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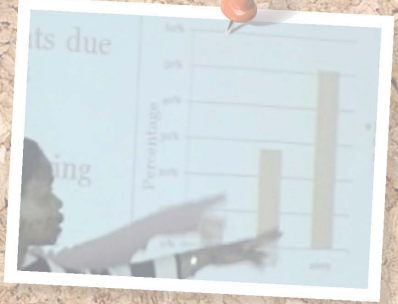
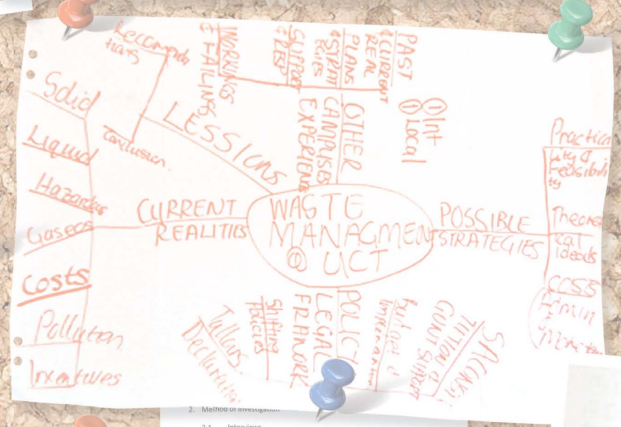
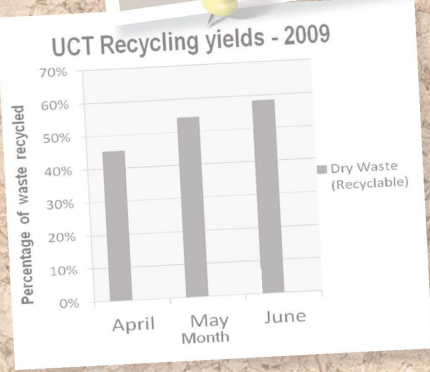
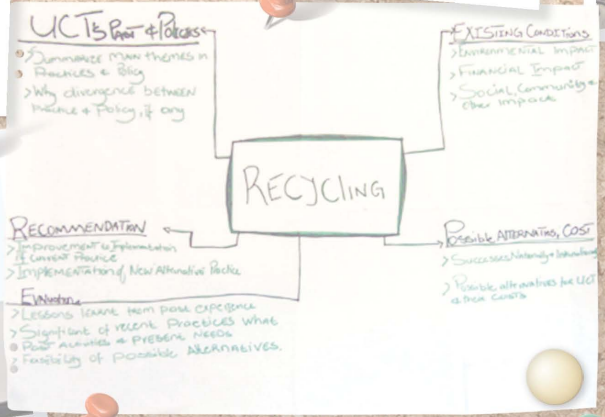
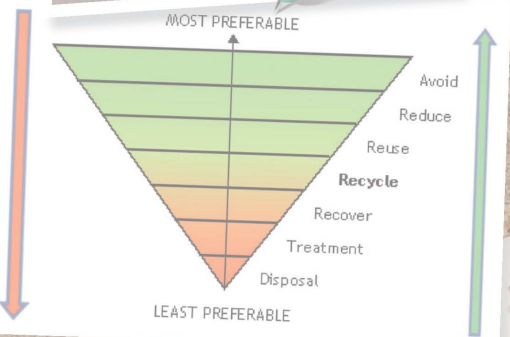
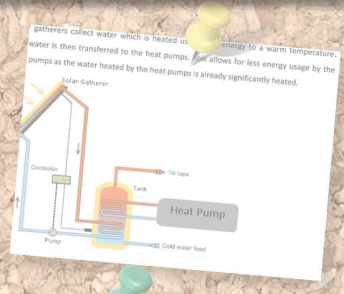
Scenario Pedagogy

a negotiated, multimodal approach to developing professional communication practices in higher education.

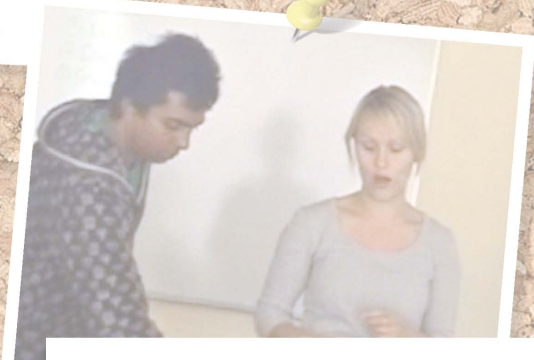


Table 1: Collection of waste, April to June 2009

2009	Wet Waste		Dry Waste		Cost in Rands
	Volumes in tons	Number of Bins	Volumes in tons	Number of Bins	
April	41.25	1650	33.92	2261	47117.42
May	47.43	1897	56.16	3744	47117.42
June	30.35	1214	42.26	2824	47117.42



1. Introduction
2. Interviews
 - 2.1 Interviews
 - 2.2 UCT Sustainability Plan
 - 2.3 Previous Reports about Recycling Efforts at UCT
 - 2.4 Reports about Recycling Efforts at the University of the Witwatersrand
 - 2.5 Reports about recycling efforts at Harvard University
3. UCT's Past Practices and Policies
 - 3.1 Waste Removal
 - 3.2 Recycling Initiatives
 - 3.2.1 Sappi's War On Waste
 - 3.2.2 The "Don't Waste" Initiative Waste
4. Current Initiatives
 - 4.1 Green Campus Initiative
 - 4.1.1 Activities on Upper Campus
 - 4.1.2 Activities at the Residences
 - 4.2 Wasteman
 - 4.2.1 Sorting and Recycling
 - 4.2.2 Cost Implications
5. Possible Alternatives
 - 5.1 Initiative at Harvard University
 - 5.2 Initiatives at the University of the Witwatersrand
6. Conclusions
7. Recommendations



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Scenario pedagogy as a negotiated, multimodal approach to developing professional communication practices in higher education

Thesis presented for the Degree of Doctor of Philosophy

By: Terri Grant

Supervisor: Dr Arlene Archer

Date: 2012

DECLARATION AND ACKNOWLEDGMENTS

This study represents original work by the author and has not been submitted in any form to another university. Where use has been made of the work of others it has been duly acknowledged in the text and references.

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I would firstly like to thank all the students over a three year period who participated in this research. Essentially, by participating in a number of surveys, allowing me to tape and video record their work and use whatever products and processes I selected, they made this research project possible.

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ABSTRACT

The focus of this study is pedagogy – the ‘how’ of teaching. In particular, a negotiated and multimodal pedagogical approach which I have coined scenario pedagogy is of interest. Scenario pedagogy involves embedding an entire curriculum into a topical and authentic scenario, relevant to a particular group of students in higher education. The course in question is professional communication and the target group comprises senior and post-graduate accounting and other finance and information systems students registered in the commerce faculty. They are not communication students *per se* but register for a one-semester professional communication course towards their respective commerce degrees.

In this study I examine how these students develop their professional communication practices using a wide variety of verbal and visual semiotic resources. Their selection of hybrid discursive, generic and modal resources are foregrounded at both draft and final product stage and include their communicative processes as well as the material artefacts they deliver in class. How students instantiate their meaning making and emerging identity as professionals-to-be is highlighted against a pedagogical framework of negotiated design. This framework combines a multiliteracies cum multimodal perspective which is underpinned by the notion of transformed practice. As pivotal elements of transformation – personally, collectively and societally – education and communication play significant roles, particularly in post-Apartheid South Africa still characterised by enormous socio-economic disparities and disadvantage.

The scenario selected involves sustainable business practices with a particular emphasis on environmental sustainability at institutional level. Universities are uniquely positioned to address socio-economic issues and improve ‘graduateness’, the development of professional, technical, communicative and socially competent students who can compete in the world economy. The study explores how scenario pedagogy seeks to contribute to this aim by presenting students with scaffolded opportunities and pedagogical challenges. During the initial stages of their investigations, students design and present a number of ‘off the page’ draft products such as mind maps and topic outlines which are then presented and evaluated in class. Using reflection and negotiated feedback, students re-design their work toward their final client ‘on the page’ deliverables comprising investigative written and oral reports. These interventions, both in and out of the classroom, allow students to explore professional communication practices and identity and to design those practices that they deem most apt for purpose, audience and context in a multicultural country. Selected moments of classroom and textual significance (process and product) are analysed to demonstrate how students

shape their own meaning making along their developmental trajectory. The study shows that they are simultaneously shaped by others through the iterative and collaborative partnerships that emerge and develop during the course.

The study is significant in a number of ways. Firstly, it gives rise to a framework of negotiated design which foregrounds 'practice' and 'design' rather than 'skills', 'competence' and a deficit view of education. This framework of negotiated design may prove useful to researchers working in the field of multimodal pedagogy. Secondly, by combining a metafunctional and multiliteracies lens with social semiotics for product and process analysis and embedding this further in contextually relevant ways, some of the concerns about decontextualised multimodal research may be minimised. Thirdly, the study confirms a cluster of sought-after characteristics which further contributes to fine-tuning course design and implementing scenario pedagogy appropriately for best results.

The study shows that a negotiated and collaborative pedagogy such as scenario pedagogy which involves multiple internal and external stakeholders more closely resembles the workplace, focusing as it does on a 'real-life' scenario of local concern as well as global significance. The aim of all higher education research is to improve the quality of teaching and learning and all contributions in this regard allow the educational body of knowledge to thrive.

TABLE OF CONTENTS	Page
Declaration and acknowledgements	i
Abstract	ii
List of Illustrations	viii
Chapter One: Introduction	1
1.1 Background to study	1
1.2 Aim and scope of study	3
1.3 Research questions	4
1.4 Context of study and imperative for redress	5
1.5 Chapter outline of thesis	8
1.6 Final comments	10
Chapter Two: Theoretical Framework	11
2.1 Overview	11
2.2 Models of communication: shifting paradigms	12
2.2.1 Deficit models of communication: focus on competence	13
2.2.2 Cyclical models of communication: moving beyond competence	14
2.3 Multimodal social semiotics: a meaning-making framework	20
2.3.1 Understanding discourse, domain, genre and design in relation to identity	20
2.3.2 Modal ensembles and metafunctions	23
2.3.3 Integrated frameworks	25
2.4 Co-construction of knowledge and the opening of dialogic spaces	26
2.4.1 Multiliteracies framework of pedagogy	26
2.4.1.1 <i>Situated practice</i>	26
2.4.1.2 <i>Overt or explicit instruction</i>	27
2.4.1.3 <i>Critical framing and embodied reflection</i>	28
2.4.1.4 <i>Transformed practice</i>	29
Chapter three: Methodology	31
3.1 Overview of methodological stance	31
3.1.1 Professional communication context	31
3.1.2 Education context and qualitative rationale	31
3.2 Site and data gathering methods	33
3.2.1 Research site	33
3.2.2 Overview of data capture methods and relation to research questions	33
3.3 A framework of negotiated design for analysing scenario pedagogy	36
3.3.1 Rationale for framework	36
3.3.2 Analytical approach	38

3.3.3 Framework terms in use	38
3.4 Detailed description of data and methods	41
3.4.1 Sample of student texts	41
3.4.2 Classroom observation	41
3.4.3 Staff and student discussion and informal interviews	42
3.4.4 Questionnaires	43
3.4.5 Post-course student reflections	44
3.5 Methodological scope, limitations and ethical issues	44
3.6.1 Scope and limitations	44
3.6.2 Ethical issues	45
Chapter four: Exploring the scenario pedagogy course in commerce	47
4.1 Background to site selection	47
4.2 Early scenario pedagogy applications	47
4.3 Commerce faculty application and characteristics	48
4.3.1 Student composition and 'habitus'	48
4.3.2 Topicality of scenario	52
4.3.3 Authenticity of scenario	55
4.3.4 Negotiated multimodal meaning making	56
4.3.5 Shared, collaborative pedagogy	58
4.3.6 Reciprocal feedback and assessment	60
4.4 Course implementation schedule	61
4.4.1 Pre-course arrangements	62
4.4.2 Scenario products and processes	63
4.4.2.1 <i>Mind map presentations</i>	64
4.4.2.2 <i>Topic outline presentations with sample illustration</i>	64
4.4.2.3 <i>Videoed PowerPoint presentations</i>	64
4.4.2.4 <i>Investigation report</i>	66
4.5 Final comments	67
Chapter five: Mapping the terrain: negotiating discursive (dis)junctures and emerging professional communication practices	69
5.1 Overview of draft product chapters	69
5.2 Generating ideas: the semiotic features of a mind map	70
5.2.1 Discursive strands	70
5.2.2 The medium and site of display	71
5.2.2 Generic and modal affordances	72
5.3 Discursive junctures and disjunctures	74
5.3.1 A categorical approach: Portia's scientific waste management stance	75
5.3.2 A narrative approach: Lindiwe's and Vusi's take on recycling	79
5.3.3 A comparative-narrative hybrid: Jenny and Hussein's 'green' building design	83
5.3.4 A persuasive approach: Jimmy and Shivani's Ridelink investigation	86
5.3.5 Foregrounding and backgrounding	90

5.4 Transforming the mind map terrain through negotiated design	92
5.4.1 From exhibition to presentation	92
5.4.2 From critical reflection to redesigning	97
5.5 Final thoughts	100
Chapter six: Emerging authorial stance of the professional communicator: transforming mind maps into topic outlines	102
6.1 Exploring hierarchies of verbal and visual design	102
6.2 Combining media and sites of display	103
6.3 Discursive and generic orchestrations	105
6.4 Semiotic analysis of verbal/visual integration and ensemble	107
6.4.1 Portia's scientific take on hazardous waste management	107
6.4.1.1 <i>Shifting perspectives: from profit to planet</i>	107
6.4.1.2 <i>Illustrating the waste management terrain and aligning outline and image</i>	115
6.4.2 Recycling	120
6.4.2.1 <i>Narrowing the verbal focus through negotiated meaning making</i>	120
6.4.2.2 <i>Team Recycling's comparative columns – an expression of authorial certainty</i>	124
6.4.3. Sustainable building practices at UCT	129
6.4.3.1 <i>Shifting paradigms in design: architecturally and pedagogically</i>	129
6.4.3.2 <i>A naturalistic image: Team Sustainable Building's photograph</i>	133
6.5 Final comments: reconfiguring and transforming the verbal and visual terrain	136
Chapter seven: Distributing the modal load: the oral presentation ensemble	140
7.1 Overview	140
7.2 Modal choices to instantiate professional communication practice and identity	142
7.3 Pedagogical observations and comparisons made possible through video recording	146
7.3.1 Video as a tool for teaching and learning	163
7.3.2 Authorial stance as an element of professional identity	148
7.3.2.1 <i>Authorial voice and modality</i>	148
7.3.2.2 <i>Visual modality and PowerPoint</i>	151
7.3.2.3 <i>Dress, authorial stance and power</i>	175
7.3.2.4 <i>Movement, territorial distance and 'ownership'</i>	158
7.3.2.5 <i>Eye contact, expressiveness and links to confidence and credibility</i>	161
7.3.3 Modal ensemble: orchestrated meaning-making	163
7.4 Final comments	168

Chapter eight: Disseminating a professional communication identity through the final client deliverable: the investigation report	169
8.1 Overview	169
8.1.1 The rhetorical relationship and design task	170
8.1.2. Discursive clashes and struggles	171
8.2 Reciprocity as rhetorical device: an act of negotiation	172
8.3 (Inter)personal engagement and links to modality	175
8.3.1 The entry point: title page	175
8.3.2 Building a professional relationship	177
8.4 De-personalised representation to enhance professional communication identity	180
8.4.1 Report orientation and links to ‘inbuilt redundancy’ and parallelism	180
8.4.2 Co-construction of knowledge to instantiate professional practice and identity	184
8.4.2.1 <i>Verbal narrative and conceptual framing: discursive merges and clashes</i>	184
8.4.2.2 <i>Visual narrative and conceptual framing: emergent professional communicators</i>	190
8.5 Final Comments	200
Chapter Nine: Contribution of scenario pedagogy to developing professional communication practices and identity in higher education and beyond	202
9.1 Overview	202
9.2 Emerging professional communication practices	203
9.3 Emerging professional identity	205
9.4 Towards a sustainable university	207
9.5 Collegial collaboration and reciprocity	207
9.6 Dialogue across difference	209
9.7 Contribution to the workplace and society	210
9.8 Significance of study and avenues for further research	211
9.9 Final comments	212
References	214
Appendices	225
1a and b: Formative and Summative questionnaires	226
2: Example of Terms of Reference letter outlining sustainability scenario	228
3: Hand-out example of PowerPoint slides for Recycling	229
4a and b: Example reports: Recycling and Sustainable Building Practices	230

LIST OF ILLUSTRATIONS

Page

List of Figures

1: A convergence model of communication	15
2: A framework of negotiated design for analysing scenario pedagogy	39
3: Waste management at UCT mind map	75
4: Recycling mind map	80
5: Sustainable Building Practices mind map	83
6: Sustainability Plan for Transport mind map	87
7: Topic outline: Waste Management at UCT	109
8: Portia's inverted pyramid: hierarchy of waste management practices	115
9: Recycling Topic Outline	121
10: Cumulative bar graph comparing wet and dry waste collection at UCT	125
11: Team Sustainable Building's topic outline	130
12: Photograph of Graça Machel Hall: light and shade	135
13: Lindiwe 'welcoming' another team of 'experts'	149
14: Lindiwe during rehearsal	156
15: Vusi during his rehearsal and final presentation	156
16: Jenny and Hussein's rehearsal and final	159
17: Hussein and Jenny in rehearsal	159
18: Jenny demonstrating shutter movements and listing conclusions	160
19: Lindiwe signifying approval	161
20: Hussein and Jenny during final presentation	163
21: Heat pump illustration in SB report	191
22: Image of 'Gherkin' building in SB report	194
23: Display of multi-coloured bins in recycling report	196
24: Tabular display of wet and dry waste from recycling report	198
25: Graphic display of dry waste from recycling report	199

List of Tables

1: The (inter)relationship between research questions, data and methods	35
2: Selection of scenario topics for commerce class	62
3: Mind map comparisons	91
4: Examples of feedback provided	99
5: Bodily characteristics relevant to professional communication practice and identity	144
6: Distance and coverage of various screenshots	147
7: Excerpt 1: Vusi in action	164
8: Excerpt 2: Jenny's demonstration	166
9: Redundancy and parallelism at work in conventionalised report format: Recycling	182

Chapter One: Introduction

This chapter introduces the subject of the thesis, aim of research and underlying assumptions regarding scenario pedagogy and its deemed contribution to developing professional communication practices and identity within a commerce domain. It includes a preliminary introduction of terms, background to local and global Higher Education (HE) pedagogical concerns and the rationale for using scenario pedagogy in tertiary education. The research questions as well as scope and limitations are also set out. The chapter ends with a brief overview of the thesis.

1.1 Background to study

The University of Cape Town (UCT) is arguably one of the continent's most prestigious universities. It is certainly one of the oldest, most well-known tertiary institutions and enjoys an enviable international reputation for teaching and research excellence. UCT, a traditionally white university, was permitted by the erstwhile Apartheid regime, which came to power in 1948, to accept black students whose academic programmes were not available at traditionally black universities. This racial designation included those of coloured (mixed race) and Asian descent. Nevertheless, the student body was far more homogeneous during this period both linguistically and culturally than the post-Apartheid era from 1994 onwards.

The Professional Communication Unit (PCU) originated at the University of Cape Town (UCT) in 1975 with the aim of preparing business and technical students for the communicative demands of their professions. The PCU website provides more background details: <http://www.commerce.uct.ac.za/Managementstudies/PCU/> on the activities of the unit. Briefly, the *raison d'être* of the PCU was to teach communication 'skills' and develop job relevant competencies. Language proficiency was assumed and course curricula were not in any way remedial or linked to 'academic support'. Post-apartheid South Africa was formally welcomed back into the global fold in 1994 and years of sanctions and isolation were ended. UCT's student profile has changed radically over the last 18 years and this has brought with it great opportunities and challenges for redress and transformation.

Coupled with local, national and international change imperatives, the demands on the business professional have grown exponentially in the highly competitive and volatile global economy. How do we facilitate 'graduateness', the development of professional, technical, communicative and socially competent students who can compete in the world economy? Achieving graduateness beyond technical and cognitive knowledge and skills is what getting a

degree from UCT should be aiming to achieve, according to past Vice-Chancellor (VC) of UCT, Dr Mamphela Ramphele (1996/7). Current VC, Dr Max Price, continues in similar vein. Playing a transformational role in society and developing a “thoughtful citizenry” is what a UCT education aims to reinforce as an ongoing endeavour (2009). As academics, researchers and practitioners, we need to constantly assess pedagogical approaches, curriculum relevance, appropriateness and “fit” in order to best align theory and practice for lifelong learning amidst rapid change (Grant and Kalil 2011).

Scenario pedagogy is an approach to teaching and learning that aims to respond to the social and pedagogical demands set out above and contribute to the university’s mission. It aims to enhance the learning, interest and motivational aspects for participants of an educational experience; to broaden the educational goals achieved in the classroom; and to create efficiencies with regard to achieving more and wider pedagogical aims beyond ‘skills transmission’ or simply learning about form and function in genres, for example (Grant 1999; Grant and Kalil 2011).

The origin and latter-day meaning of the term ‘scenario’ encompasses, among others, important notions of role play, choice and situated practice, all of which inform and characterise scenario pedagogy. In the early 90’s, the term, scenario learning, was coined to describe a situated teaching and learning approach which has much in common with the experiential learning movement. This movement relies heavily on Carl Roger’s (1980) embodied conceptualization which embraces behavioural, affective and cognitive aspects of teaching and learning. The experiential movement has long advocated “active learning methods to engage students academically, socially and emotionally” (Brzovic and Matz 2009: 21). Examples of this movement are case- problem- or enquiry-based and holistic learning (Evangelos 2006; Moore 2008; Mabry 2011). With its focus on a “pedagogical framework that is grounded in cooperation, collaboration and experience” (Rassool 1999: 239), the term evolved from scenario learning to scenario pedagogy in 2008. Although teaching and learning go hand in hand, the focus of this study is not on learning *per se* – involving the cognitive internalisation within students – as it is on negotiated pedagogical practices and multimodal meaning making both in and out of the classroom. Pedagogy encompasses all participants. According to Cope and Kalantzis (2000: 9), “[p]edagogy is a teaching and learning relationship that creates the potential for building learning conditions leading to full and equitable social participation.” It is this equitable and participative relationship that interests me as all participants take on these teaching and meaning-making responsibilities.

So, although scenario pedagogy is a form of enquiry-based learning, it has “unique characteristics that make it a distinct contribution to the field” (Moore 2010). Enquiry-based learning approaches may adopt similar experiential approaches in their attempt to engage participants dialogically. However, they focus more on learning than pedagogy and do not necessarily depend on real-time events of situated practice, the co-option of external real-time event partners or an array of thematically linked scenarios (which may or may not involve problems). A characteristic of this type of multi-layered pedagogy is that an entire course can be embedded within the over-arching scenario (Grant and Kalil 2011).

Scenario pedagogy also aims to be a ‘shared’ pedagogy where teaching, learning and authority are negotiated between teacher-facilitator and student participant in the main with external ‘expert’ stakeholders, peripherally engaged. It aims to create an educational triangle between the subject matter which is embedded within a particular set of institutional scenarios and these groups of participants. The scenario or teaching-learning context, although existing, is specifically chosen for topicality and relevance to the discipline at hand so that all communication development and practice happens within an authentic setting, a *situated practice* (Cope and Kalantzis 2000) with some characteristics of a *learning community* (Tinto 1997; 2003). Although these students are not yet members of a fully-fledged *community of practice* (Lave and Wenger 1991; Wenger 1998; Barton and Tusting 2005), they do share what Gee (2003, 2005, 2008) calls an *affinity group* of like-minded ‘apprentices’ who are on their way to mastering essential professional and social discourses and practice: perhaps a community of practice in the making. Enabling students to acquire domain specific knowledge and master an array of discursive practices may provide them with opportunities to select, from a repertoire of meaning-making visual and verbal resources, those which seem most apt for purpose and audience (Kress, Jewitt, Ogborn and Tsatsarelis 2001; Kress 2003, 2010; Gee 2003, 2005; Jewitt 2006, 2009). These and other concepts and theorists will be discussed more fully in chapter two, the theoretical framework.

1.2 Aim and scope of study

The overall aim of this study is to explore the contribution that scenario pedagogy can make to developing professional communication practices in specific business domains in particular and higher education pedagogy in general. In this study I wish to explore how scenario pedagogy attempts to go beyond a functional, language-based genre approach to teaching specific business or academic practices within an embedded scenario, happening in real-time. This experiential and collaborative approach foregrounds the importance of student pedagogical involvement and how various role players such as facilitator, student teams and expert others negotiate meaning collaboratively both in and out of the classroom. Student

interests, identities and textual products and processes are examined against a multidisciplinary theoretical backdrop which intersects across a range of disciplines relating mainly to communication, applied linguistics and education, specifically drawing on theories of multimodal social semiotics, new literacy studies, multiliteracies and authorial stance. I weave these intersecting disciplinary frameworks and theories together to create a framework of negotiated design against which scenario pedagogy can be explored and gauged. The shift in focus from 'competence' and 'skills' to 'practice' and 'design' is evident in this framework which is fully described in chapter three. It provides a useful analytical lens to show how students grapple with the discursive, generic and multimodal practices evident in professional communication as well as growing hybridity within these practices.

Although assessment plays an important role in any university course, and is alluded to in various chapters, I do not evaluate assessment and grading practices as such nor select student samples based on grades. I am more interested in how students design and redesign their work, based on carefully deliberated selections of semiotic resources, from draft products and processes to final professional dissemination and presentation.

1.3 Research questions

Although teaching and learning are inextricably linked, there is the matter of focus and foregrounding. Where fundamentally does the researcher's interest lie? Although learning is mentioned on numerous occasions, more importantly in a study involving multimodal communication is the concept of meaning making, particularly shared meaning making within social semiotics and dialogical contexts. As will be seen in chapter three, methodology, my first two questions are also inextricably linked and are therefore not analysed in separate chapters. It seems fitting to interrogate these related issues in all four analytical chapters along the trajectory of student work and development. The third research question, although alluded to in earlier chapters, has its primary focus in chapter nine.

My research questions are:

- How does scenario pedagogy enable students to access and prepare multimodal professional communication practices within a commerce domain?
- How, within a shared affinity space, is the development of these negotiated and collaborative practices from draft process to final product shaped by student interest and emerging professional communication identity and know-how?

- What are the implications of scenario pedagogy for professional communication pedagogy in particular and higher education (HE) in general?

As academic and practitioner, pedagogical and curricular ideas and strategies that emerge to assist in developing professional communication interventions at tertiary level are of major interest. Although curriculum design is not the focus of the study, implications may arise that allow me to draw tentative conclusions in this regard in my final chapter. Of greater salience in this dissertation is how scenario pedagogy may contribute to educational redress and workplace professionalism.

1.4 Context of study and imperative for redress

My teaching experiences, deliberations with colleagues in various disciplines and research over three decades have made me question whether skills development *per se*, although a commendable outcome and useful side effect, should be the critical pedagogical focus or locus of my work in the PCU. To be communicatively ‘competent’ in a global context is long seen as going beyond ability in language to, for instance, issues of intercultural and ethical sensitivity, technological prowess and appreciation of diversity, social change and transformation (Grant 2006; 2007a; 2008; Steyn 2003; Fairclough 1992; Cope and Kalantzis 2000; New London Group [NLG] 2000). Taking this further and moving beyond a deficit model of ‘improving’ skills and competencies to a sustainable multimodal practice model which foregrounds student participation and accountability presents a more challenging vision for individual and social change and is deserving of further research (Grant 2004; 2007b; Grant and Kalil 2008; Archer 2006; NLG 2000; Lea and Street 1998).

The characteristics of contemporary classrooms mean that there is often less time to achieve more. This situation, coupled with growing student numbers, multilingualism and diversity means that “the experience of learning in higher education is, for most students, still very much a *spectator sport*”, according to Tinto (2003: 1). Imaginative approaches to teaching practice that transcend traditional assumptions are necessary too if the dynamic links among student know-how, vocational preparedness, organisations (such as the university or workplace), global issues like environmental management and digital technology proliferation, and curriculum, are to be better understood (Grant 2004; Grant and Kalil 2008).

In addition, the use of multimodal and experiential, collaborative pedagogy has relevance in South Africa where English as an additional language (EAL) and disadvantage still characterise our educational landscape. The change in government in 1994 brought a new

imperative to redress the hegemonies and inequalities of the past (White Papers 1997) but many policymakers, educationalists and students alike continue to express concern at the sluggish and often arbitrary implementation of educational reform at primary, secondary and tertiary level (Bloch 2009). The harsh reality is that the poorest of the poor in the most vulnerable and under resourced communities in South Africa continue to experience a dire educational divide. The divide between the 'have's' and the 'have not's' is as wide if not wider than before in many crucial areas, not least of all educational resources, pedagogical availability and expertise (Bloch, 2009). Annual numeracy and literacy research (National Benchmark Tests Projects 2009/10) has confirmed that many students, even those not traditionally classified as disadvantaged, seem under-prepared for the rigours of academic programmes, especially in highly numerate degrees such as computer science or chartered accountancy.

The dilemma of linguistic hegemony, in particular the use of English as the legitimate language of education, the economy and the state exacerbates the situation still further and continues to oppress. This is not unique to South Africa as English has come to dominate the landscape globally, particularly in what De Groot calls "business settings" (2008: 1). As Bourdieu (1991) pointed out, the symbolic power afforded by being well versed and practised in the dominant language and at ease within its associated contexts and corridors of power perpetuates an unlevel playing field where the privileged excel across all socio-economic frontiers.

Although there are eleven official languages in South Africa, English remains the only language of tuition at most of our tertiary institutions and indeed at UCT, despite the fact that – according to Government census figures – less than 10% of the population speaks English as a first language. Besides having to learn the hegemonic rules of institutional academia and academic practices (often tacit and invisible) and having to shoulder the heavy mantle of a new discipline such as accountancy or information systems with its own linguistic capital (Bourdieu 1991) and discursive practices, over 50% of our students have to do so in an additional language, twice, three, often more times removed from their lifeworld and predispositions or habitus, to use Bourdieu's term (1991). If education is critical to social and economic upliftment and empowerment, then requisite attention to multimodal and -lingual pedagogical practices, alternative curricular approaches and diverse learning styles is paramount.

A multimodal pedagogy as advocated by the New London Group (NLG) (2000), Kress, Jewitt, Ogborn and Tsatsarelis (2001), Lemke (2002), Archer (2004, 2006) and Jewitt (2006), among others, acquaints learners with a repertoire of communicative designs and practices and affords multiple semiotic resources for students to draw on which transcend linguistic competence with its focus on hegemonic practices around a dominant *lingua franca* such as English. This is particularly relevant to technical and business students whose meaning-making 'expertise', available resources and interest may lie in broader communicative practices, not often privileged or valued in the classroom. Timely sense-making opportunities where students select, co-design, use, adapt and transform multimodal practices to enrich and build their student and vocational identities, repertoire and confidence serve to honour a more nuanced and respectful pedagogy which has the potential to be more exciting and motivating to both student and teacher. This seems particularly apt at senior and postgraduate level where students' developing autonomy and professional identity require the space, climate and opportunity to emerge. The work of theorists such as Halliday (1985) on metafunctions, Kress and Van Leeuwen (2001, 2003), Kress (2003, 2006, 2010), Jewitt (2008, 2009) and Archer (2004, 2006) on social semiotics and multimodal meaning-making, Gee (2003, 2008) on semiotic domains and the New London Group (NLG) (2000) on a multiliteracies pedagogic framework contributes to a fuller understanding of a multimodal pedagogy.

An experiential and collaborative pedagogy that allow students to link theory to practice may afford them opportunities to "link theory and practice from one course to the next, from one discipline to the next and from one life experience to the next" (Brzovic and Matz 2009: 21). Going beyond a mostly singular and verbal approach to text and genre to include a multiplicity of verbal-visual modes, participative roles and changing classroom dynamics may afford opportunities for greater reflection, negotiated meaning-making and joint ownership of socially situated teaching and learning. It seems reasonable to assume that greater success in meaning making can be gained by using participative real-world embodied scenarios and allowing students to learn actively, dialogically as well as critically (Smart and Csapo 2007; Gee 2003).

This study provides the opportunity to foreground student interest and growing autonomy and explore how students individually and collectively negotiate their emerging identities as future professionals.

1.5 Chapter outline of thesis

In this section I will briefly summarise the focus of each chapter in relation to the research questions and students' developmental trajectory.

Chapter two extends the points introduced above, provides the theoretical framework within which the study is located and defines key issues. The framework and review is sub-divided into various core fields starting with earlier linear models of communication and theories of communicative competence and moving towards more cyclical and convergence models of communication which strive to shift attention from senders and receivers to participants in joint meaning making. How professional communication identity is instantiated through discursive, generic and modal practices within particular domains and affinity spaces (Gee 2003, 2005, 2008) is explored against a backdrop of participant interest (Kress 2010) and authorial stance (Hyland 1999). The shift to a collaborative and negotiated framework of social semiotic domains and practices includes an exploration of the co-construction of knowledge and opening of dialogic spaces. Theories of multimodal social semiotics including Halliday's seminal work on metafunctions, the NLG's multiliteracies pedagogic framework and experiential, situated teaching and learning practices form a key focus.

Chapter three discusses the methodology used in terms of the overall research design and conceptualisation. Methods relate to both products and processes. Data gathering involves firstly a selection of sample texts from 2008 and 2009 which comprise four major key moments of design: the mind map, topic outline with sample illustration, PowerPoint presentation and written report. The social semiotic textual analysis of these products is supported and complemented by classroom observation, informal discussion, interviews, questionnaires and reflections. Whereas an overarching (re)view is provided in chapter four, my primarily qualitative analysis is based on these selected products and processes as seen through the lens of my framework of negotiated design. A Likert scale-based quantitative analysis is included as a minor aspect of the methodology to augment the study and summarise key trends over a three year-period (2008-2010). Methodological limitations, mitigation attempts and ethical considerations are also included

Chapter four describes and evaluates the commerce site of the study and the concept of scenario pedagogy in more detail. The professional communication course under study is taught to mainly postgraduate diploma in management accounting students and more recently to other senior commerce students in information systems, marketing and finance. This is a full second semester course which is both credit-bearing and examinable. The concept of scenario pedagogy as it relates to this site is examined against the thematic scenario

backdrop of sustainable development. Salient descriptions of a cluster of concepts surrounding corporate sustainability and green reporting with links to greenhouse gas emissions (GHG) and global warming are addressed in this chapter. The chapter includes an in-depth review of the elements which broadly characterise scenario pedagogy based on pilot study guidelines and feedback and include those which participants hope to emulate as well as avoid. These characteristics, which have crystallized over many applications, have been systematically and thematically grouped. They are based on my own teaching practice and past research. I am indebted to James Gee (2003) for providing ideas for thematic clusters which I have adapted for this section. Whereas quotations from interviews, reflections and the formative (FQ) and summative (SQ) questionnaires are used in later analytical chapters to substantiate claims made, this chapter focuses primarily on the responses of *all* students who attended the course over a three year period (2008-2010). Although a more fine-grained analysis of only a few selected products and processes are made in the following four chapters, this chapter section aims to provide a macro view of opinion across a full sample.

Chapters five and six cover the analyses of student mind maps and topic outlines with sample illustrations respectively. They focus primarily on applying the framework of negotiated design to the initial draft stages of student planning and preparation. These chapters have both a product and process focus and each chapter is further sub-divided into foregrounding various theoretical perspectives. A semiotic and metafunctional analysis of student products is followed by a full discussion of the NLG's multiliteracies framework, as adapted within the framework of negotiated design to primarily illustrate processes within class. These chapters illustrate the product-process analyses by following the developmental trajectory of a number of teams' work through various draft stages of production. Chapters five and six focus on the work of four and three teams respectively. The former focuses on the mind map as the initial planning device and the latter on two products, a topic outline and a sample illustration.

Chapters seven and eight focus primarily on applying the framework of negotiated design to the final production stages of student presentation, dissemination and distribution: the oral and written reports. These chapters too have both a product and process focus, illuminated by the various theoretical underpinnings outlined in chapter two. As with chapters five and six, the social semiotic and multiliteracies analyses of textual products and processes pertains mainly to answering my first two research questions as outlined above. The two products in question, the filmed oral PowerPoint presentation and written investigation report, are the culmination of the developmental trajectory as illustrated by two of the original three teams exemplified in chapter five. Whereas chapters five and six deploy an informative rather than comparative ordering framework where each product is analysed separately, chapters seven and eight

select key issues and moments across the work of two teams to highlight developing communication practices and identity.

The final chapter, chapter nine, explores the pedagogical and course design implications as they relate to professional communication development in higher education (HE) and beyond. The contribution of scenario pedagogy to workplace 'graduateness' and the questions posed in the opening chapters, are weighed up. The chapter aims to draw various strands together and evaluate local and global pedagogical considerations at institutional and societal levels. The chapter highlights future avenues of research in the field of scenario pedagogy at local and international level.

The references are followed by appendices which comprise formative and summative questionnaires and examples of a scenario Terms of Reference letter, a PowerPoint slide hand-out and two student reports.

1.6 Final comments

As can be seen in the references at the end of the thesis, I have already published both locally and internationally on various aspects of teaching and learning in my quest to improve my teaching practice. This thesis will seek to re-interpret and elaborate on these earlier analyses in order to combine and synthesise the old with recent scenario teaching-learning interventions. By using my own habitus (Bourdieu 1991) and existing hybrid resources gleaned over many years, as well as new discoveries along the trajectory of my research path, I hope to mirror the collaborative and negotiated style of meaning making which I am seeking to explore and analyse.

In so doing I wish to reflect an authorial stance (Hyland 1999; Hyland and Tse 2004) that in essence moves away from what Preece calls "posh talk" (2009) to what Flesch termed "plain talk" (1962). According to Flesch (1962: 10), writing for practical and professional purposes, such as business communications, requires a different mindset to academic or literary conventions. This is not to say that professional writing opposes or competes with academic writing or is 'anti-literary' but rather that its varied functionality and hybrid nature, as discussed in more detail in chapter eight, requires a repertoire of styles and registers. These may vary from concrete, personal, consultative and active to abstract, impersonal, formal and passive depending on context, purpose and audience, the most salient inter-dependent factors upon which all professional communication rests.

The theoretical work which informs this study is set out and reviewed in chapter two.

Chapter Two: Theoretical Framework

This chapter details theoretical perspectives introduced in chapter one. The framework within which the study is located shifts from earlier theoretical conceptions of communication, competence and literacy towards a multimodal framework of social semiotic domains and practices and the situated and collaborative New London Group's multiliteracies pedagogic framework (NLG). The major sections will be further sub-divided into core concepts which inform and illuminate the overarching theoretical framework.

In this chapter I argue for a coherent multimodal approach to pedagogy which is characterised by:

- a repertoire of communicative and representational resources that do not reside in language only;
- interchangeable and negotiated roles of teaching and learning;
- a willingness of participants to negotiate status differences and assume or relinquish authority when relevant and appropriate; and
- approaches to pedagogy and course design which reflect sustainability and encourage students to adopt transformative practices for a rapidly changing and challenged world.

My framework of negotiated design discussed in more detail in Chapter three, Methodology, emerges from this theoretical discussion and aims to encompass and transform complementary elements into a coherent ensemble.

2.1 Overview

Although remaining germane, the research is of necessity quite wide-ranging. This investigation, although locally situated, is informed by local and global events and issues which have precipitated changes in literacy and communication studies, some overt and accelerated, others more subtle, hybrid, even contradictory (Street 2003; Prinsloo and Baynham 2008, Kress 2010). The study is located in and 'filtered' through an influential interplay between various topics such as shifting educational paradigms and student-teacher relationships and authority, job-related communicative practices for a multicultural world and technological innovations in the global economy (Grant 2004, 2005 a and b; NLG 2000; Trompenaars and Hampden-Turner 1998; Mirabito and Morgenstern 2004). As pointed out in the introduction, all impinge on 'the graduate' in his or her quest for global workplace literacy and citizenship, professional identity, mobility and access (Ramphela 1996/7; Price 2009; NLG 2000; Cope and Kalantzis 2000).

I start with earlier models of communication and communicative competence theories and argue the need to view these as limited by their focus on 'one-way' communication, a mechanistic approach to skills acquisition and a deficit view of student development. The shift to social semiotic domains and dialogical, negotiated models of communication allows a holistic and expanded view of communicative development which more appropriately reflects the requirements of a global age. The last few decades have also, according to Street (1988, 1993, 2003), seen a shift from a 'mono' view of literacy as a decontextualised, neutral and technical skill, the 'autonomous model' of literacy, to one that offers "a more culturally sensitive view of literacy practices as they vary from one context to another", a view that posits an 'ideological', multiliteracies stance of literacy as "social practice... always embedded in socially constructed epistemological principles" (Street 2003:1) and ways of knowing which are rooted in conceptions of being, identity, interests and power relations (Lea and Street 1998; 2000). A multiliteracies view of literacy (New London Group 2000; Cope and Kalantzis 2000; Medhurst 2009, 2010) supports a multimodal approach to literacy and pedagogy.

2.2 Models of communication: shifting paradigms

Scholarship in communication studies has made significant strides after World War II with the advent of mass communication, the information society and growing globalisation (Rogers and Kincaid 1981; Mirabito and Morgenstern 2004, Kaul and Gupta 2007).

There has been a most marked epistemological shift in recent decades in communication theory from linear transmission models of communication such as those posited by Shannon and Weaver (1949) and Osgood (1957) to more appropriate multidirectional relational models (Rogers and Kincaid 1981; Grant and Borchers [2002] 2008; Kress 2008, 2010). The shift was gradual. Berlo's 1960's model of communication was also essentially a linear model (source, message, channel and receiver) but he went further and warned that "it is dangerous to assume that one [of these elements] comes first, one last, or that they are independent of each other. This denies the concept of process, and communication is a process" (Berlo 1960: 106). Schramm too abandoned linearity in favour of transactional thinking and was in the forefront of the move to relational communication models in the 1970s (cited in Rogers and Kincaid 1981). A brief overview of these changing global phenomena affords insights into the necessity of propelling communication perspectives from a mathematical and scientific angle to one that is intrinsically personal, dialogical and multimodal (Arnett 1992; Kress and van Leeuwen 2001; Grant 2005a).

2.2.1 Deficit models of communication: focus on competence

Concepts of communicative competence have varied greatly over the years. Del Hymes coined this phrase in the 70s and linguistic competence formed the basis of early definitions (Gumperz and Hymes 1972). Definitions of communicative competence soon expanded to include more than mere linguistic elements. Both Hymes and Gumperz (1986) introduced the notion of *ethnography of communication* and *speech communities* and took a sociocultural standpoint, attempting to describe the meaning-making functions and processes of participants' language in use within particular communities. Spitzberg and Cupach's definition of communicative competence as "the ability to interact appropriately and/or effectively" (1984:74) introduced a participative, cyclical and dialogical imperative that started to go beyond earlier "linear models of communication" (Grant and Borchers 2002: 9). Spitzberg (1989: 246) contributed to the debate by listing no fewer than "136 distinct conceptual labels...associated with competences" but his two communicative dimensions of 'appropriateness' and 'effectiveness' were accepted as pivotal in communication research in general (Taylor 1994; Grant 2004) as well as intercultural communication research in particular (Steyn 1997; Grant 2006).

Spitzberg's (1989) dimensions of effectiveness and appropriateness encompassed both axes of cognitive, task-oriented message transmissions as well as affective, relational and social understanding. This suggested both a verbal and nonverbal contextual fluency that went beyond linguistic competence, an approach frequently advocated by scholars such as Gumperz and Hymes (1986), Hymes (1979), Gumperz (1992) and Archer (2005). Speaking a language is a good start, but learning to understand and appreciate the sociocultural context and features of the *speech communities* (Hymes and Gumperz 1986; Kaschula and Anthonissen 1995) in which a particular language (or dialect) is spoken extends the definition of fluency still further. Also, being 'fluent' in one such community does not presuppose fluency in another (Trompenaars and Hampden -Turner 1998; Grant and Borchers [2002] 2008). Bourdieu (1991) also used the term competence, specifically *practical competence* when describing field specific linguistic expertise and appropriate, contextualised language in use.

In their book, *Communicating across cultures in South Africa*, Kashula and Anthonissen (1995: 10) use Gumperz's extended definition of communicative competence: "Whereas linguistic competence covers the speaker's ability to produce grammatically correct sentences, communicative competence describes his [sic] ability to select from the totality of grammatically correct expressions available to him [sic], forms which appropriately reflect the social norms governing behaviour in specific encounters." The expanded and more contextualised definitions of communicative competence are welcome. However, the term

competence still brings to mind its opposite, incompetence, and by association an emphasis on skills acquisition and the deficit model of learning.

Also, besides being sexist, I would argue that if this definition is applied too narrowly, it would not adequately reflect the multimodal scope and complexity of communication and meaning making nor does it adequately address the dynamic quality of interaction. Individuals and communities are subject to change and transformation; communicative competence is not a trait or state of being that one simply has or is but a lifelong trajectory of becoming. A focus on practice and negotiated co-production of meaning rather than trait seems more apt in a changing and flexible workplace.

2.2.2 Cyclical models of communication: moving beyond competence

The shift from competence to practice where participants, rather than senders and receivers, take on, play out and use a repertoire of semiotic resources in concert with others over time and place offers a richer and arguably more sensible and legitimate platform for local and global meaning making, meaning sharing and mutual understanding.

The singular or plural use of 'practice' as verb and noun offers a complex and nuanced palette of meaning which enriches how one views ongoing development and growing expertise as well as the conventional way of doing things. Chouliaraki and Fairclough (1999: 21-22) embrace its manifold and ambiguous nature as being helpful. "A practice can be understood both as a social action, what is done in a particular time and place, and as what has hardened into a relative permanency – a practice in the sense of a habitual way of acting". All our practices - those we belong to and those we mindfully practise and master - reflect our social lives. This broad definition of practice includes both 'being' and 'acting in' particular identifiable ways which practitioners come to recognise ("relative permanency") and particular negotiated ways, appropriate to context and occasion ("time and place"). This ambivalent 'double-voiced' functionality, as Bakhtin (1981) may have referred to it, contributes helpfully to reframing literacy to 'literacy practices' (Street 1995; 2000; 2003) and reflects the 'social turn' as outlined by proponents of 'New Literacy Studies', particularly Gee in the 80s and 90s. This social reframing also contributes to the shift from a static, linear, narrow text-bound and skills-based reading-writing focus to a complex, dynamic, interactive multimodal vision, more apt for a technologically suffused world. The situated, experiential and negotiated scenario approach to meaning making and pedagogy is well served by the variable characteristics and dual (albeit ambivalent) functionality of practice.

The same characteristics are also well aligned to the cyclical and dialogical convergence model of communication (Rogers and Kincaid 1981) discussed below, where participants are mutually responsible for negotiating meaning towards joint understanding and Arnett's (1992) interactive, communicators-as-partners perspective. Unlike earlier linear models of communication where the speaker is dominant and 'in charge' (having much in common with a teacher-centred educational paradigm and autonomous model of literacy), the participative, cyclical models of communication are characterised by greater equality and dialogue. These interactive, relational models resonate more comfortably too with the ideological model of literacy, affording greater participant parity while suppressing hegemonic tendencies. All parties – speakers and listeners, employers and employees, managers and subordinates, teachers and students – seek to transact, shape and transform meaning toward consensual understanding and mutual regard.

In the model below, an attempt is made to represent a dyadic interaction between two parties who, from within the confines of their own 'logic bubbles' or perceptual identities and selfhood, reach out and seek to transact with another. Neither A nor B holds understanding unilaterally. Understanding is not an integral part of their expressive-interpretative logic bubbles but a promise in their midst which through dialogue and relationship may come to fruition. It is the interactive relationship itself which affords the potential for understanding.

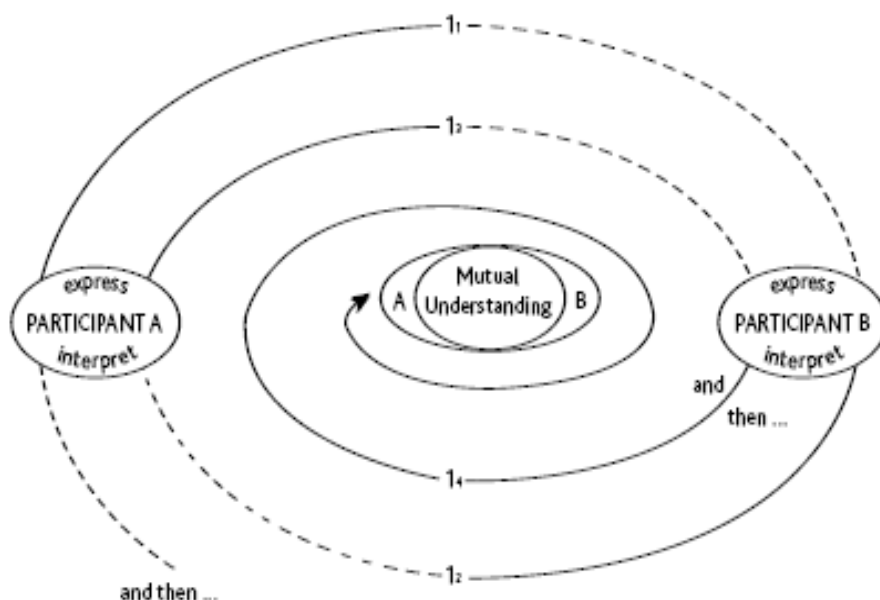


Figure 1: A convergence model of communication (source: Rogers and Kincaid, 1981: 65)

Rogers and Kincaid define convergence as “the tendency for two or more individuals to move toward one point, or for one individual to move toward another, and to unite in a common interest or focus” (1981: 65). As said, mutual understanding is not a creation of any one party

but is participant and context dependent. Communication never happens in a vacuum. There is always the “and then” of a life, a social condition, a normative predisposition or collective ‘habitus’ (Bourdieu 1991) that frames and influences the interaction and the interpretation. Knowledge and meaning is not neatly bestowed from one party upon another, ‘clean’ and intact, a kind of banking concept of communication or education as espoused by Freire (1970) where empty heads can be filled with regular deposits of decontextualised matter to be accepted as the unadulterated, universal ‘truth’ and diligently learnt by rote. Participants are mutually responsible for meaning making which is multilayered and often ambivalent, messy and unpredictable.

Convergence is not a static concept nor is mutual understanding ever perfect as participants grapple with meaning and converge towards ‘common ground’. Although the dynamic, processual nature of communication is difficult to capture, a cyclical model such as the one above “compels us to study relationships, differences, similarities and the changes in these relationships over time” (Rogers and Kincaid 1981: 66).

The shift in the West to cyclical, negotiated and participative models of communication held enormous consequences for democratic principles in government, education and business management with the gradual abandonment of the idea of a passive audience and its replacement of the concept of highly active, involved and selective participants, fully interested partners in the communication process. The authoritarian ‘tell’ and ‘sell’ school of thought of one-way transmission models mentioned above is characterised by power differentials between senders/transmitters and receivers/recipients which always favour the sender. It is assumed that the message is the message *sent* and ‘success’ in transmission is equated with congruency of sender-receiver expectations.

A dynamic cyclical model derives its power from participation and negotiation of meaning as a joint venture, mutually and contextually conceived. The assumption underlying this stance is that the message is the message *(co)received* and the ‘success’ of the transaction lies in equitable interaction and acknowledgement of difference and the reality of global diversity (Steyn 1997, 2003; Human 2005). Kress (2008, 2010) adds the dimension of interest and claims that representation precedes communication. Whereas the communicator or sign-maker decides from a position of interest how to represent what is to be communicated, no communication occurs unless there is interpretation.

Representation is focused on myself and my interest; *communication* is focused on my interest and its relation to others. With *representation* there is first something to which I want to give material realization, making some meaning tangible in the world. Second, the 'take' on what I wish to represent arises out of my *interest*. *Interest* directs my *attention* to something that now *engages* me, at *this* moment. Third, my *interest* is shaped by my history, by my experiences over time in a set of communities and their cultures. And fourth, my interest is shaped by my sense of what is relevant to attend to in my social environment right here and now, in relation to this phenomenon or object (Kress 2010: 50-51, his italics).

Whereas Kress (2010) relates representation to 'self' as sign-maker, he extends communication to the 'other' as interpreter and participant in meaning-making. The receiver, the 'other' determines what should be attended to and this too occurs from a position of interest. What motivates and prompts the communicator to select representational resources deemed apt for purpose and audience and what motivates and prompts the receiver to interpret these representational resources 'communicatively' occurs from positions of interest. As social activities, both representation and communication are transformative providing, respectively, the resources to redesign meaning and the means to reshape the social environment (and be shaped by it). This 'take' on things, to use his expression, resonates with Rogers's and Kincaid's (1981) cyclical convergence model of communication which informs and underscores scenario pedagogy and the framework of negotiated design, discussed in chapter three.

Alongside the shift from senders and receivers to participants in communication, is an equally important shift from senders as individuals to senders as teams and collaborators. Collaborative speaking and writing is more the norm than the exception in most workplace cultures today where individuals are not free agents to do as they please (Gollin, 1999: 278). Teams have to work together to formulate, contest and negotiate meaning. Gollin contends that Flower's definition of negotiation is more apt in a collaborative communication context than "adversarial practices used in political or industrial negotiation", honouring as it does "multiple voices" and an open-minded provisionalism (Flower in Gollin, 1999: 279). This perspective also resonates with my framework of negotiated design. The 'multiple voices' and participation in meaning-making are particularly important concepts in scenario pedagogy.

Besides interest, two further terms of communicative value in terms of co-production of meaning are 'modality' and 'authorial stance'. According to Kress and Van Leeuwen (2006:155), modality relates to "the truth value or credibility of (linguistically realized) statements about the world". This is not to say that a naturalistic photograph or abstract diagram – images that are not linguistically realised – are not capable of exhibiting modality. In terms of the former, "the greater the congruence between what you see of an object in an image and what you see of it in reality with the naked eye...., the higher the modality of that

image” (Van Leeuwen and Jewitt 2002: 151). Likewise a diagram in a scientific or professional domain may realise high modality in an abstract domain. Modality is always contingent on a particular context and domain for its degree of strength. As a characteristic of scenario pedagogy, I would argue that the more topical and authentic the scenario selected, the more ‘truth value’ may be ascribed to it. Authorial stance is also concerned with credibility but shifts the focus from material verbal and visual texts to the communicator and his or her intention to subject and audience. Hyland (1999:101) conceives of authorial stance as “the ways writers project themselves into their texts to communicate their integrity, credibility [and] involvement.” Hyland and Tse (2004:156) use the term “metadiscourse” which views writing as “social engagement” and a means whereby authors “signal their attitude towards both the propositional content and the audience of the text” (Hyland and Tse 2004: 156). Although these works foreground writers and readers, all multimodal communications may be implicated. Authorial stance focuses less on ‘absolute truth’ and more on notions of probability and asks the question: how trustworthy is the data – whether verbal or visual – in the eyes of senders and receivers? For example, just because a statement or illustration is emphatically and categorically stated as ‘factual’ or ‘true’ will not make it so unless evidentially substantiated and proven. Likewise communicators may seem more trustworthy and credible if they use more hedged ‘may/might/could’ statements in a written or oral argument, particularly if they attempt to weigh up the data to support or refute the point considered (as one might do in a set of report conclusions).

Hyland’s original features of stance (1999: 103) comprise hedges and markers of attitude, relations, persons and certainty (emphatics). In later work, Hyland and Tse (2004), present an adapted taxonomy of stance features characterised by greater rhetorical nuance. *Interactive* features such as transitions (‘furthermore’, ‘therefore’); evidentials (cited references); code glosses (‘namely’, ‘for example’); frame markers (‘In summary’, ‘I contend’); and endophoric markers (‘see page X’, ‘in section above’) help to *guide* readers through the text. *Interactional* characteristics *involve* readers in the argument. These comprise hedges which, as intimated above, withhold certainty and commitment and express probability, possibility and provisionalism. Boosters claim certainty and commitment (‘clearly’, ‘absolutely’) and include ‘is’ and ‘will’ language rather than the hedged ‘may’, ‘could’ or ‘would’. Attitude markers involve affect and opinion, often through adjectival and adverbial forms (‘importantly’, ‘noteworthy’). Engagement markers concern the reader/audience and attempt to invoke participation such as questions, asides and imperatives (‘please note’, ‘as you can see’). Self-mentions or person markers, such as the subjective ‘I’ and ‘We’ or the objective ‘the results show’ allow for authorial presence or distance respectively. Hyland (1999: 100) claims that “creating a convincing reader-environment involves deploying disciplinary and genre-specific

conventions” with which specific communities will identify. He quotes Knorr-Cetina (1981:106, original emphasis) who claims that a “published paper is a multi-layered hybrid *co-produced* by the authors *and* by members of the audience to which it is directed. This co-production of meaning can relate to all texts and communicators, not only written documents, writers and readers. That this contributes to creating a mutual, interactive relationship between meaning-makers and more equitable power sharing seems evident. All parties co-produce meaning and assign modality or truth value. Although the relevance of this shift to educational meaning-making and pedagogy is important to understanding the shared nature of scenario pedagogy, this study will focus more firmly on the pedagogical co-construction of knowledge than an in-depth analysis of text features.

In the scenario classroom, teachers-as-partners are a given as they are not scenario subject experts *per se*; on the contrary the students often know far more about the intricacies and practices of the scientific or business scenarios they are exploring and are thus encouraged to ‘co-teach’ within a workshop environment. According to Arnett (1992), a teaching-learning partnership sets up a dialogical and transactional engagement which creates interplay of both affective and cognitive communication practices and power sharing. Therefore, whereas teacher-centred pedagogy is firmly rooted in earlier, often simplistic and autonomous linear definitions of sender-receiver communication, the dialogical ‘partnership’ approach seeks to align itself with a cyclical model where participants explore identities, negotiate complexity, question and cross boundaries, accommodate difference, construct and deconstruct meaning toward mutual understanding and respect (Rogers and Kincaid 1981; Arnett 1992; Grant and Borchers [2002], 2008).

This may take time, care and knowledge of context in which utterances are made. Participants in dialogue may become aware of the uniqueness, the heteroglossia of meaning, as espoused by Bakhtin (1981; Holquist 1990), not in words, but in time-and circumstance-specific conditionality. “Everything means, is understood, as part of a greater whole, there is a constant interaction between meanings, all of which have the potential of conditioning others” (Bahktin 1981: 426). We can only agree to disagree when we acknowledge this fluidity and engage in dialogue, collaboratively, to negotiate understanding, not agreement. Bakhtin’s point that that there is no monologue, no one language shared by all resonates with Fairclough’s (1992) view that language is not transparent. Language and all communicative practices create spaces within and between users to fill up with their own meanings and histories.

According to Rogers and Kincaid (1981), effective communication is not characterised by congruence and agreement but by one’s ability and willingness to accept difference and

ambiguity, embrace change and flexibility and reciprocate appropriately and relevantly. If this thinking can be encouraged and these conditions approximated in (and out) of the classroom, then the aim of developing meaningful professional communication practices rather than mere knowledge of skills and text types can more readily be achieved. Moving toward a multimodal social practice approach holds out the promise of meeting these conditions and more readily achieving this aim.

2.3 Multimodal social semiotics: a meaning-making framework

In this section several concepts such as discourse, domain, genre, identity, mode, design and metafunction, among others, will be defined and discussed within the context of understanding situated practice and communication rather than language-in-use, that is, language and communication in a wider, richer multimodal social semiotic sense rather than a narrow lexico-grammatical sense.

2.3.1 Understanding discourse, domain, genre and design in relation to identity

Extensive use is made of these terms to theorise an appropriate meaning making framework for scenario pedagogy. In Ivanič's (1999: 169) explanation of discourse and genre, she follows both Kress (1988, 2003) and Fairclough (1992) in distinguishing between discourse and genre. "Discourses carry possibilities for self-hood in terms of the values and beliefs to which writers who deploy them become party; genres carry possibilities for self-hood in terms of the social relations and communicative purposes to which writers who deploy them become party." These definitions are key to understanding the intricate interrelationships between them. Equally intricately related are the conceptions of discourse and domain with all three terms having strong links to selfhood and identity as will be seen in the discussion below.

Initially discourse was understood in a narrow sense as a sample of written text and many definitions of these terms focussed only on writing or language. The expanded definition of discourse to firstly include spoken text such as transcribed or recorded conversation or speech and more recently multimodal textual samples such as illustrated documents and other non-verbal artefacts has also brought general agreement that discourse (and genre) can be realised in modes other than written and spoken language (Kress and Van Leeuwen 2001; Archer 2004; De Groot 2008; Gee 2008). Briefly, a discourse refers to any extended sample of multimodal text which domain participants can create, identify and engage with as well as the type of domain specific language in use be that 'classroom' or 'workplace' discourses or, more specifically, 'academic', 'scientific', 'environmental' or 'business' discourses.

In earlier work, Gee (1996) capitalised 'Discourse' as a way of realising its symbolic and ideological power in contrast to lowercase 'discourse' with its more mundane textual definition of 'language in use'. Fairclough's (1992) and Gee's (2003, 2008) later theorising around these issues is useful in this pedagogical context. Within a particular discourse, various *discourse* or *discursive practices* may characterise and differentiate one discourse from another such as those used in information systems or accountancy. Discourse practices refer to the durable and consistent *types* of social practice drawn upon by a particular group and how these are combined and structured to identify the particular group and ideological stance in question (Foucault 1972; Fairclough 1992; De Groot 2008). Shared and situated processes of text production, interpretation and ideology are involved. As discourse and discourse practices reflect a particular domain, they privilege domain participants in a way that builds exclusivity, belonging and professional identity. Van Riel and Fombrun (2007: 63-65) claim that identity is rooted in design, culture and communication. The word identity, derived from the Latin "idem" meaning "same" and "identidem" meaning "repeatedly similar" or "the same each time" hints at fixed elements of being and behaviour. Although our meaning-making and messaging choices may be strongly rooted, durable and recognisable, more than one discourse, domain and identity, or a hybrid combination of them, may surface. Foucault (1992) talks about a 'discursing subject' which relates to the person, the individual, immersed in particular discursive fields or practices and how these may mesh and/or compete (such as environmental and business discourses in the workplace).

A domain comprises two key elements: its multiple semiotic systems, and the attached affinity group, or people that develop and maintain the domain's values, goals, norms and discursive practices (Gee 2003, 2008). The consistent, patterned ways of operating and the articulation of domain elements need learning and regulating, a process taking place only in part through enacting specific textual behaviours. Competence in a domain with its repertoire of discursive practices is signified by being able to fluently interpret (e.g. read) and produce (e.g. write). This is a process that requires reflective ability and metalevel knowledge of the multiple semiotic codes or texts of the domain using its social languages (for example, registers) and design grammar (Gee 2008; Kalil 2008; Grant and Kalil 2008). This type of learning and domain fluency takes time as discursing subjects "strategically blend and cobble together the identity of the moment, balancing bricolage with habitus (Caldas-Coulthard and Iedema 2007 cited in Lemke 2009). Gee (2004, 2008) likens these 'cobbled together' imitative acts to 'bootstrapping' whereby domain participants pick up notions of how to be and how to act in a particular situation by observation, immersion and practice. Lemke talks about identification and how "in various settings...we mobilize these identifications to perform the identities we wish to project and have recognized or ratified by others" (Lemke 2009: 147).

According to Gee (2008: 137), members of a domain have in common a repertoire of “specialized representations, modalities, knowledge and practices” which encompass cognitive and affective information, values and norms, the ‘design grammar’ of that particular domain (NLG 2000; Gee 2003, 2008). A design grammar means “a set of principles or patterns in terms of which materials in the domain are combined to communicate complex meanings” (Gee 2008: 138). It provides a type of ‘short-hand’ which insiders have access to and which means something to other domain members because of their shared professional identity, background and common knowledge of the various discourse practices. Unless members have gained some mastery over this design grammar, they are not in a position to design and communicate messages appropriately.

Each domain affinity group in the workplace, from accountant to marketer, has its own design grammar and students in these groups need opportunities to master these so that they too can design their own messages and, with growing competence, contribute to and adapt the discourses and discursive practices of their chosen professions. Domain participants need to assess what is required to fulfil a particular purpose for a particular audience. This is not static and even less so in a rapidly changing global economy.

Gee is not the only theorist to use the terms design or design grammar. The multiple meanings of design (as verb and noun) have been usefully appropriated by Fairclough (1992, 1995), the New London Group (2000), Cope and Kalantzis (2000), Kress and van Leeuwen (2001, 2003) and Kress (2003, 2010) among others. Kress (2011) prefers the term ‘design’ which focuses less on rigid rules or grammars than on forward-looking conscious choices and interventions in the world to accomplish a particular rhetorical task apt for purpose and audience. “Design asks, ‘what is needed now, in this one situation, with this configuration of purposes, aims, audience, *and with these resources*, and given *my* interest in this situation?’” (Kress 2008: 49, his italics). He recognises the dynamism inherent in choice and the collaborative mindset needed to enact the rhetorical and interpretive choices necessary in representation and communication in the 21st century.

In the NLG’s multiliteracies framework, editors, Cope and Kalantzis (2000) use the terms *Available Designs*, *Designing* and *Redesigning* to describe their particular theory of meaning making. The affordances of many modes and discourse practices allow domain participants (senders *and* receivers) to select from Available Designs, “a creative application and combination of conventions and genre choices” (2000: 20) to participate in Designing, a series of processes which go beyond mere competences to reflect agency and the interests of the designer-producer-sender as well as the receiver-interpretor-co-designer in their joint, negotiated construction of meaning. Cope and Kalantzis (2000) point out that reading, seeing

and listening are also instances of Designing, a view which resonates with the convergence model of communication described earlier, where all participants are co-designers in joint meaning-making practices towards *Redesigning* and transforming knowledge, social relations and identities. Hyland's (1999) claim of texts as socially mediated writer-reader co-productions speaks to the concept of redesigning that all participants engage in to create new meanings, a 'new account', according to Kress (2011).

The multimodal nature of scenario pedagogy, involving the interlocking interests of designers and producers, receivers and interpreters as well as processes and products seeks to mimic workplace domains in business and industry. Going beyond formats and genres such as conventional discourse types or verbal-visual choices to include decisions about materials such as paper or screen (computer-mediated communication), also aims to mimic global demands. The use of computers not only as scenario topic content (e.g. web pages) but also as sites of display in teaching and learning (Vula: UCT's learning management system [LMS], Internet, email, computer-mediated communications (CMC) and PowerPoint presentations) contributes to the notion of growing electronic expertise and know-how. It presupposes that both learners and teachers are/will become proficient themselves in their use in and out of the classroom as an aspect of design.

2.3.2 Modal ensembles and metafunctions

Kress and Van Leeuwen (2001; 2003) argue for a framework with which to examine meaning-making, which decentres language *per se* and recognises the many modes of learning and communication. Kress (2003: 45) defines mode as a "culturally and socially fashioned resource for representation and communication." Modes include representation, communication and meaning making through image, sound, diagram, action, *and* spoken and written language (Kress, Jewitt, Ogborn and Tsatsarelis 2001). Kress also expands the definition of text to include "any instance of communication in any mode or in any combination of modes" (2003: 48). Gee in recent work, (2003, 2008), also moves away from a narrow focus on language or literacy to the multiple coded ways of communicating that people use, from number systems to graphics, to body language, to movement.

From a communication perspective, particularly professional communication in a global and technological era, modal combinations are the rule rather than the exception and opportunities for situated practice within complex real-life scenarios offer students a much greater chance of collaboratively building a shared repertoire of multimodal domain expertise than monomodal linguistic practices. We live in visual, screen-minded societies yet visual, 'non-verbal' modes have been ignored, even suppressed at the cost of verbal ones, particularly writing – and this is especially true in university curricula. The hegemony of writing as a mode is unquestioned

but its superiority seems to be moving onto shakier ground given the inexorable semiotic shifts and emerging digital literacies occurring globally (NLG 2000; Kress and Van Leeuwen 2001; Kress 2003, 2010; Jewitt 2009; Medhurst 2009, 2010).

Kress *et al.* and Gee foreground the multiplicity of semiotic domains, while applying Halliday's (1978, 1994 [1985]) Systemic Functional (SF) theory. This theory explores how meaning is organised in terms of various categories of communicative function namely the ideational, interpersonal and textual metafunctions of language. These three categories of metadiscourse correspond with Kress and Van Leeuwen's (2001, 2003) representational, interactive and compositional metafunctions respectively.

The ideational function comprises both logical and experiential elements and allows users to construe and describe the world and their experiences of it in terms of events, objects, processes, activities, concepts and ideas. For this reason, some theorists prefer to use the term "experiential" (Tan and Yuet See 2009) to describe this kind of meaning. The interpersonal/interactive function relates to who participates in the exchange (writers and readers, speakers and listeners) and the impact of their social relationships on meaning. It looks at how people engage with each other and with the material (texts) being used in the exchange. It is not only what we say (the ideas) but also how we say it (our relationships and attitudes) that affects meaning. This participant interrelationship links to modality, authorial stance and metadiscourse discussed earlier insofar as signmakers and interpreters shape and are, in turn shaped by, their relational and communicative practices (Hyland 1999; Hyland and Tse 2004). The textual/compositional metafunction looks at how texts that we use and exchange 'hang together', that is, how cohesively they are constructed and composed as well as their content and information value (Halliday and Hasan 1985; Halliday and Matthiessen 2004; Unsworth 2006; Stenglin 2009).

Halliday "argued that the grammar of a language is not a code, not a set of rules... but a resource for making meanings" (1978:192). According to this theory, "... the structures of language have evolved (and continue to evolve) as a result of the meaning-making functions they serve within the social systems or cultures in which they are used. Language is considered as a meaning-making system where the options available to individuals to achieve their communicative goals are influenced by the nature of the social context and how individuals are positioned in relation to it" (Unsworth 2006: 57). The flexibility this affords mirrors the goals of scenario pedagogy where meaning making is not rigidly prescribed or enforced but negotiated and shared between participants according to function and context.

Although Halliday focused on language, he was quick to point out that his three macro functions could relate to any semiotic system, both verbal and visual. Like Bakhtin (1981), Halliday also challenged the convention that language use (even academic or professional language) is unitary, impersonal and objective as the self and identity are bound up in all types of communication which condition and are conditioned by them (as is historical context). His three organising principles comprise a useful metalanguage, a toolkit of sorts, which is exceptionally useful in differentiating, organising, ranking and stratifying meanings according to purpose and audience and this study makes extensive use of these metafunctions to theorise and analyse the processes and particularly the products of scenario pedagogy.

2.3.3 Integrated frameworks

The social semiotic meaning making framework and metafunctions described above thus serve and contribute to a comprehensive model of communication for understanding what transpires in a situated teaching-learning environment. As shown, those that view practices as situated and social examine them contextually, in conjunction with the actions, beliefs, attitudes and values of the people and groups who read and write or refer to reading and writing while taking part in wider activities (NLG 2000; Prinsloo 2003; Archer 2006; Lillis and Scott 2008, Kalil 2008; Grant and Kalil 2011).

To summarise, the situated social practice approach recognises that people go about their social lives and in the process write or communicate in specific ways to achieve some of their social goals. Being 'literate' in this sense is ideological and multimodal in the range of semiotic codes that need learning, as well as comprising social and cultural dimensions beyond knowledge of technologies around, for example, language and number use, or simply formats and genre styles (Grant and Kalil 2008). Lemke (2002: 8) summed this up well when he said that practices in scientific and business domains have been described as constituted by "complex integrations across language, mathematics, visual representations, and practical actions".

So, in designing curricula, instead of only homing in on the conventions of particular genres or the formats of certain artefacts *per se*, such as letter or report writing, the role of social and cultural elements in shaping textual production becomes more important. Learners are encouraged to confidently draw on their knowledge of all these semiotic codes and the social and cultural contexts and dimensions within which they operate in order to improve their communicative practices and to do so intelligently and appropriately. This is not to say that only 'local is lekker', a South African colloquialism for 'good'. As Street (2003) has argued, the relation between local social and cultural context(s) and distant, global literacy practices needs to be considered so that neither is privileged. "The result of local-global encounters around

literacy is always a new hybrid” (Street 2003: 4) and it is this hybridity and intertextuality (Fairclough 1992, Candlin and Hyland 1999) – the possibility/promise of accommodating and constructing new texts and contexts, near and distant, re-articulating them and making them one’s own – that interests me as co-designer, teacher, participant and researcher (Chouliariaki and Fairclough 1999). The claim that scenario pedagogy can be designed and managed to engender situated social practice notions of communication such as “meaning-making, negotiation of identity, and social participation” (Clark & Ivanič, 1997: 85) is examined in both local and global contexts in later chapters.

2.4 Co-construction of knowledge and the opening of dialogic spaces

Whereas the semiotic resources discussed above focus in more on multimodal products and processes of communication, the NLG’s multiliteracies framework of *Situated Practice, Overt Instruction, Critical Framing* and *Transformed Practice* privileges pedagogical processes (NLG 2000; Cope and Kalantzis 2000). This multiliteracies pedagogy affords a useful alignment with a dialogical and experiential approach such as scenario pedagogy. It needs to be emphasised from the outset that the four components mentioned above are not neatly sequential but are iterative, cyclical and negotiated. In-class exercises and practices such as reviewing tasks, giving and receiving feedback and debating issues create a dynamic and participative interplay which allows for progress from, for example, ‘off the page’ planning and structuring (from mind map and topic outline) to ‘on the page’ writing, proofreading and editing (final document). This to and fro between draft and final document/presentation, between product and process, strengthens and enlivens experiences and helps build confidence.

2.4.1 Multiliteracies framework of pedagogy

The four elements discussed below are contextualised within scenario pedagogy and will be further adapted (re-designed) in later chapters to more appropriately fit my framework of negotiated design.

2.4.1.1 Situated practice

The overarching ‘situated practice’ component includes negotiating and assigning various appropriate sub scenarios with carefully selected role plays, exercises, discussions and presentations, allowing students to engage with various practices and expand their repertoire in a constructive and scaffolded environment (Smagorinsky and Fly 1993; Tharpe and Gallimore 1988). The environmental scenarios introduced earlier (and fully described in chapter four) aim to provide this supported cum supportive situated practice in which to embed all teaching and learning activities and to form the focal point for curriculum design.

This framework also acts as support for learners who, as with Vygotsky's (1978) zone of proximal development (the ZPD), negotiate the division of labour such that the roles of 'master' or expert and 'apprentice' or learner widen or diminish as the need arises or become blurred and interchangeable thereby stimulating talk and negotiation between differences and identities. Effective teaching and managing are in part about when to provide or obtain assistance for understanding and when to allow learners to operate without interference or help. Opening up a co-constructive space for dialogue with its concomitant benefits and opportunities creates affordances around scenario interests and design choices which imply both flexibility and co-control.

Dyson (1993), Arnett (1992) and more recently Preece (2005) hold that students use talk to organise their social worlds and articulate who they are, relative to others. Dialogic spaces allow young people to interrogate, question and learn about how other people think and live. Dialogue always involves negotiation between differences, power, social borders such as race and class, and accomplishes kinds of social work (Foucault 1972, 1991; Bernstein 1975; Bourdieu 1991; Arnett 1992). It needs to be authentic and respected, however, if it is to flourish in a pedagogic setting. The hegemonic institutional character of a university, traditional teacher-student expectations and huge disparities of privilege and power create a dialogical urgency and necessity to minimise, if not eliminate, participant scepticism and cynicism. When, as recommended by Cope and Kalantzis (2000), situated practice is based on the world of students' 'designed' and 'designing' experiences, then minimising suspicion, apathy and resistance becomes a distinct possibility.

2.4.1.2 Overt or explicit instruction

In scenario pedagogy, the in- and out-of-classroom activities are interspersed with bursts of timeous overt instruction to make explicit the metalanguage of various designs, media, discourses, genres and processes such as writing and referencing various documents and conducting surveys, interviews and meetings. Although overt in the sense that these aims and outcomes are 'pre-emptively' selected prior to the course, these 'lessons' are nevertheless immersed and embedded in situated practice and surface only when required as part of a responsive just-in-time curriculum and not as a drill. Students too are encouraged to take turns in co-constructing classroom participation as and when required to showcase and peer review their planning processes and report back on their field work.

A constructivist approach underpins scenario pedagogy where students are actively involved and responsible for their own learning and contribute towards teaching and assessment. Moving beyond a constructivist view to foreground meaning-making through authentic social and cultural interaction with others, creates the necessary multidimensionality; in other words

the development of the mind and thinking are embodied, and not a purely mental process where learning, that is, acquisition of knowledge, happens in the head (Vygotsky 1978; Varela 1999; Hay and Barab 2001). In the scenario approach participative learning is pivotal, with the apprenticeship-type character of embodied learning seen as the way in which design grammars and discourse practices of various affinity groups or communities of practice can develop effectively for use in future learning and action (Gee 2003; Lave and Wenger 1991), allowing participants to transform practice as described in component four below.

In my discussion of scenario pedagogy and framework of negotiated design described in more detail in chapter three, I adapt the terminology from overt instruction to explicit and implicit instruction. The rationale for this is that not all instruction is overt. The terms explicit and implicit more readily align with and mirror the type of reciprocal instruction given and received in the classroom. Some lessons, as said, are pre-emptively planned and inserted by the facilitator according to a particular teaching plan; others are not but arise as and when needed by either party – the facilitator or various task teams who co-teach at various points. Then too, certain genres and content are privileged explicitly and form part of the course outcomes such as oral and written reporting. These practices are formally taught and assessed. Others, such as setting up a face-to-face, telephonic or email interview, are not and can be considered part of the ‘hidden curriculum’, implicitly ‘covered’ but not overtly taught or assessed.

2.4.1.3 Critical framing and embodied reflection

This aspect refers to how students contextually interpret and frame their growing mastery and control over various social and discourse practices in conscious ways both cognitively and affectively. Reflection on its own implies a mental, cognitive ‘take’ on the processes of thinking through that which occurs as part of teaching and learning *after* the event. To reflect on something implies a past tense. Embodied reflection inserts a feeling dimension which includes (but does not separate) affect and cognition and further implies an ongoing pedagogical dynamic which occurs *during* classroom interaction rather than after the fact. This type of holistic mindfulness in teaching and learning encourages a whole-body ‘heart and head’ approach which aims for embedded contextuality (Grant 2005b; Jordi 2010; Mabry 2011). This goes beyond situated practice to include students’ interest, authorial stance, identity, know-how and habitus: all that makes up who they are or are seeking to become.

This component provides students with opportunities to critically reflect on meaning making and higher order functionality associated with purpose and audience, processes and products in socially relevant ways. A critical and holistic pedagogy, which aims to empower participants to be the ‘architects’ of their own learning, can fruitfully appropriate significant metaphors, allowing students to reflect on and relate meanings and aptness to their social contexts and

purposes. Metaphors such as 'bricks and mortar' or 'click versus brick' are suggestive of designing, planning, building and constructing from mind maps (blueprints) for documents to 'dry runs' (rehearsals) for presentations or from page to screen. These are particularly evocative of a formative, team-based and collaborative approach to pedagogy and assessment where participants are encouraged to act as a construction rather than a demolition team. As students acquire the necessary distance to reflect and (re)locate various discourse practices from one situation to another, they become confident to extend and transform those practices.

2.4.1.4 Transformed Practice

Transformed practice refers to students' ability to assimilate and accommodate principles and theory, discourses and practices in such a way that what is taught-learnt reflects their goals and values, that is, they have assimilated and revised what they have learnt and made it their own. Applying their existing, hybrid and new-found mastery to real-life situations, leading to work-based practices, helps to showcase their developing professional communication practices and expertise.

Generalising their meaning-making practices to wider contemporary local and global social and cultural practices allows students to consciously participate in authentic events and practices which at once acknowledge and value their own multimodal resources, contributions and habitus, as well as wider social structures. How these mediate one another without privilege or overt hegemony is an aim of all mindful and embodied pedagogy (Varela 1999; Grant 2005b).

Apprenticeship-like meaning making that is "deeply embedded in embodied experience" (Gee 2003: 73) involves telling and doing in a process of transforming stored networks of associations "through action and reflection" (Gee 2003: 92). A view of thinking or cognition that is compatible with this approach suggests that thought is shaped and ultimately transformed by sets of relationships or mental models (Mogogo 2005; Gee 2003). Mindful, embodied meaning making also aims to offer a composite '3-D' rather than linear or flat approach because it stimulates and feeds the process from all angles allowing for the accumulation of theoretical and practical knowledge in an accelerated time frame (Lynott 1998; Grant 1999, 2005b).

The importance of deep, participative learning as opposed to rote or superficial knowledge accumulation and enhancing emotional as well as intellectual development is well documented (McCroskey 1998, Goleman, 1995; Grant 1999, 2005b). Instead of simply listening to or reading about the subject matter before doing an assignment, scenario students

are creatively 'assaulted' by seeing/listening, thinking/feeling, assessing/doing in a just-in-time, ongoing fashion (Grant 1999; Gee 2003). Exactly because it involves embodied action, the iterative multiliteracies approach is potentially more transformative and powerful than relying on memory and purely cognitive abstractions such as in rote learning of facts and simply being told important generalisations (passive learning) in teacher-led instruction (Lave and Wenger 1991; Grant 1999; Gee 2003; Kress et al. 2001; Kalil 2008; Grant and Kalil 2008).

Together, these product-process elements and practices can be likened to what Archer termed a "reciprocal curriculum" (2004: 36) as they resonate with a negotiated and reflexive pedagogy and classroom power-sharing. Students from diverse backgrounds and language groups are actively encouraged to bring their own cultural and social resources to bear on learning activities and outcomes and to help shape these by sometimes responding and contributing to them and at other times initiating and guiding them. This pedagogical to and fro seeks to 'unfix' the curriculum and free up both teacher and learner to take turns to facilitate learning activities when appropriate depending on purpose, context and audience. This is not a question of 'equal measure' but rather about encouraging unfettered and supported learning environments where students – especially those from disadvantaged backgrounds – can select and access multimodal resources and affordances. By critically and creatively experimenting with various meaning-making resources, students seek to broaden their repertoires and contribute more freely to innovation. At the same time, they also learn the academic and professional conventions and genres necessary to function and succeed in the world by reframing and transforming their discourses to 'fit' workplace norms, the 'rules' as Bernstein (1996) put it.

A multimodal social semiotic approach to meaning making combined with the four-component multiliteracies heuristic can be usefully combined into a framework of negotiated design. This framework, which is more fully described in chapter three, provides a useful methodological and analytical toolkit to explore scenario pedagogy, analyse the products and processes which emerge in class and contribute to answering my research questions. The following chapter includes the site of analysis, the research design as well as the various methods used to accomplish the analysis.

Chapter Three: Methodology

Chapter three starts with an overview of the general methodology, research design and conceptualisation. Specific methods as they relate to both semiotic products and pedagogical processes follow. Data gathering comprises sample texts, classroom observation, informal discussion, interviews, questionnaires and reflections, all of which are discussed in more detail in chapter four, the analytical site of the study. Qualitative and quantitative analysis techniques associated with these products and processes are described. Methodological limitations, mitigation attempts and ethical considerations are also included in this chapter.

3.1 Overview of methodological stance

This section discusses the particular and general contexts of the study as well as its primarily qualitative focus.

3.1.1 Professional communication context

Given that the subject matter, communication, has multidisciplinary origins and intersects across many research fields (Spitzberg and Cupach 1984; Wardrope 2001), it is apt to weave the threads of various disciplines and theoretical perspectives together to strengthen the strand and enrich the study. This interdisciplinary characteristic can be seen as an advantage as it “affords some flexibility” (Wardrope 2001:244) both pedagogically and methodologically. Although professional communication domains and practices – the focus of this study – form but a small sub-section of communication studies, they too intersect across many fields and disciplines. On its website, the Association for Business Communication (ABC) describes itself as “richly interdisciplinary, drawing membership from such disciplines as management, marketing, English, communication, linguistics, information systems, to name only a few.” Making a case for social semiotic domains and dialogic spaces as I have done in chapter two, the theoretical framework, allows me to focus the study more sharply on my research questions posed in the Introduction involving the development of situated multimodal professional communication practices and emerging professional identity to explore and illuminate scenario pedagogy and its role in HE development.

3.1.2 Education context and qualitative rationale

Educational policy in South Africa has always been a seat of struggle and protest and was highly contested even at the height of Apartheid with its enforced policy of Christian National Education. Educational policy is always informed by political and ideological perspectives which express relations of power and privilege (Foucault 1972; Bourdieu 1991). In particular,

pedagogical power, questions of modality and authorial stance as well as socio-cultural factors involving professional communication identity need to be accounted for in this analysis. My key concern is to contribute to pedagogical and curricular transformation that encourages educational redress for all. Historically, disadvantaged black students suffered greatly in terms of lack of access to educational, economic and cultural resources but *all* students suffered in isolation from each other and the rest of the world. Educational redress needs to cater for diversity while helping to heal past wrongs and imbalances among students of every colour and creed.

The methodology employed in this study is primarily qualitative. According to Maxwell (2005: 17) “[t]he strengths of qualitative research derive primarily from its inductive approach, its focus on specific situations or people, and its emphasis on words rather than numbers”. Although only a few student teams are foregrounded, the study is made up of several stages and will employ varying complementary methods appropriate to each stage, set of objectives and research questions (Babbie and Mouton 2001). These will include multimodal social semiotic and multiliteracies analyses of student products and processes and classroom observation combined with survey methods (questionnaires and interviews), allowing for a ‘thick’ analytical underpinning of the qualitative bias.

This study investigates and evaluates the use of scenario pedagogy, described and analysed in chapter four, in annual professional communication courses in commerce. Major interests for me are:

- understanding the particular scenario *contexts* and circumstances in which actions and discourses occur and how these shape, influence, reframe and transform one another;
- understanding the *meanings* for participants in the study of the discursive, generic and modal practices they engage in, design, select and display and their reflections and accounts of their sense-making activities and texts;
- understanding the *processes* and not just outcomes of events and practices and their dialogical, collaborative, negotiated and experiential nature; and
- understanding the *explanations* and *interpretations* of these events and practices without fixating on finding, testing and proving factual causation.

A minor quantitative analysis of survey results is also used to help generate characteristics of scenario pedagogy (see chapter four) and augment qualitative data.

3.2 Site and data gathering methods

A brief overview of the research site and data capturing tools in relation to my research questions is set out in this section.

3.2.1 Research site

The site of this study involves a scenario pedagogy course run in the commerce faculty. The course includes students registered for a postgraduate diploma in financial accounting (PG Dip) as well as other senior commerce students from fields such as information systems and finance. In terms of sample texts, draft and final student products collected over a two-year period (2008/9) have been selected. In terms of questionnaires and reflections, a third class (2010) has been included to augment the quantitative data, given the small cohorts involved. The class size over these three years varied from 10 to 14 students with 33 formative and 35 summative questionnaires collected in total. The former were completed during the first week of the course; the latter at the end of the course. The abbreviations FQ and SQ are used to identify student responses. Student reflections, mostly completed online, were submitted after the final session with a few arriving after all grading procedures had been completed. Eighteen in total were received. See sections 3.4.4 and 3.4.5 for more detail.

Analysing and comparing the data from the same course over this time period may highlight patterns and trends to assist with answering the third question posed by my research: what are the implications of scenario pedagogy for professional communication and HE development? Discussions around transferability from one group of participants – both teachers and students – to another, and generalisability across wider curricular opportunities are both important pedagogic and HE concerns (Booth and Colomb 1995; Morgan 1997) and this research site will use *Transformed Practice* not only as a component for professional communication student development specifically but also for professional communication course and HE development overall.

3.2.2 Overview of data capture methods and relation to research questions

Methods comprise:

- sample of student texts relating to sustainable business practices and environmental governance scenarios:
 - Draft products: mind maps and topic outlines with sample visuals

- Final products: written investigation reports and filmed oral PowerPoint presentations
- classroom observation
- staff and student discussion and informal interviews
- pre- and post-course questionnaires (FQ and SQ)
- post-course student reflections

The sample of draft and final student texts comprises the product analysis stage, focusing on students' use of multimodal resources in their work. The questionnaires and student reflections also contribute to textual analysis. The classroom observations, transcripts, discussions, interviews and some data from the questionnaires and reflections are used to analyse the pedagogical processes of course participants: students, facilitator and outside experts. Much of this analysis is based upon the distillation of key characteristics of scenario pedagogy as framed by these processes and literature review as will be discussed in the next chapter.

I use a two-pronged analysis to focus on student products and in-class processes of scenario pedagogy in the main. I do, as suggested, refer to other textual products such as transcriptions and reflections as well as some out-of-class activities but these serve merely to foreground and reinforce in-class productions.

Chapter four, as mentioned, describes the site of the research in more detail and provides an analytical platform for subsequent chapters. Chapters five and six focus on preparatory and interim products and processes and chapters seven and eight foreground the final 'polished' professional products and processes. These chapters aim to answer my research questions as outlined in chapter one.

By way of a summary, I list my research questions as well as the sources of data and analytical approach in the table below. As the first two questions are related, each analytical chapter (chapters five to eight) focuses firstly on the draft products and negotiated pedagogical processes at the planning stage and secondly on the finished products and presentations: the business deliverables for target client. These chapters analyse and compare the development of a repertoire and ensemble of semiotic resources which are presented in the classroom over the course of one semester. What draft and final verbal and visual texts do students create to access and explore professional communication practices, appropriate to purpose and audience? Another question that arises is: How are pedagogical events organised, negotiated and shared within affinity spaces to allow and encourage the

emergence of students' professional identities? To answer these questions, the developmental trajectory of a sample of student teams in relation to their in/out of class activities and interactions over time is followed and analysed against the pedagogical framework of negotiated design displayed in 3.3 below. As classroom deliverables and pedagogical processes may/may not follow in sequence but iteratively build and rebuild through selecting, designing, instructing, and transforming, I have attempted to provide particular categories and instances for analysis within the framework.

Also, as there is so much data to consider, I start with four teams at the draft product stage of the analysis (mind maps, chapter five), then focus on three of these in the topic outline chapter (chapter six). In terms of final products, the oral and written reports (chapters seven and eight respectively) the focus narrows to two of these teams. Observations and survey comments are, however, based on a much wider sample.

Table 1: The (inter)relationship between research questions, data and method

Questions	Data	Method
<p>How does scenario pedagogy enable students to access and prepare multimodal professional communication practices in a commerce domain?</p> <p>How, within a shared affinity space, is the development of these negotiated and collaborative practices from draft process to final product shaped by student interest and emerging professional communication identity and know-how?</p>	<p>Main sources (Foreground):</p> <p>Draft verbal and visual processes and products:</p> <ul style="list-style-type: none"> • Mind maps • Topic outlines with key visuals <p>Final verbal and visual processes and products:</p> <ul style="list-style-type: none"> • Filmed oral report using PowerPoint • Final written investigation report <p>Supplementary sources (Background):</p> <p>Staff and student responses:</p> <ul style="list-style-type: none"> • Questionnaires (student) • Interviews (student and staff) • Reflections (students) • James Gee's learning characteristics (2004) • Classroom observations • Tape recorded transcripts 	<p>Pedagogical framework of negotiated design. This comprises:</p> <ul style="list-style-type: none"> • a multimodal semiotic analysis of students' draft and final textual choices and productions, and • a multiliteracies pedagogical analysis of students' developmental trajectory through draft and final stages of course processes <p>This is complemented by a:</p> <ul style="list-style-type: none"> • qualitative data analysis of survey sources, and • quantitative data analysis of survey sources (Fisher's exact test for statistical coding and Likert scale analysis)

<p>What are the implications of scenario pedagogy for professional communication pedagogy in particular and higher education (HE) development in general?</p>	<p>Main sources (Foreground)</p> <p>Responses from staff, students and expert others:</p> <ul style="list-style-type: none"> • Informal discussion with scenario experts • Responses from all stakeholders (email, interviews) • Literature review material <p>Supplementary sources: synthesis of above sources (Background)</p>	<p>The implications for pedagogy are proposed based on multimodal data analysis (multiliteracies and multimodal semiotic analysis) as well as survey responses</p>
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3.3 A framework of negotiated design for analysing scenario pedagogy

This section will include a discussion on why such a framework is useful to analyse the process and products of scenario pedagogy, the analytical approach taken and terms in use.

3.3.1 Rationale for framework

In order to explore products and processes in class, I have combined and merged multimodal social semiotics (Kress and van Leeuwen, 1996, 2001, 2006; Jewitt and Kress 2003b; Jewitt 2009; Kress 2003, 2010) and a Hallidayan metafunctional analysis (Halliday 1978; 1994 [1985]) with an adapted version of the New London Group's multiliteracies pedagogy (Cope and Kalantzis 2000; New London Group 2000) to describe how I envisage a framework of negotiated design for analysing scenario pedagogy.

Although a metafunctional semiotic view of text could be applied to the practices and processes that are played out in the classroom, it principally acts as both overarching and underlying framework and toolkit in my multimodal analysis of textual products. The four elements of a multiliteracies pedagogy (the 'how') and the three aspects of meaning (the 'what') are likewise relevant to both product and process (Cope and Kalantzis 2000). As mentioned in chapter two, these elements need not follow a rigid, sequential pattern and may be combined in various ways to supplement and enhance teaching and learning.

As also noted earlier, the division between process and product is blurred and somewhat artificial. The acts of mind mapping or topic outlining together with their display and presentation are part of the process of gathering, designing and structuring information. The physical paper-based mind map is also a textual product, albeit a draft one. A similar argument can be made for the topic outline or a sample illustration. The product-process

division is therefore an analytical one allowing me to selectively foreground and focus in more on product or process as appropriate.

There is another reason why I have chosen to merge and combine a number of theoretical and analytical perspectives in my framework as displayed below. An early criticism levelled at multimodal semiosis which focused solely on text as a site of analysis often revolved around the isolated, disembodied nature of such research (New London Group 2000; Jewitt 2009). Educational and linguistic researchers such as Martin (1993), Street (1995; 2000, 2003) the New London Group (2000) and Iedema (2003) among others, underscored the need to include social context and situated practice in textual analyses. In *The Routledge Handbook of Multimodal Analysis*, Jewitt (2009: 26) provides a brief overview of the “limitations of multimodal research”. She starts this seminal work with a thoughtful breakdown and critique of various strands of multimodality as theory and methodology, focussing more on their contributions than shortcomings. In terms of literacy studies, criticism was also levelled at the ‘stand alone’ autonomous views of literacy and monomodal approaches privileging language. These debates gave rise to a great many ‘new’ literacy studies and interest in multiliteracies, ideological views of literacy and literacy for a new media age (Street, Pahl and Rowsell in Jewitt 2009; Prinsloo and Baynham 2008; Gee 2000; 2008 a & b; Lillis and Scott 2007; De Souza 2008; New London Group 2000; Cope and Kalantzis 2000; Street 2003; Archer 2001, 2006 and Kress 2003; Barton and Hamilton 1998; Medhurst 2009, 2010).

Although there is little doubt that texts can be usefully analysed in the absence of their creators or the social contexts in which they emerged, a social semiotic approach, as advocated in more recent multimodal studies, privileges both text and overriding societal factors of the times (Jewitt 2009; Kress 2010). As a communication practitioner, I share the belief that “[c]ommunication always has been and always will remain subject to social, cultural, economic and political givens” (Kress 2010: 19). Having access to student products as physical artefacts, the generative processes of production and the observed negotiated processes of presentation over time has allowed me to contribute to this growing body of social semiotic research. Embedding all teaching and learning within an existing and overarching topical context is a characteristic of scenario pedagogy. Using a broad pedagogical framework such as the multiliteracies framework thus makes sense. But combining it with a multimodal perspective on student productions allows for a more in-depth analysis which aims to speak to the complexity of representation and communication in a meaningful way.

As a researcher, questions of interest include: How is student work expressed? What does it communicate about a particular student or partnership/team? How does it reflect their lifeworlds, interests and emerging identities as young professional communicators? What does this work say to the audience? Are purposes and design functions starting to take shape? Is mutual and negotiated meaning making and understanding emerging and converging? These issues and questions contribute to answering my research questions and framing the analysis in the chapters that follow.

3.3.2 Analytical approach

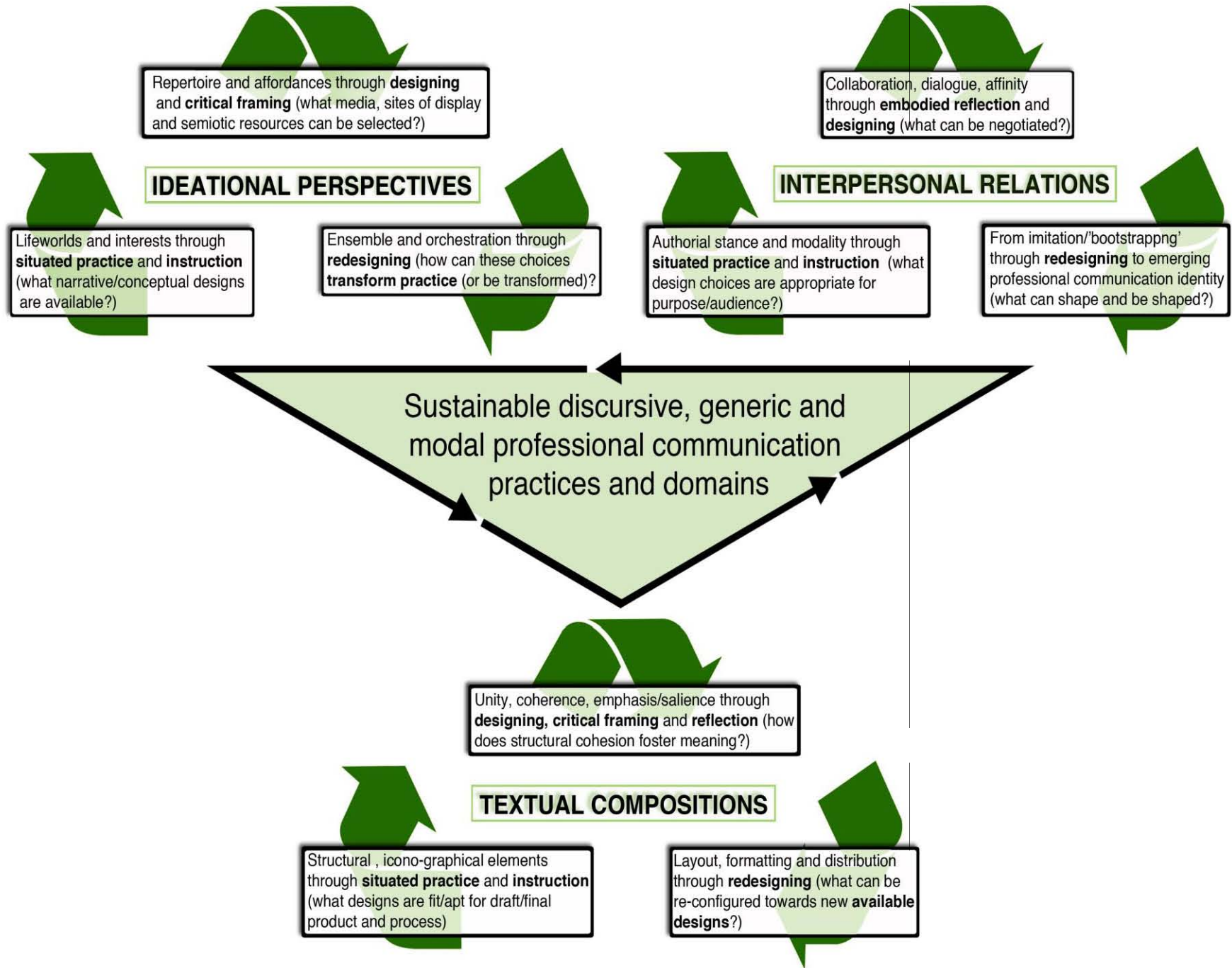
Firstly, I primarily use a social semiotic analysis to investigate students' textual products and how students grapple and engage with multimodal resources, discourses, domains, genres, modes, media and sites of display from draft form through to finished deliverables for assessment. These written, oral and visual professional workplace products serve as exemplars of developing professional communication identity and expertise. Halliday's (1978, 1994) social semiotic metafunctions provide a useful lens for analysing meaning from the perspective of: the ideational (epistemological representations of the world and knowledge systems); the interpersonal (dialogical relations and interactions between participants and products) and the textual (unity and coherence of multimodal texts).

Secondly, in analysing process, I predominantly use the four adapted components of the multiliteracies framework: situated practice, explicit and implicit instruction, critical framing/embodied reflection and transformed practice to illuminate scenario pedagogy of participation). This embodies the 'what' of teaching and learning. A useful bridge to analyse both products and processes is the multiliteracies use of available designs, designing and the redesigned the 'how' of teaching and learning to illuminate selection, application and implementation of resources towards domain and discourse mastery (NLG 2000; Cope and Kalantzis 2000). The framework of negotiated design illustrates how these resources and components are combined for analytical purposes.

3.3.3 Framework terms in use

In this framework, the connections between pedagogical product and process have been mapped and displayed simultaneously in an attempt to represent the iterative and dialogical nature of scenario pedagogy. Domain and the discursive, generic and modal practices that occur within it are key concepts central to the overarching scenario context and commerce fields of study. Environmental responsibility and sustainable business practices are, given global events, increasingly acknowledged as critical to commercial discourse, besides financial profitability.

Figure 2: A framework of negotiated design for analysing scenario pedagogy



During the last decade in particular, many business and professional domains have suffered reputational damage for dubious business conduct. For this reason, these elements are at the very core of the analytical framework as can be seen in figure 2. Although course outcomes and my research questions relate specifically to developing 'professional communication practices', each of these three words can envelope and signify manifold meanings. The term 'professional' can relate to the professions such as accountancy or marketing but equally to a sense of professionalism and doing things well (mastery/high standards as opposed to novice amateurism). Besides doing things right, recent shifts to doing the right things include an ethical standpoint to long-term sustainability in business.

Likewise 'communication' is an umbrella term encompassing objects, ideas, knowledge systems, actions, experiences (ideational metafunction) and social relationships (interpersonal metafunction) as realised in verbal, visual and aural compositions of every conceivable kind (textual metafunction). A metafunctional focus posits a multilayered approach to meaning-making in terms of understanding how knowledge systems, experiences and relationships work and combine within and across various texts. I have not attempted to neatly separate the metafunctions in the analysis in later chapters as their connections merge and underpin one another. What/whose interests are being served, how, by whom and for what purpose are questions that co-habit, intermingle and contribute to framing the discussion, particularly on modality, authorial stance and metadiscourse. In my framework, in accordance with a left-right reading path, I have located ideational perspectives on the left and interpersonal relations on the right. Both of these are jointly manifest in foundational textual compositions situated below.

The term 'practices' rather than skills connotes developmental actions sustained over time. As a concept, it aims to move away from effective communication as a set of fixed traits or mechanistic attributes and a deficit view of 'haves' and 'have not's' to ongoing, life-long interactive meaning-making.

I have used the recycling logo of three cyclical arrows as part of my framework. Not only does it signify regeneration and represent the scenario topic, it also reflects the convergence model of communication discussed in chapter two. This outer layer of the framework merges the 'what' and the 'how' of the multiliteracies pedagogical framework with social semiosis which highlights the affordances of media, sites of display, genres and modes and asks of sign-makers and interpreters: what interests you and how then will you engage, participate, negotiate and transform meaning collaboratively?

With negotiated and collaborative sign-making much process-product creation is blurred and the iterative nature of representation and communication is ongoing and dynamic. The use of arrows centrally points to the cyclical and iterative nature of representation and communication. Although an attempt has been made to guide reading path, the lack of arrows between each outer 'section' in the framework is not an attempt to disclaim connection but rather to highlight the fact that readers can start at any point and move to and fro between elements as appropriate rather than in a fixed or sequential path.

3.4 Detailed description of data and methods

Methods pertaining to both the products and processes will be set out in more detail in this section.

3.4.1 Sample of student texts

As mentioned above, selected sets of draft and final student texts are analysed through identified theoretical lenses pertaining primarily to multimodal social semiotic and metafunctional analyses and the multiliteracies pedagogical framework. These theoretical approaches have been adapted and merged into my framework of negotiated design as shown. Sample draft products include mind maps on flipchart paper and topic outlines and sample visuals on overhead projector transparencies. Sample final products comprise oral presentations using PowerPoint as well as bound, hard copy investigation reports. These products will be discussed in more detail in chapter four, the site of the study.

The oral presentations (rehearsal and final) were filmed by the facilitator which freed up the researcher from involvement. From a researcher's perspective, as an observer at these sessions, I could view the speakers and record impressions first hand and not through the camera lens. I was also able to observe the audience who were not filmed and, as with the earlier mind map and topic outline presentations, consider the interactive aspects of and between audience and team members. This allowed for a rich, complex impression of the proceedings and the continuous interplay between modes.

The use of video allows the researcher to visit and revisit the data many times to see what teams elect to change, maintain and adapt during the second session. Comparisons can be made in terms of how students view what is deemed apt at draft stage and how they transform delivery style, content and their own bodies for the final deliverable to the client i.e. how they elect to instantiate professional practice in terms of their interpretation of professional identity and what they consider appropriate for purpose and audience.

Genre analysis is acknowledged insofar as the site of this study involves students in institutional academic and professional settings but the focus of textual analysis takes its cue from multimodal social semiosis with its more expansive appreciation of the interactive semiotic landscape (Kress and Van Leeuwen 1996, 2001; Kress 2008, 2010; Jewitt 2006; 2009; Norris 2004). Besides genre, I look at discourses, domains, modes, media and sites of display. Within each of these, various tools are identified to further extend the analysis.

3.4.2 Classroom observation

As discussed in more detail in chapter four, I have taught on past scenario pedagogy courses in other departments such as computer science in the science faculty. These prior courses have served as pilots of a sort in that they allowed me, as researcher, to analyse past work and fine-tune future applications. Based on teaching experience (my own and observing others), student opinion and literature surveys, I was able to discern and confirm characteristics of scenario pedagogy (See section 4.3 for a closer identification of these clusters.)

I elected to firstly co-teach in a minor capacity during 2008 and then from 2009 to withdraw from teaching and observe a colleague who has co-taught with me for many years. This allowed me to more aptly fulfil the role of observer and researcher than active participant (see ethical issues in 3.5.2 below). My colleague and I compared notes before and after particular workshops about events in the classroom and student reports of their activities during the week (e.g. what material they had located, who they had interviewed, future plans and so on). She also included me in her communications with students via UCT's online learning management system, Vula, and provided copies of student communications and downloads.

3.4.3 Staff and student discussion and informal interviews

Various discussions with staff, students and expert contributors were held during the course and a number of post course interviews to more readily gauge longer-term reflections and opinions were conducted. A few formal student interviews were also used to cross reference discussion questions, questionnaire responses and to elaborate on attitudes and perceptions to product and process in a face to face situation. These were tape recorded and professionally transcribed to allow me to revisit the data and compare responses. Primary staff members (facilitator and expert others) were also contacted to capture their impressions on student work and pedagogical processes and how they viewed their contributions. An external student doing her Masters in education during 2008, who asked to observe one of our course modules, also provided feedback on her observations (Humna 2008).

3.4.4 Questionnaires

The aim of the first questionnaire (FQ) was to obtain primary data from students concerning their existing views about professional communication practices, meaning-making resources and HE grading and assessment practices. Students filled this in near the start of the module. Only open-ended questions are included. The post-course questionnaire (SQ), delves deeper into their meaning making resources and genre conventions and elicits views about academic and professional communication practices in general and writing tasks in particular. Their critical view of scenario pedagogy, the aims of the course and the various processes and tasks required to accomplish these aims were sought. For this questionnaire, I adapted some of the questions to align with Gee's (2004) conceptions of meaning making to provide more nuanced data on the role of student interest and identity in situated practice. Condensed examples of both questionnaires can be found in the appendices starting on page 225.

Annually, course questionnaires are completed in class or online. With such limited numbers, relationships tend to be personal and the response rate is high over the period. Although the study is primarily qualitative, a quantitative statistical analysis of the three sets of summative questionnaires is included (2008/9/10) in chapter four. A Fisher's Exact test (a Chi-Square type test used for smaller samples) looks for associations between any two category variables and trends over the three-year period. It provides descriptive statistics in terms of year of study, gender, home language, other languages, years in tertiary education and previous work experience. This data is useful to interpret significant relationships and to quantify patterns and trends according to these selected variables. This test has the advantage of being able to calculate the P value (probability of observing the results obtained), despite the smallness of the sample. The usual statistical cut-off value of 0.05 was used. If the P value is above that, then no significant association exists; if below, then it does.

This questionnaire comprises 30 questions. The first section includes demographic information as outlined above and some open-ended questions to elicit students' views on the structure of the course, the benefits and drawbacks of scenario pedagogy as a teaching-learning approach as well as general comments. Section two, comprising 23 5-point Likert scale questions (strongly agree, agree, uncertain, disagree, strongly disagree) about, among others, learning preferences and writing tasks, follows. The statistical analysis aims to contribute to the study insofar that if certain relationships, patterns and trends, established over the period, emerge, it may be possible to more confidently draw conclusions and highlight salient implications. This "synthesis of sorts" (Jones and LeBaron, 2002: 505), an epistemological merger between quantitative and qualitative approaches and methods may contribute to the analysis overall. So, although the statistical aspect can be located in a more

quantitative research paradigm, the analysis as a whole, from textual analysis to participant observation, is primarily driven by qualitative data with an overtly post-positivist bias.

3.4.5 Post-course student reflections

Students were asked to reflect on the entire experience, both inside and outside the classroom as well as individually and collectively as task teams. They provided feedback on the various communication processes which they and the workshop leaders initiated before and during the course and gave opinions on their role-play constructions, the challenges and opportunities faced and used to enhance their expertise and communicative practices. These were handed in as hard copy or online mostly after the final written assignment had been completed so that students could reflect on all the products created and their representational choices from draft to final assignment. Many reiterated points and comments made in questionnaires but the reflective focus shifted away from the course *per se* to their own contributions and attitudes, particularly to sustainability.

It is important to note that quotations used throughout this dissertation, whether from questionnaires or reflections may, in some cases, have been shortened but reflect the spelling and grammar of the original.

3.5 Methodological scope, limitations and ethical issues

All researchers devise parameters and boundaries within which they can pause and take stock. As intimated in the theoretical framework, many areas could be highlighted but only a limited selection of theories and theorists are privileged. Of the many constraints inherent in this research, the following are particularly significant.

3.5.1 Scope and limitations

The classes are small enough annually for me to focus on an entire class. This would indeed be possible if I were to analyse only selected pieces or take a purely quantitative approach. However, following the trajectory of selected teams over time and looking at a complete set of draft and final deliverables dictates that a smaller sample of students be selected, using a more qualitative lens. Although I do not draw on all the data available equally, key products and moments that serve to provide a more nuanced and fine-grained analysis of scenario draft and final products are privileged. In terms of additional information such as questionnaires and reflections, I have, as mentioned, drawn on many more including questionnaires from 2010. This allowed me to collate data from three classes in order to add more contextual depth as well as conduct a statistical analysis which would have been impossible with a smaller sample. Although this sample of students may represent senior

commerce students in general, the fact remains that only their work 'counts' in this analysis and any conclusions drawn, as observer and researcher, are limited by this condition.

3.5.2 Ethical issues

As Brynard and Hanekom (2006: 87) attest, "full disclosure by the researcher is only one of the conditions of informed consent included in most guidelines for the protection of human subjects." Even though the type of research manifest in this study carries no risk to 'life or limb', it is still incumbent on the researcher to follow protocol and obtain ethics clearance at the outset of the project. The paperwork aside, more important in this type of research which requires observation and the use of student data is full disclosure about the nature of the project at the outset. I addressed the students at the beginning of each course and obtained their written consent to use their products as data; no one refused although they were afforded the right to do so.

As researcher, I am responsible for my observations and selections and the unilateral choices I make in what to attend to and select bestow a power which the subjects of my research do not share. This is not a collaborative decision. Although participant voices are privileged in their negotiated work and feedback, how I use this knowledge is by its very nature selective and open to bias. In an attempt to counter this, I have tried to use multiple products and processes over time and a two-pronged methodological approach. I have also attempted to keep an open mind and to listen to these "multiple voices" (Flower cited in Gollin 1999: 279).

The benefit of using taped transcriptions outweighed the fact that, once again, selection was at work as it would have been impossible to tape every session. Nevertheless, taping important moments of student discussion and presentation allowed for greater accuracy. These transcriptions also supplemented my notes which in turn aimed to enhance validity and reliability.

I also used video to film their oral presentations. Using video raises ethical concerns particularly given the aspects of power, selectivity and, importantly, confidentiality. Although students' gave their consent at the outset and all names have been changed in the study, using photographs and screen shots in later chapters does allow participants to be identified. Students were unconcerned about the issue of confidentiality. They were also quite open about viewing their own presentations and allowing their peers to do so too and many considered these video sessions to be the highlight of the course.

Another ethical consideration is researcher participation versus observation. Teacher-as-researcher may enjoy a closeness and understanding that a more distant researcher may not be privy to. However, researching one's own practice introduces the danger that one may exert undue pressure and influence, albeit unintentionally. Participant researchers may become too involved with their subjects and, as Babbie (1983: 248) contends, lose their "scientific detachment". Although he argues that each role of the observer from involved/present to detached/distant has its advantages and disadvantages and that true objectivity and detachment are well-nigh impossible, caution is recommended in participative settings to avoid misrepresentation. Having taught on this and similar programmes for many years, I felt that I could enjoy the best of both worlds in that I had been 'fully present' in earlier years as teacher, then, during 2008, I co-taught with another facilitator who took over the teaching completely during 2009 and 2010. Withdrawing and ultimately removing myself from teaching altogether allowed me to aim for as unobtrusive a role as possible.

In terms of the teams whose work is analysed in later chapters, I chose complete sets with no consideration for grades or background. Indeed, final grades did vary, particularly for the written report. There is also considerable variation in terms of socio-cultural and linguistic backgrounds, as set out in the next chapter.

Chapter four describes the commerce site of the study. It evaluates scenario pedagogy not only as the context within which the commerce application is examined but also its characteristics and comparative trends and outcomes.

Chapter four: exploring the scenario pedagogy course in commerce

4.1 Background to site selection

In this chapter, the first forays into scenario pedagogy are briefly outlined before the site under investigation is foregrounded. The commerce site highlights major student-designed and produced semiotic products and processes which make up the units of analysis, described earlier. An overview of previous work provides a rationale for my decision to transfer this teaching-learning approach from one faculty and context to another. It also serves as a pilot insofar as it proffered an opportunity to discern the characteristics of scenario pedagogy deemed most apt for enhancing professional communication practices. These clusters of characteristics, further generated in these later commerce sites of analysis, are based primarily on an analysis of 35 summative questionnaires (SQ) from 2008 to 2010. They provide a platform against which the product-process analysis in later chapters can be gauged. The formative questionnaire (FQ) also provided useful demographic information on student background and opinion at the start of the course.

4.2 Early scenario pedagogy applications

Although the Professional Communication Unit (PCU) is located in the Commerce Faculty, it has traditionally offered PCU courses across faculties. Besides commerce, I have taught in the Science Faculty since the early 80s when I was approached to join the Computer Science Honours programme. In the early 90s, the department also asked me to run a writing module with their senior undergraduate class to prepare them for the competitive world of work and teach them to 'market' themselves better. An in-house genre-based writing course was introduced at first but met with mixed success. Although the department was critical of student 'shortcomings' and growing industry demands for communicatively able graduates, the students themselves seemed apathetic and disinterested with what was perceived as a trivial, boring 'add-on'. Discouraged with appearing to foist what was considered a 'language' or 'English' class on these technically-minded students, I started experimenting with various teaching practices early on. Keeping student background, disposition, attitude, interest as well as global events and technological developments in mind, the kernel of a scenario approach to pedagogy started to emerge.

The launch of the PRISM project (Project to Revolutionise Information System Management) at UCT in the 90s presented a unique opportunity to situate the teaching within a context-rich scenario that aimed to galvanise student attention and sustain their interest (Grant 1999). This was followed by other sets of scenarios such as the controversial Millennium bug or Y2K, the

Integrated Student Support System (ISIS) project and subsequent 2008 upgrade of PeopleSoft and the SupaTsela project which involved a number of ICT hardware and infrastructure renewal initiatives (Grant and Kalil 2010).

These earlier scenario courses form the historical background to the investigation insofar as they provided pedagogical insights for future course design.

4.3 Commerce faculty application and characteristics

The diploma communication course had been running for many years as a conventional PCU course and the 2008 scenario intervention was an entirely new departure and the first of its kind in the commerce faculty. As a full, credit-bearing course, it comprises a number of assignments, oral presentations and a written examination, affording students a much broader exposure to an ensemble of multimodal professional communication practices than the shorter science courses. Although the commerce faculty stipulates general professional communication competencies, particularly writing, the PCU has *carte blanche* to teach how and what it deems appropriate.

Pedagogical aims (based on departmental instructions), classroom approach and theoretical conceptions may be similar in both science and commerce but as course duration, student characteristics, scenarios, domains and discourses differ, this more recent professional communication scenario application may raise some interesting questions about multimodal situated practice in local and global business contexts.

4.3.1 Student composition and 'habitus'

The commerce-based Postgraduate Financial Accounting (FA) Management Diploma caters for those students from any university with accountancy as a major who wish to pursue the Chartered Accountant (CA) qualification. As many universities do not offer this highly prestigious qualification, UCT attracts students from elsewhere as well as in-house graduates who wish to become CA's¹. In any given class, therefore, about half the students are new to UCT. As with primary and secondary education, tertiary education in South Africa suffers from the legacy of an Apartheid past and graduates from traditionally black universities are deemed unprepared in many respects. This diploma is a prerequisite for entry to the postgraduate diploma in accounting (PGDA) for any students who do not have a CA option in their

¹ The UCT CA qualification has an enviable reputation for excellence and a much higher South African Institute of Chartered Accountants (SAICA) pass rate than elsewhere in the country. At the end of 2011, UCT's Department of Accounting evolved into a fully-fledged College of Accounting.

undergraduate degree (mostly traditionally black universities). This year of “intensive study” (UCT Commerce Faculty handbook 2009: 66) serves to accelerate preparedness to the expected PGDA entry level so that these students can compete more readily. Since 2009, the professional communication course has become more mixed with students from other departments such as information systems (IS), finance and marketing registering.

Students in technical fields such as accountancy or information systems have often been labelled inarticulate communicators, more interested in numerical data than linguistic subject matter (Hemphill and McCormick 1996; Grant 1999; Archer 2004; Case 2007). Accountancy and information systems students also tend to have courses (and literacy practices) skewed towards developing numeracy with minimal or zero focus on communication *per se*. When they do communicate, a monomodal approach with a reading-writing focus takes precedence. Communication practices are also geared to academic and specialist practitioner audiences with little or no consideration given to mixed or lay audiences or those affiliated to ‘lifeworld’ contexts in the public or private sector (Oblinger and Oblinger 2005; Grant and Kalil 2011).

Additionally, as the communication course is not a major subject, students may lack motivation, especially at the outset. Yet, the very nature of the work they will engage in as professionals requires that they are able to effectively present their findings and sell their ideas to a global audience. And all too often, the decision-making but non-specialist audience who needs to be convinced is more interested in understandable, cost-effective applications and financial forecasts than theoretical data or jargon. The choice of scenario, therefore, is crucial, so that students perceive it as relevant in terms of their professional development and workplace understanding (see 4.3.2).

Although, as stated, some of these students have an undergraduate UCT degree, many do not and come to UCT from all over the country and internationally to prepare themselves for their professional CA qualifications. Classes are characteristically diverse in terms of language, nationality, socio-economic background and many other factors involving cultural, religious and political affiliations, race, gender, age and educational background. Home languages vary over the years and can comprise English, Afrikaans, a number of African languages, including Portuguese and French spoken by our neighbours to the north, other European languages such as German, Dutch and Swedish and Asian languages such as Korean and Mandarin.

The group is highly heterogeneous in terms of varied backgrounds, business specialisation and range of workplace experiences. These students may not know each other well (if at all),

some having just arrived at UCT to pursue postgraduate studies and others coming from different undergraduate programmes within commerce and even science and humanities. About a third to half the class is female. Depending on the length of their undergraduate degree or work experience, the average age, mid to late twenties, is also older than most of the other PCU classes. Occasionally, students have been in their thirties. Black students tend to be older than their white counterparts by a year or more. Although, in annual surveys, I have not queried students directly, I could speculate that socio-economic factors and pass rates may affect when students start university and their academic trajectory. Some students, however, simply have an extra year of schooling, completing their A-levels in countries such as Kenya and Zimbabwe before starting university. Besides nationality, a number of these students, particularly black students, have working class roots and rural backgrounds and are often the first generation with tertiary opportunities and ambitions.

At school, in particular, socio-economic deprivation may have affected familiarity with and access to resources (particularly communication media, both traditional and electronic), levels of maturity and sophistication, and communicative confidence and ease (especially EAL students from disadvantaged backgrounds). Although technological access may improve greatly at university, economic wherewithal may not and several impoverished students have been known to operate at university under far from ideal personal and academic circumstances.

What these business and technical students do share in common is their interest (and growing expertise) in technology proliferation and awareness of global issues. In information systems research, this generation, known as “The Net Generation” (Oblinger and Oblinger 2005) are characterized as being screen-minded, enquiring and more visually than verbally proficient. Their web-based visual sensibilities and know-how equip them with great communicative potential in the ‘tech-savvy’ knowledge economy of multinationals and transnational business dealings.

As senior students they also have a number of years of tertiary acclimatization (albeit not all at UCT). The use of local, institutional scenarios may foster greater awareness and ‘buy-in’ of institutional goals and responsibilities. An interesting survey finding (SQ) is that even newcomers seem proud of ‘belonging’ to UCT. It is important therefore that the scenario selected is relevant to the lives of the students in some way so that involvement and ‘ownership’ may be heightened. “I enjoyed reading through the Green Campus Action Plan and learning more on the how’s and why’s of energy sustainability at UCT”, was one of many similar comments. This sense of campus belonging, together with their post-graduate status,

seems to enhance their interest and 'affinity' as novice professionals. This attitude may, in turn, boost their confidence and camaraderie.

Another characteristic which emerges from SQ findings relates to work experience. Students, particularly postgraduates, often need to generate additional income by tutoring and other part-time work. It is interesting to note that every student had or was working part-time, either at the university as a tutor or in the private sector. A few held more than one job and their work-based ambitions, wider disciplinary background, resourcefulness and resilience present valuable opportunities for situated experiences which could benefit them academically and vocationally.

The black, 'coloured' and Asian cohort, in particular, also has multicultural and -lingual backgrounds. An interesting finding from a Business Communication Needs Analysis, a National Research Foundation (NRF) funded project conducted in 2001/2 (Grant 2003; 2004) involved both gender and ethnicity. Definitions of effective communication and competence were more thorough, in-depth and encompassing in predominantly female, EAL groups: "only a small number of students (generally female and second language) noted diversity or gender sensitivity, multilingual abilities and fluency (not just 'use of English') or 'ethical as well as cultural factors' (15%, $n = 23$) in their definitions of communicative competence". Although these students are generally perceived as 'less expert', particularly in the commerce domain, they could arguably be regarded as having a greater understanding of the complexity of communicative competence than the perceived advantaged yet mostly monolingual English first language group who also happened to be predominantly white male.

A decade later, a Fisher's exact test for significant association has found that although there is no significant difference in how students have answered the SQ in terms of home language, age, number of years in tertiary education or previous work experience, "there is a significant association" in how students answered question three. Whereas female students "strongly agreed" that "effective writing and presenting are key aspects of professional communication practices", males tend to "agree". This sense of involvement and passion is also evident in the pre-course FQ. Female students at this level seem to feel more strongly about communication practices in general than their male counterparts.

The heterogeneity and diversity evident in the class across language, race, gender, age, among others, offer the advantage of workplace similarity where employees generally do not get to choose their co-workers and need to accommodate difference across a range of identities, know-how and many other qualities. These group constraints and affordances can be explored reciprocally in class and in the field so that individuals/partnerships are willing to

explore challenges and opportunities constructively. Feedback on group dynamics reflects that although for some “Group work is a pain.... I prefer to rely on myself”, the scenario pedagogy approach aims to reflect a “real world experience” where “[c]ommunication is important between team members ... [to] iron out difficulties” by finding out “how different people communicate effectively but in varying ways and combinations of ways.” The technical, communicative and attitudinal potential which exists in the class provides ample meaning-making resources which could be called upon and utilised.

4.3.2 Topicality of scenario

The context for this scenario course is UCT’s Sustainability Programme and ‘go green’ policies. Based on experience with and reception of scenario pedagogy in computer science and rising concern with curriculum relevance – particularly in the aftermath of the economic meltdown starting in 2007 – the decision was taken to introduce a course in the commerce faculty which might add global value. As evidenced by international attention, sustainability has become the watchword of the early 21st century and a global imperative in society, business and government. Sustainability can be defined as that which continues, is ongoing or has a viable future, not for its own sake but to ensure long-term feasibility of policy, strategy or mission in relation to people, profit and planet. Although UCT has been a signatory of the Talloires Declaration on sustainable practice for decades (see page 54) and has in the past spearheaded certain policies to enhance sustainable development such as the War on Waste (WOW) campaign of the 80s, these efforts had stalled and little success was achieved, mainly due to a perceived lack of cost-effectiveness. A sense of urgency, particularly global urgency, was perhaps missing then too. In the wake of the economic crisis, a meltdown of a different kind was feared worldwide as global warming issues took hold so the launch of UCT’s ‘green’ policies and programmes in August 2008 – amidst growing international environmental and corporate governance concerns – was fortuitous and timely.

Environmental and sustainability policy issues will not only remain topical (and contested) for years to come but, as a subject, is suitably complex to use as a situated scenario at postgraduate level. By providing an institutional yet global scenario, the course aims to provide:

- interest and motivation to participants (more so than when provided with case studies already researched by staff);
- variety of multimodal subject matter to suit individual interests;
- meaningful participation in real issues concerning corporate governance and the ‘triple bottom line’ (financial, social and environmental reporting);

- promotion of the undertaking of UCT's March 2008 Sustainability Programme and the Talloires Declaration signed by university leaders in 1990 and again in 2002.

In order to reduce UCT's carbon footprint, four major areas were identified that include energy savings, reducing carbon emissions, recycling and water conservation (Hall and Murray 2008). A strategy for sustainable management is directed at education, cost cutting and social responsibility with the ultimate aim of contributing to urban renewal, job creation and poverty alleviation.

Sustainability, as a global phenomenon, has recently generated a large body of scholarship worldwide (Critien 2007; Hall and Murray 2008; Rippon 2008-2011; Mabry 2011; ACDI 2011). Equally, it has garnered very powerful and influential lobbies of public and private sector skeptics whose vested economic interests may conflict with environmental social responsibility. According to Hall and Murray (2008) and more recent global pronouncements, more and harder evidence of carbon emission damage and proof that sustainable development makes good economic sense irrespective of belief has silenced some but certainly not all skeptics, some of whom are scientists. Stronger leadership was seemingly displayed in upper government and industry echelons as seen by the World Economic Forum (WEF) 2007 declaration in Davos which upheld the Kyoto Protocol's goals of carbon reduction and intensified international pressure on dissident views (Hall and Murray 2008). However, the 2009 Copenhagen talks deadlocked and the vested interests of developed and developing nations alike, resulted in major concessions and 'watered down' policy decisions which bitterly disappointed many climate change specialists. Talks in both Mexico and more recently in Durban, South Africa in 2011 (COP17) seem to have made little headway (ACDI 2011).

Print and particularly electronic media such as film and the internet continue to play their part in attempts to change public opinion. Celebrities from all walks of life such as past American presidential candidate, Al Gore, and film star, Leonardo DiCaprio, have taken up the media cause with their controversial films, *An Inconvenient Truth* and *The 11th Hour*, respectively. Social media, blogs and other digital fora continue to grow exponentially and become more influential in educating and changing public opinion. According to Ober (2006: 98) "information is a mass commodity – not a scarce resource" (unlike potable water or clean air) and our need to know and to have information at our fingertips is becoming more and more "unrelenting". Accessing, retrieving, storing and archiving electronic information via the internet using, among others, search engines, web directories and databases are commonplace communicative practices which help students marshal their growing knowledge and expertise in the 21st century. As communicative tools, multimodal practices and technology work

together to co-construct new meaning. When sign-makers and interpreters, as participants, are added to the equation and use these tools to interact, negotiate and collaborate, representation and communication are strengthened.

All these traditional and digital sources keep the world informed on suspect business practices. There is mounting pressure on corporates and institutions to take the lead themselves and model good behaviour. According to press reports, one of the world's largest pension funds, the Dutch-based *Algemeen Burgerlijk Pensioenfonds* (ARP) has divested in Wal-Mart, one of the world's largest and most influential companies, for non-compliance with the UN Global Compact, whose principles relate to sustainable and ethical business practices (Business Report, Cape Times, 12 January 2011). Governments the world over, especially members of the WEF, continue to work together to pass more stringent and punitive legislation to temper industry polluters and assist developing countries to set their own goals.

Universities too are being urged, as signatories of the Talloires Declaration, to play an increasingly influential role in creating solutions not only for the societies in which they operate but to practice what they academically preach by creating energy efficient campuses and bringing sustainability into the curriculum (Timpson, Dunbar, Kimmel, Bruyere, Newman and Mizia 2006). They are regarded as having the research capacity to investigate emission reduction and alternative energy sources and, as respected seats of learning, of being perfectly positioned to influence future generations of public and private sector leaders to implement sustainability policies across the field (Hall and Murray 2008; Rippon 2008-2011). Beside setting an example, the Talloires Declaration asks universities to, among others, agree to:

- create programs to develop the capability of university academics to teach environmental literacy to all undergraduate, graduate and professional students.
- set an example of environmental responsibility by establishing institutional environmental policies and practices of resource conservation, recycling, waste reduction, and environmentally sound operations.
- utilise university academics and administrators together with environmental practitioners to develop curricula, research initiatives, operational systems, and outreach activities to support an environmentally sustainable future.

The aim of scenario pedagogy is to assist with achieving these goals in face to face and digital arenas and, at the same time, establish collaborative partnerships in which students can forge their vocational identities as ethical professional communicators in business and industry.

4.3.3 Authenticity of scenario

As mentioned, real on-going scenarios are required to provide the content and context to develop academic and business communication practices to contribute to achieving efficiencies and enhancements in teaching and learning for business and industry. Although external scenarios (for example, the Y2K 'Millennium bug' used in the computer science department) are equally feasible, institutionally embedded scenarios provide greater organisational ease and convenience. Academic staff can adapt and arrange these scenario topics in collaboration with non-academic management staff, other scenario experts (internal or external) and, in the case of the sustainability project, a student-and-staff-based campus initiative, the Green Campus Initiative (GCI). Ideally, however, the 'local' scenario should not be too parochial lest student curiosity and interest wanes. If the scenario is deemed important in some way, emotionally and/or intellectually, motivation and participation tend to heighten. According to respondents, the scenario approach was "more interesting, you can relate to the events as they actually happened." The 'Aha' factor which some students may experience is an added bonus.

As an example of situated practice, the overarching scenario needs to be authentic, ideally reflect and engage with issues within the student's study ambit and provide an all-encompassing backdrop and rationale for participating in contextually relevant real-life communication events. It is probable that students may become more willing to enter into a role-play experience with anticipation and curiosity because it is the context that interests them rather than the communication principles and practices, many of which may not interest them at all. The likelihood that these students will work to improve their professional communication practices in contextually relevant ways is potentially heightened because the interpersonal, group, oral and written practices are not taught/learnt for their own sake but as a means to an end. Some professional communication practices and genres, those officially sanctioned such as reports and presentations, are taught explicitly, others such as meetings interviews or online searches are not. They are afforded *ad hoc* just-in-time classroom treatment to streamline process management and supplement meaning making.

The overarching scenario comprises a series of related episodes which exist because of an underlying socio-economic situation resulting in a particular project implementation to ameliorate or remedy the situation or problem. As a particular scenario is being played out in real time, activities and experiences are underway but have not yet ended or been resolved so the end-result is unknown (unlike a documented case study). An attempt is made to replicate real-world events and provide appropriate conditions and strategies to create decision making and problem solving opportunities for students. The scenario approach aims to position

students in various participative, role-play activities which seek to mimic professional workplace practices and satisfy faculty and industry demands for 'communicatively competent' graduates. Beyond this, students are encouraged to engage with emerging professional identity and promote interest in sustainable development. They are further encouraged to develop existing and new meaning-making resources to enhance multimodal integration and coherence.

Although students, especially senior students, enjoy the challenge of a complex and meaningful scenario, (Grant 1999; Grant and Kalil 2010), the challenges around designing and implementing a collaborative approach such as scenario pedagogy can be a double-edged sword. If certain criteria and conditions are not met due to any number of reasons such as participant disinterest, confusion, anxiety or reticence, the more problematic the situation could become. Two such comments hint at this difficulty: "Never seen before, new to students, sometimes difficult to pick up method" and "First time always presents difficulties and delays; report structure also new to me." Dobos (1996) and Grant (2008) found that the more positively challenging the tasks, the greater the sense of accomplishment but the more negatively challenging (heavy workload), the lower the performance. In their paper on the learning environment, Muller and Louw (2004) reiterate that academic overload creates heightened stress levels and poor performance. Coupled with this, learning styles differ, classes are never homogeneous and disadvantage still prevails, even at senior level. As another team acknowledged: "We found it quite hard at times to communicate with the sources ... as they were not always available and seemed to have limited time... although we got some referrals. I suppose this happens in real life too ☺" These factors may impact on scenario implementation, attitudes and outcomes and need to be acknowledged and addressed up front and throughout the process.

4.3.4 Negotiated multimodal meaning making

The scenario approach relies on mixed methods, modes and media, both verbal and visual. Theory and practice(s) are not taught in isolation or in sequence but aim to be iterative and negotiated as evident in the framework of negotiated design discussed in chapter three. Students do lots of things simultaneously and often in an accelerated fashion in terms of making (quick) decisions around a host of available designs and working within deadlines. As stated in chapter two, they are 'assaulted' – multimodally speaking – by seeing, doing, thinking, valuing, behaving and communicating in appropriate ways for purpose and audience as reflected in a diverse workplace where meaning-making is not neatly classified or packaged (Lynott 1998; Kress and Van Leeuwen 2001; Kress et al. 2001; Gee 2003, 2008a).

Primary generic professional practices (e.g. designing a letter, executive summary, report, graphic or business presentation) form the crux in terms of departmental brief and assessment focus but life skills and practices such as effective team work, meetings and interviewing seek to create a more comprehensive and long-term approach to developing multimodal professional communication practices overall. “I learn extra skills that I will take with me and put to good use in the future which I hope will make a difference as a professional” and “... I believe the communication skills I have learnt will stand me in good stead for the remainder of my life”.

As scenario material and resources are not provided beyond initial input information with web contact information from an external expert (see Table 2 on page 62) and scenario terms of reference letters from PCU facilitators (see example in appendices), students generally gather, design and create their own data and other verbal-visual materials. Besides often knowing more about the scenario topics than the facilitator, this may prompt them to get the investigations under way. Students soon realise too that, because of the topicality of the subject matter, they cannot rely on secondary sources of information such as print or electronic media only. Primary research methods such as interviews with and telephone calls/email to scenario experts locally and internationally are important sources of up-to-date information. Students seem to glean particular satisfaction from taking control of their data gathering as evident in this student reflection: “I felt that the people regarding the Ride Link Initiative, our topic was transport, were very helpful, informative and gave us a good idea as to which areas were worth pursuing and which were more of a dead-end.... we contacted these people via email and even had a couple of face to face discussions with one person in particular who had a vast knowledge of our topic.”

As part of the ethos of the course, students are encouraged to share data, especially if they come across information which might prove helpful to someone else in the class. Although individuals and teams are in a sense responsible for their own products and a certain competitive climate exists, particularly in the commerce faculty, the focus on “co-opetition” (Grant and Borchers [2002] 2008: 5) introduces a cooperative and collaborative work ethic early on which facilitators attempt to sustain throughout. As these are senior students, many of whom have work experience, they also bring their own existing and hybrid resources, competencies, know-how and perspectives - their habitus (Bourdieu 1991) to bear on the issues at hand. So, although the whole class participates in the same scenario, teams select different aspects of it to investigate depending on their interest and curiosity. Within each team/partnership, different roles, functions and tasks are negotiated and delegated according to criteria such as interest, fairness, competence and networking know-how. Members are

encouraged to delegate multimodal functions and 'play to their strengths' in terms of cultural and linguistic diversity, visual-verbal roles and expertise, processes and product design and creation (Grant 2007b, 2008). Reflections such as the following were common: "We all contributed considerably the same amount of input for this project as we did each of our sections individually and then met often to exchange material and reflect on each others performances" and "I did gain a lot from the way other students structure and present their findings".

Producing mini hand-ins *en route* to the larger final hand-in seems to minimise inadequate preparation and quality as well as procrastination and 'writer's block'. In survey findings (SQ), students confirmed that dividing a large project into smaller steps and deliverables makes the task seem less formidable and eliminates last-minute 'cramming'. "The idea of splitting up the work into a series of steps, each introduced by an afternoon workshop made it easier to split up the specific investigation into smaller subtopics.... The rough diagram we produced was a good starting point even though the topic outline changed as we learnt more about the content we'd be using." Teams also realised the usefulness of such an approach to other course work. "I see the benefit in the mindmapping and in the development of a topic outline (I have began using these techniques myself!)." "In general I enjoyed the structure of this course and found a lot of the process information beneficial in my other courses."

4.3.5 Shared, collaborative pedagogy

Besides individual contributions, group members also switched functional and pedagogical roles. The roles required can vary from task team investigator and interviewer to scribe or presenter, depending on purpose and audience. The reason for this switching is to enlarge the repertoire of roles and practices over time.

Although 'set pieces' of facilitator instruction were inserted throughout the course, these inputs aimed to be on demand and just-in-time rather than fixed or rigid. As an observer, it was interesting to note the workshop leader's flexibility in this regard. Depending on perceived need, the facilitator used the opportunity to provide additional instruction, summarise insights and propose changes collaboratively suggested. The timetable was also re-negotiated during the course; veering 'off course' was accommodated when deemed to be necessary and helpful. The facilitator confirmed during discussion that she was not rule-bound and had the freedom to change focus as and when required. As evidenced here, this type of explicit or implicit instruction aimed to move away from a transmission approach to pedagogy of negotiated design, grounded in collaborative deliberation and action.

Collaboration involved various parties: external scenario experts before, during and after the course as well as much intra- and intergroup collaboration which may create challenges. Annual SQ responses mention the pitfalls of collaborative team work where some members ride on the coat tails of others resulting in frustration and a love-hate attitude to reliance on others. According to Arnett (1992: 125) true dialogue allows team members to “call out the best” in themselves, become “more than they may have originally thought possible” and for teams to aim to be greater than the sum of their parts: win-win, rather than either win-lose or lose-lose. These issues are discussed in class in an attempt to ‘recruit’ the effort and commitment needed for students to embrace opportunities and tackle obstacles in an even-handed manner.

As this teaching-learning approach is experiential and practical, collaboration, persuasion and task delegation need to start immediately. Once topics are finalised and the investigations are underway, students are called upon to participate in the workshops in incremental stages. Classes revolve around researching their particular focus areas and comprise meetings (with or without facilitators/lecturers); seminars; workshops with just-in-time theoretical input; field work comprising both primary and secondary data gathering; report backs with feedback (from peer groups and facilitators); rehearsals (of group presentations) and various other experiential activities (Kolb 1984; Katula and Threnhauser 1999; Grant 2008).

Students also keep in touch with each other, facilitators and external experts online thus blurring and crossing in-class/out-of-class borders. Although these senior students are at ease in the technical use of computers, mobile communications and other electronic devices, discussions about communicative know-how, electronic etiquette and ethical considerations add interest and include sessions on active listening, perception and intercultural communication. At the same time, it is reiterated at length how busy the external consultants are and that they receive no payment for their ‘extramural’ scenario inputs. Students are urged to keep these issues in mind when they make appointments and use their services.

Although internet usage was mainly provided on campus and deskbound in the past, the multiple functionality offered by handheld mobile devices, such as smart phones², has been exploited more frequently recently, allowing online meetings and chatroom discussions, social

² University wide SMS (Short Message Service) functionality was introduced in 2009 for staff-student contact, particularly last-minute or emergency announcements. Whereas some students may not have home computers or laptops, everyone in the class (2008/2009) had cell phones and some even had smart phones such as I-Phones and Blackberries with much more sophisticated functionality.

networking, blogging and 'twittering'. An electronic learning management system such as UCT's Vula, accessible both on and off campus, is also most useful as a collaborative communication tool. According to Althaus (1997), Griffen and Anderton-Lewis (1998) and Kaul and Gupta (2007), frequent contact, both face to face and online, aims to minimise alienation, status, gender and language inequalities and build rapport. It also aims to contribute to team building and affinity group formation where members share goals, outcomes, task team identity and ethos with growing domain expertise or "stored lore" (Gee 2008a: 142). "With regards to our actual topic (energy sustainability)...I enjoyed reading through the Green Campus Action Plan ...and talking to people like Dr Rippon." In this way, teams report back to the class on a weekly basis to keep others informed of their out-of-class progress. The aim of thematic connectedness, available expertise, joint tasks and deadlines is to lessen absenteeism, foster team member loyalty and accountability and allow teams to enact their growing discourse expertise. Researchers such as Buzan (1991), Goleman (1995), McCroskey (1998) and Grant (2005b) have argued the importance of deep, participative embodied learning and meaning-making, involving left- and right-brain, to enhance emotional as well as intellectual development. According to Arnett (1992) and Varela (1999), dialogical and embodied learning and meaning-making aims to shift students from passenger to driver mentality to ensure pedagogical turn-taking and co-responsibility for their own journey, direction and pace.

4.3.6 Reciprocal feedback and assessment

Teams obtain feedback and 'draft' marking of outlines as they progress *before* final presentation and hand-in (see 4.4 and chapters five onwards to follow this trajectory). Feedback is elicited from/offered by facilitators, outside experts as well as peers so that assessment of draft products and processes is shared, formative and summative. Researchers such as Smagorinsky and Fly (1993); Grant (1999); Grant and Kalil (2008) and Gallimore and Tharp (2002) argue that co-constructed and generated feedback provided in a supportive climate may induce greater acceptance and follow-through. Two metaphorical thinking patterns are encouraged. The first, based on Nancy Kline's injunction (1999: 66) that 'everyone speaks once, before anyone speaks twice', is advocated in an effort to engage more reticent members and discourage interruptions. She claims that "giving everyone a turn increases the intelligence of groups. Knowing they won't be interrupted frees people to think faster and say less." The other is the invitation for students to regard themselves as 'construction' rather than 'demolition teams' in an effort to encourage ethical and courteous inter- and intra-group conduct.

Timing of feedback also plays a role in terms of receptivity and how much time teams are given to absorb, process and accommodate feedback. Quick turnaround times for marking and assessment – from whichever quarter – is required if students are to build their expertise and enhance their processes and products collaboratively. In an effort to suppress bias, examination scripts are marked by PCU staff members who do not teach on the course and orals are presented to a panel of examiners, including external experts and guests.

According to a number of educational researchers from various disciplines, (Smagorinsky and Fly 1993; Dobos 1996; Muller and Louw 2004; Grant 2004, 2005b, 2006, 2008; Archer 2000, 2001, 2004, 2006; Smart and Csapo 2007; Creme and Lea 2008; Gee 1990, 2003, 2004, 2008 and Jewitt 2006, 2008 among others), the more relevant, useful, supported, inclusive and valuable a learning event is perceived to be, the greater the likelihood of motivated involvement. If students are also encouraged to bring their own viewpoints, know-how and representational resources to the situation and issues at hand, and that they can and may offer solutions, interaction and interest may be sustained.

The extent to which these characteristics and conditions prevail poses pedagogical challenges for all participants.

4.4 Course implementation schedule

In the situated commerce scenario course, students are invited to:

- ‘visit’ and participate experientially in an authentic ‘event’ involving institutional sustainable development policies and interventions
- conduct primary and secondary research in order to ‘solve’ real-life technical, environmental and business problems in real-time
- select and practice a wide repertoire of discursive, generic and multimodal communication practices, both in person and electronic, by way of draft and final assignment preparation, and finally
- produce an array of finished written, oral and visual products (hard copy and electronic) that meet the standards and purpose of the target audience such as the report terms of reference of a particular client.

This requires a great deal of pre-, during and post-course planning and follow-up, particularly as it involves a wide range of stakeholders, both internal and external to the university.

4.4.1 Pre-course arrangements

The course runs annually in the second semester. From 2008 to 2010 there were nine, twelve and fourteen senior and post-graduate students respectively³. In conjunction with John Critien, Director of Property and Services at UCT, Sandra Rippon, an environmental consultant, a colleague from PCU and I devised key project areas for different students to focus on. Letters comprising the various terms of reference for each scenario were then devised (see example in appendices). These external experts, together with a number of others, also agreed to act as advisors during the project.

The project areas and initial contact details were presented in the first workshop. In Table 2 below the names and contact details of various staff members have been removed. Here is a sample of topics used, each of which was described more fully in the terms of reference letters.⁴

Table 2: Selection of scenario topics for Commerce class

Project/Task	Brief Information	Contacts/References
1. Energy consumption (measurement and measures to reduce)	ESKOM and the Central Energy fund agreed in principle to fund the capital cost of renewal of high consumption equipment (heating and cooling). UCT is in a consortium with other HEI's .	Research on energy consumption at UCT: Properties and Services: [names and contact details]
2. Transport (public/private)	Over 20 000 people access UCT campuses daily. Private transport and the Jammie Shuttle are the main means for this. Consider the overall situation and impact.	Traffic department at UCT: Properties and Services: Civil engineering survey: RideLink Initiative [names and contact details]
3. Recycling	UCT has had recycling initiatives in the past. A new one was launched in 2008. What are these and how effective were/are they? What else could be considered?	Green Campus Initiative: Properties and Services: Wasteman: [name and contact details]

³ As the popularity of the class grew, numbers soared to 27 in 2011 with several students being turned away due to lack of capacity.

⁴ Topics are revised annually; some are replaced, others adapted, depending on student make-up, the status quo at the university and international experience. For example, pesticide use and e-waste were added in 2010 and 2011 respectively.

4. Sustainable building practices	Users of building have initiated their own sustainability initiatives. What are these and what are their strengths and weaknesses? What other green practices or designs could be instituted? How do they fit into UCT's Sustainability Policy/Plan?	Construction Economics (EBE): Kramer Building Project Residence committees [names and contact details]
5. Water management	Increased capacity of dam, retro-fitting of flush mechanisms and conversion to waterless urinals	Properties and Services: [names and contact details]
6. Waste management (solid, hazardous, gaseous and liquid)	How is waste managed at UCT? How effective is this? What else could be done?	Properties and Services: Faculty representatives: [names and contact details]
7. Education and communication	Disseminating information and ideas and recruiting skills to support 'green' initiatives are part of the imperative of the UCT Sustainability Plan. How is this being tackled and how effective are these efforts? What are students' perceptions on sustainability issues at UCT – what do they know and what are their attitudes and values?	Green Campus Initiative: Vula site (Learning Management system): Editor of 'The Barometer': SRC environmental portfolio spokesperson: [names and contact details]

4.4.2 Scenario products and processes

In the first workshop, the objectives of the course, background to and use of scenarios are explained. Specific sub scenarios are described so that individuals (2008) or partnerships (2009 onwards) could select a scenario topic and negotiate a particular focus area. It is important to note that students use the topic areas tabled above merely as a point of departure. It is entirely their responsibility to devise a specific focus area for investigation.

Students are invited to join the GCI Vula site and various resources such as UCT's Sustainability Policy, slides and other documents are posted at regular intervals. Campus Green Week, a series of exhibits, panel discussions and concerts, takes place annually in the second semester and students are encouraged to attend. Annually, various speakers address students and answer questions in various time slots on various sustainability issues but the main action in the workshops comes from students each week as they present the stages of their preparation on their aspect of the sustainability scenario. Students present the following items and these products and processes comprise the focus of my analysis in later chapters:

4.4.2.1 Mind map presentations

The first two workshops are taken up by explicit and implicit instruction in terms of the situated scenario, course expectations and practical exercises. A task team member presents a plan of action during the third workshop in the form of a concept or mind map. With the ultimate goal of writing a professional investigation report with a particular technical, managerial and/or business client in mind, teams are required to gather, consider, select data and then spatially map their main topic ideas, using whatever layout and design elements they deem appropriate such as a diagram, flowchart or web design. Most students are familiar with this concept and technical students, in particular, gravitate towards diagrammatic illustration of processes and procedures. These are then presented and critiqued in class.

4.4.2.2 Topic outline presentations with sample illustration

Adding new data gleaned from feedback and ongoing research, teams revise their mind map material into more detailed topic outlines. They also design an image such as a graphic or diagram which they are considering using in their final oral and/or written report. In advance of the session, discussions are held about the most important elements of a logical and coherent topic outline followed by practical exercises on overall and parallel structure, narrative and conceptual ordering principles, notation systems and layout to show subordination between main and sub-headings. Discussions are also held on visual and other non-linguistic resources and how best to design, compose, represent, illustrate and communicate their message(s) visually. These discussions are held timeously so that once again, meaningful peer and facilitator feedback on each presentation can be given.

4.4.2.3 Videoed PowerPoint presentations

The PowerPoint presentation near the end of the course is shared between partners. In advance of the final presentation, students take part in an informal rehearsal. During this session, students practise their content, timing, turn-taking and delivery style and use the critical appraisal of their fellows to determine what works to get their meaning across to the designated audience whom the facilitator and their peers simulate. Aspects involving, among others, vocal tone, dress, body positioning and territory, gesture and movement, eye contact and facial expression allow for team discussions of salient intercultural, transformation and diversity issues and their relevance to a multicultural global economy.

They also use the opportunity to test the equipment and appraise their use of PowerPoint or other web application in preparation for the main event. Ideas around visual and graphic representational resources, discussed in previous weeks, are incorporated into the presentation as well as demonstrated during the presentation. Decisions about relevant

selection and appropriate transformation of visual modes from more formal, impersonal written textual products such as the report to less formal oral and screen presentations, are negotiated collaboratively. These presentations may include sound effects, animation or film/music clips where appropriate and discussions are held regarding audience reaction, often negative, to the ubiquitous use of PowerPoint templates and jaded clipart, for example (Tuft 2001; Grant and Borchers [2002], 2008). The rehearsal, as scaffolding exercise, also allows presenters to build confidence. They receive feedback (and a minor rehearsal assessment) from facilitators and students alike. Besides receiving immediate oral feedback, each student also receives written mark sheets from every member of the audience. This grade is used positively which means that if they fare much better during the final presentation, it may fall away; if for any reason, their rehearsal proves better than the final, then this mark can be used to augment their final assessment. It provides a fall-back position and a cushion in case they 'peak' too soon. The facilitator uses her discretion annually about mark allocations.

These presentation and question sessions are filmed and students are able to view themselves during a playback session in the final workshop in the absence of guests. The camera is positioned at the back of the class in line with the audience and is treated as another member of the audience in terms of speaker engagement and eye contact. The facilitator films each presentation with the pedagogical aim of allowing students to receive and provide feedback on their practice. The video production is not about making a video but rather using video as a teaching aid in a professional communication course as the culmination of that course.

At the end of the final presentations, guest experts and the facilitator critique the presentations on delivery style as well as accuracy and depth of verbal and visual content in terms of purpose and designated audience. They also ask in-depth questions which can be directed at either partner. During the final sessions, much of the discussion is guided by comparison with the former sessions in terms of developing professional communication practices and identity. Although the facilitator may initiate the discussion, the role of educators is distributed among the entire class. Being members of their own audience gives students the rare opportunity of gauging reaction and providing feedback about themselves as well as others. Assessment is only finalised after this viewing.

These multimodal presentations are the culmination of a collaborative and experiential approach which also aims to afford elements of fun and humour, amidst the nervous tension (Shaw 2010). Presenting and video reviewing include elements of 'edutainment' which,

according to surveys (questionnaires, reflections and interviews), are the highlight of the course for many students, despite the stress. Although it might be “a bit odd watching yourself [video]”, as confided by one student, they all realised the value – after the event – when they could relax. “A good learning experience – get to see yourself too!” The camaraderie and energy (nervous and otherwise) of these two sessions seem to contribute to an appreciative note as evidenced by further comments. “The scenario and examples are good tools as communication is learnt through **practice** and this method facilitates practice. It [presentation] builds experience (hands on) – particularly relevant for the marketing arena” (student’s bold and underlining).

4.4.2.4 Investigation report

The function of PCU staff members is to facilitate student processes involved in investigating scenario topics, evaluating data and writing the report on sustainability practices at UCT. In addition to the students’ oral reports (based on the same topic), class time is taken up with exploring and debating communication principles and key aspects of form, genre, content and style related to report preparation, planning and design of verbal and visual data, overall readability and referencing.

By their very nature, formal academic papers can be classified as academic artifacts with a long, classical epistemological and ontological provenance and tradition, far removed from many of these students’ lifeworlds or habitus (Bourdieu 1991) – especially EAL students from disadvantaged backgrounds. Besides their particular lack of exposure to and familiarity with academic genres, students in general often attest in surveys and course assessments to ‘hating’ essay writing (Radloff 1988; Munter 1999; Grant 1999, Gilleard and Hawkins, 2004; Bangeni and Kapp 2009), finding it “taxing”, a “hindrance” and “boring”. Students seem a little more drawn to the concept of ‘real’, work-based writing such as evaluative reports and business plans. Unlike essay writing, report writing can at least be defined as a professional practitioner activity which may (one day) contribute to generating an income. However, despite their lukewarm interest, few have written or learnt about actual business genres such as investigation reports or feasibility studies either at school or university although they may be familiar with the terminology. The fact that corporate reporting activities are globally practised (De Groot 2008), underscores the relevance of teaching and learning about their varying roles, functions, purposes and audiences. Although commonly practised, one cannot pretend that there is one way, a ‘correct’ way of reporting information. Kress and Van Leeuwen (1996, 2001) concur that even seemingly “settled practices” are social constructions, subject to change. Nevertheless, the normative report genre is accepted by government and business audiences the world over as an important decision-making resource and practice.

Annually, as can be seen in their terms of reference letters, a mixed academic/ institutional, business/corporate and/or government audience is stipulated: the 'busy professional' (see appendix 2). Maintaining workplace conventions and simulating the 'office' scenario helps students in and out of class to maintain a work ethic and identity that may more closely mimic what they will be required to produce and how they will be expected to behave when they graduate. Besides making these assignments easier to mark – a very important concession, given PCU staff members' limited expertise in the scenario topic – this 'non-specialist' requirement is also more realistic in terms of global end-user accessibility. Considering university and industry concerns relating to corporate citizenship, this premise also helps students fulfill the requirements of becoming effective and marketable professional communicators.

The draft documents and rehearsal and final oral and written reports make up the bulk of the year mark with a minor percentage going to other class activities (job application letter, curriculum vitae and a class test) followed by a final written examination, none of which form part of this study. Whether graded or not, all in and out of class products and processes aim to develop relevant professional communication practices and identity and to do so in a spirit of collaborative collegiality.

4.5 Final comments

Given public and private sector criticism of governance and sustainability issues amidst an individualistic, everyone-for-themselves ethos, it felt particularly appropriate during the period under study (2008-2009) to incorporate indigenous knowledge systems, ethics and corporate social responsibility into the curriculum. The scenario content – sustainable development – and desired communal ethos advocated in class and in the field permitted a 'corporate climate' characterised by greater participation, dialogue and *Ubuntu*⁵, an African philosophy of collective wisdom and fraternity, familiar to many of our students (Steyn 2003; Steyn and Grant 2007). The aim of attempting to legitimise their habitus and cultural capital (Bourdieu 1991) is to contribute to a sense of status, inclusion, belonging and identity. According to past surveys, these feelings remain after the course ends. In an interview, a marketing student claimed: "... so when I was tutoring, I explained to everybody what I expect of them, a good professional level and I told them about PCU....I told them [that] with practice,you know

⁵ *Ubuntu*, roughly defined, as "I am because you are and you are because we are, together." The communal spirit which it espouses, coupled with 'co-opetition' seems to provide a more sustainable attitude to 'doing business' mindfully.

where you are going and ... every group was professional, their PowerPoints were good, they were enthusiastic and I told them this comes with practice.”

In the past, especially at the height of free market economy triumphalism and soaring executive remuneration, it was more difficult to convince technical and business students of the importance of being accountable, mindful and caring communicators or to view sustainable and ethical practices as crucial to the ‘bottom line’ and ‘hard’ rather than peripheral nice-to-have ‘soft’ skills. However, considering past financial scandals, corporate failures and bailouts, university curricula from accountancy to economics are being robustly debated locally and internationally. The course as a whole aims to engage students on their own terms as partners in communication, not mere recipients, and to reflect more accountable and cordial workplaces intent on personal and ultimately global wellbeing and ethical integrity. A focus on sustainable business and communication practices may have a greater chance of contributing to real ‘graduateness’ going forward.

In this study I focus on scenario-related student products and classroom processes from draft to final production: written and oral, verbal and visual. Samples of student work are selected to represent each stage. Chapters five and six analyse draft products and processes. Chapter five starts this developmental trajectory by analysing the mind maps of four teams.

Chapter five: Mapping the terrain: negotiating discursive (dis)junctures and emerging professional communication practices

5.1 Overview of draft product chapters

Chapters five and six analyse the 'off the page' draft products and processes as sequentially mapped against the analytical framework of negotiated design. These two chapters seek to illuminate scenario pedagogy, in particular, the planning and preparation stages of the environmental scenario described in the previous chapter.

In order to illustrate the negotiated nature of scenario pedagogy more closely, the developmental trajectories of four scenario pedagogy task teams are set out. As stated earlier, students were permitted to choose their own scenario topics from a list of broad environmental areas covered in the Talloires Declaration and to determine the permutations that appealed to them most. There were plenty of choices related to UCT's sustainability policies and practices such as waste management, recycling, green building design and transport to engage their attention and interest. Having made a choice, teams could begin to collaborate and plot their way.

Verbal and visual designing activities have been selected to showcase this trajectory. These comprise the production of a mind map on flipchart paper followed by a topic outline with key graphic on overhead transparencies. Although the course comprised additional planning exercises and assignments, these two in-class productions provide a meaningful representation of scenario pedagogy events. Draft practices such as mind maps and topic outlines are considered important building blocks of the final oral and written reports which follow in chapters seven and eight as exemplars of professional practice.

The realisation of collaborative planned and unplanned pedagogical events into material semiotic artefacts and deliverables allows the analytical focus to shift between product and process and vice versa. What follows therefore is neither a neat nor linear discussion but an iterative analysis which aims to resemble the cyclical and hybrid nature of representation and communication. It is hoped that the framework of negotiated design as described in chapter three will emerge coherently 'in situ' with the analytical gaze shifting from student product to pedagogical process in a cyclical and multi-layered configuration.

The audience's perspective may present different orders of attention to the sign-maker. Whereas sign-makers' planning and processes of creation, prompted by their interest, may precede product display, much of this occurs out of class. In class, the audience as

interpreters view the 'finished' product, the physical and material artefact, first and their interest will determine how they engage with the product and its presenter. For this reason, the analysis primarily focuses on the mind map and topic outline with sample illustration as semiotic texts within the situated practice of classroom presentation and discussion. My attention, as researcher, was also firstly drawn to choice of scenario topic, medium and site of display before probing deeper to consider discursive, generic and modal semiotic practices and ensembles.

5.2 Generating ideas: the semiotic features of a mind map

The analysis of four scenario team mind maps focuses on product and process as acts of negotiated collaboration. Before moving to these particular examples, mind maps and the act of mind mapping in general is discussed.

5.2.1 Discursive strands

As will be seen in more detail in this and later chapters, intertextuality and interdiscursivity characterise professional business genres in the 21st century (Fairclough 1995; Candlin and Hyland 1999; De Groot 2008). Business communication – as belonging to the 'soft' interdisciplinary knowledge fields rather than the hard sciences is not constituted of one 'classical' discourse with discrete subject silos or fixed boundaries in a Bernsteinian sense (2000) but are an amalgamation of a number of discursive practices. It inhabits a number of domains at once and thus proffers multiple voices, from marketing and accounting to information systems and finance. When a plethora of textual and discursive strands are appropriately woven and mesh, arguments posited may be strengthened. Discursive blurring which gives rise to inconsistent reasoning and poor connection, on the other hand, results in ideational confusion and textual incoherence which, in turn, may undermine interpersonal understanding, rapport and credibility – the writer-reader relationship (Hyland 1999; Hyland and Tse 2004).

A number of discursive strands – not always fully developed but emerging – are evident in the mind map examples analysed in 5.3. A professional business discourse with a focus on commercial costs and financial feasibility is evident as is an environmental, 'green' discourse reflecting the actual scenario content. These two major strands – themselves discursive 'regions' (Bernstein 2000) – are often in tension, particularly in large institutional and corporate settings. These institutions regularly find themselves conflicted by having to satisfy primary stakeholders whether constituents, shareholders, investors or interest groups. Given the global mood and sustained protest action, attempts to maximise profits in socially and environmentally responsible ways has increased rather than diminished these tensions.

Environmental topics such as waste management and recycling also lend themselves to a scientific discourse where hierarchy, categorical sub-division and classification of types are characteristic. Although these scenario topics involve a comparison of universities, both local and international, there is less evidence of a formal academic discourse at this stage. This can be confirmed by the use of non-linear ordering principles, an informal register (both orally and in writing), overcrowding of sub-topics with 'off the cuff' spatial arrangements, uneven lines and the anomaly of generally careless spelling errors and a mixture of 'fonts', all of which will be discussed in various sections below. Another discursive thread which emerges is a legal one as students engage with legislation and policy documents relating to the Talloires Declaration and sustainability policies and plans of UCT and other institutions.

As intimated, various discursive threads are not mutually exclusive but it is both useful and interesting to identify merges and disjunctures during these draft product interventions to facilitate the communicative development of student teams.

5.2.2 The medium and site of display

The facilitator started these early sessions by talking about ways of generating ideas and gathering information. Although most students are familiar with brainstorming activities – particularly in the context of group work – many may not consider using mind or concept maps in gathering and negotiating information or planning assignments. In scenario pedagogy, mind mapping is regarded as a crucial part of the exploratory meaning-making process, a creative activity of design emerging as a material artefact, a draft product. Thus the mind map (re)presents both a visible and tangible object and the practices that brought it into being. As a physical and mental process, it affords participants opportunities to creatively generate, challenge and negotiate ideas, notions and questions of interest and then to compose these into meaningful arrangements on/via a medium of choice. What topic headings and subheadings to choose and how to arrange and display these visually across/down a screen (if online) or on a sheet of newsprint (as done here), are decisions and activities that follow. These process/product practices may be accompanied by argument and contestation, trial and error both out of class during planning and in class during presentation before consensus is reached. Even for students working on topics individually, the entire process involves ongoing collaboration and feedback resulting in processes and products of negotiated design rather than solitary creations.

A mind map of the large size stipulated on the course affords a different medium and site of display to either the A4 page or computer screen. The generous space dimensions allow for

multidirectional arrangements across the sheet with varying meaning potentials. As the sheet of paper or cardboard can be oriented in portrait or landscape and the display on the surface can use either portrait, landscape or a combination, a non-linear 'take' on things is encouraged, as seen in the examples selected.

Once mapped out within a particular frame, designers may consider how to communicate that which is represented on the mind map. What is the most appropriate medium for display and where/how should it be displayed: the site of display in terms of appearance and location? A mind map is in and of itself a site of display but context and location – where displayed and whether on a board or flipchart stand, fixed or mobile, in a classroom or boardroom – allows the site to take on additional dimensions. Besides displaying the mind map, the medium constructs an aspect of the message. Meaning is constructed by *all* the elements, the linking of entities and the relationships and connections between them. Important terms that illuminate these choices, relationships and connections are 'ensemble' and 'orchestrations' (Jewitt 2006, 2009; Kress 2010). Simply put, ensemble relates to what modes are selected from a repertoire of semiotic resources; how these combine and work together refers to orchestration. The musical connotation is apt relating as it does to choice, harmony, composition and practice. The more coherently modes resonate and work in concert, the greater the potential for effective representation, communication and mutual meaning making.

5.2.2 Generic and modal affordances

Besides medium and site of display, another semiotic resource is genre. As an informal genre, a mind map provides opportunities for semiotic work of an interim and provisional nature. Genre may be theoretically defined as the "'emergence' of social organization, practices and interactions" [that are] "recognizable [and] experienced as having relative regularity and stability" (Kress 2010: 113). According to Kress [genre] "comes through participation in *events* formed of such actions experienced as recognizable *practices*" and tends towards "ritual" (2010:113-114, his italics). This seems to suggest ordered, expected, habituated ways of doing things. This view may be more suggestive of a formal, 'classical' genre. Although mind maps have conventions which are socially constituted, they are not as legislated as other more regulated genres like the report, for example. (See chapter eight.)

An informal genre such as a mind map affords a 'what if', either/or, trial and error practice approach which is neither certain nor predictable. Mind mappers may not consciously consider generic patterns or ordering principles although it could be argued that mind maps do share generic traits and a certain 'look and feel'. According to Kress (2010: 95), mind or concept maps attempt to "'fix' meaning" in habitual ways and shape what viewers have come to

recognise and expect of this type of visual-verbal display. He contends that a concept map is “organized through the affordances of image, using the semiotic logic of space and the modal affordance of spatial relations between simultaneously present entities.” As can be seen in the mind maps below, everything can be viewed at once. Viewers expect a certain hierarchical display of main and sub-points, orchestrated in a particular and meaningful order. Although mind mappers may have the freedom to creatively plot and map uncertain terrain, as early cartographers might, they also aim to follow certain iconographic conventions in order to provide a sense of place and possible direction, a deictic function. Kress (2010:117) defines deixis “as the term which names locations and directions within the semiotic object, which direct participants”. Besides the ‘signage’ within a mind map such as lines or arrows, a mind map itself uses orientation and deixis to help participants locate themselves at the outset of their journey. The practice speaks to the question of design, framing and composition: the arrangement of visual and verbal data on a page, the spatial relationships between words and other design elements such as lines/arrows (vectors) and shapes such as text boxes, bubbles and circles. Mind mapping accommodates various sizes of ‘font’ – even if handwritten as is the case here – as well as what’s up, centred or down, foregrounded or backgrounded and challenges the sequential or linear arrangement of data within the frame.

This broader inclusion of lexical and graphic modal resources and the spatial arrangement between them encourages a visual stance first and a ‘consider all factors’ cognitive/affective engagement which, according to Theron (1994), may amplify creative brainstorming and innovative meaning making. Elements in framed space such as shapes, colours, icons, lines and other visual semiotic resources add a richness which works to engage participants and “enables sign makers” to select modes “to do different kinds of semiotic work” (Bezemer and Kress 2008: 171). As an embodied activity, it readily blurs the lines between the cognitive and affective and creates multi-layered and -faceted meaning making opportunities for sign-makers and interpreters to engage as participants in communication. According to Kress (2010: 83), the separation of “mind and body, of affect and cognition” is artificial at best. The different kinds of thinking enabled by this informal genre – besides broadening knowledge experientially – may also serve to build relationships, interest, attention and curiosity which may in turn engender a sense of fun and rapport in the classroom, a dialogical, interpersonal affordance which Shaw (2010) views as pertinent to both teaching and learning. Allowing students to create informal genres such as mind maps to explore professional communication practices aims to stimulate interest in these practices and to do so in an engaging and situated way.

Through in-class instruction, out-of-class preparation followed by classroom presentation, discussion and feedback, sign-makers as designer-presenters consider what social norms and regulations govern their discursive, generic and modal choices. As each verbal and visual semiotic resource has its own affordances, logics and framing possibilities, it is up to designers, first, to discern which they consider most apt for purpose and audience and then to test their choices collaboratively in class. Creating a mind map is therefore a useful out-of-class planning exercise but becomes even more meaningful once collaboratively negotiated in class.

5.3 Discursive junctures and disjunctures

As an opportunity for creative design, the practice of mind mapping allows students to explore and construct a knowledge base by generating ideas that reflect and foreground their scenario interest and arranging these in hierarchical relationships. I analyse and critique how students use narrative and conceptual tools to portray these relationships and explore the tensions and disjunctures that arise as they grapple with discursive, generic and modal choices that they deem fit for purpose and audience. Although an informal mind map can hardly be considered a professional product, I also look for evidence of shifts from student to professional practice and how these shifts, as minor as this may seem at this stage, may impact identify formation.

I firstly focus on the mind map itself, as early product of an individual or partnership before its in-class display and presentation. Each scenario team worked on their mind maps after some in-class explicit instruction coupled with group discussion. I show how, once in the 'public domain', each mind map ceased to be designer 'owned' but became a joint responsibility.

How the underlying discursive strands are represented epistemologically may be evidenced through the choice of labelling on the mind map: what words and phrases are used to name things and represent various topics and what are the effects of these choices? In this section I will focus on semiotic comparisons of the selected mind maps to see how various teams privilege, label, order and frame certain information to enhance or weaken salience and modality. Decontextualised mind maps, at first silently displayed, manifest a number of discursive disjunctures realised by certain design and semiotic choices. These disjunctures have the potential for being ameliorated through the processes of contextualisation and negotiated discussion; together the aim of mutual meaning making and understanding seems more likely.

5.3.1 A categorical approach: Portia's scientific waste management stance

Portia, who worked on her own, chose the subject of *Waste Management at UCT* as her scenario topic. Although both conceptual and narrative ordering frameworks are evident in this mind map, scientific classification of categories of waste management, as discursively itemised, seem to dominate. As the analysis shows, Portia's choice of topic was prompted by prior interest and background knowledge. As a motivated sign-maker, Portia selected a topic which bridged the gap between an undergraduate locus of expertise (science) and a new field of postgraduate study (accountancy). In one topic she could combine the known with the unknown in an attempt to explore and consolidate both.

At first glance, the mind map appears more apt as the underlying design of a scientific paper or policy document than an investigation report. Important report sections, particularly Conclusions and Recommendations, are not prominently displayed and one only becomes aware of them after much scrutiny and later through negotiated discussion.

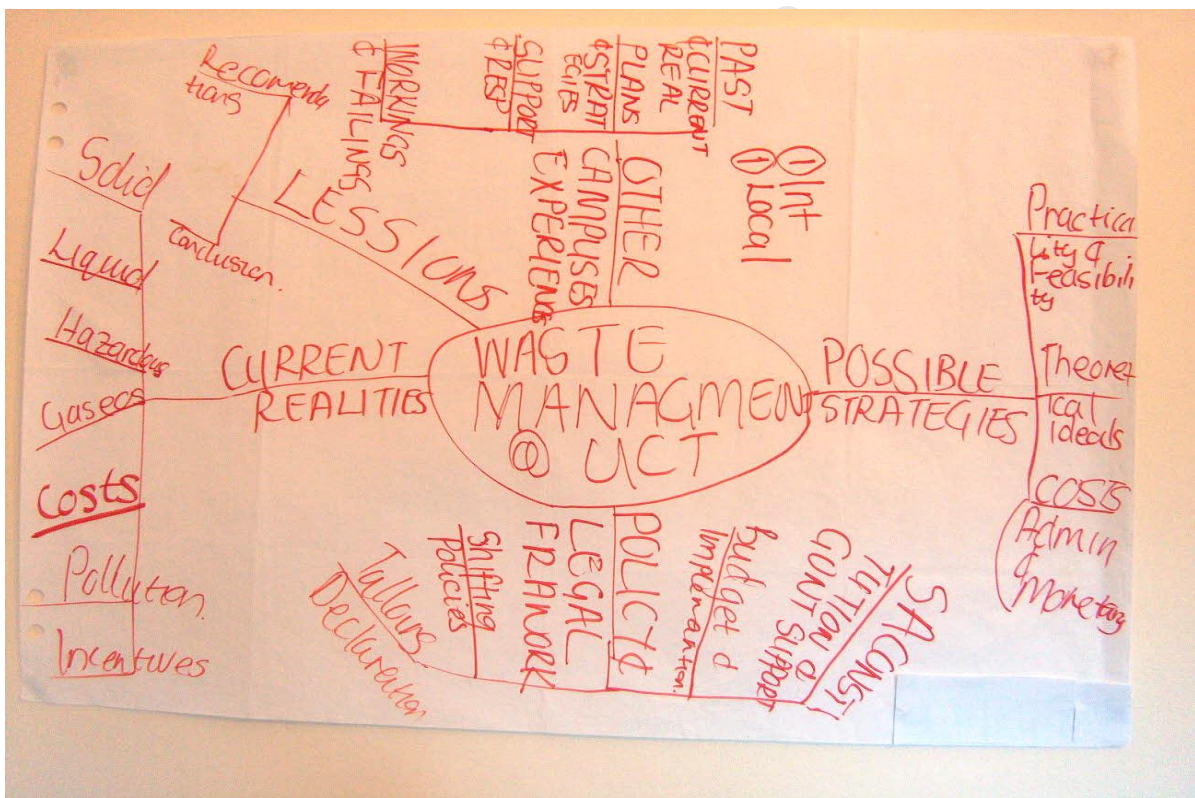


Figure 3: Waste management at UCT mind map

Compositionally, the mind map is 'divided' into four major quadrants which are more or less equal in size. Although shapes are 'balanced' and lines are used, the reading path is not clear as deictic participant directions such as numbering and arrows are missing. Reader expectation tends to the more 'usual' left-right clockwise reading path in the West but this

approach does not make sense. This initial confusion affects textual coherence and this confusion was only clarified during Portia's anti-clockwise presentation. (See section 5.4 below.)

As can be seen in figure 3, the circled scenario topic in the largest writing takes centre stage with all other mind map elements emanating from it and on either side. The topic is further sub-divided into *Current Realities* on the left and *Possible Strategies* on the right. In terms of reading path and Kress's contention (Kress and Van Leeuwen 1996; Kress 2010) that what is given is usually on the left and what is new is on the right, this arrangement makes sense to a Western reader who, having read the centred topic, will appropriately move to the left side. This 'start' seems to engage a scientific discourse which is borne out further by classification of four kinds of waste: *Solid, Liquid, Hazardous* and *Gaseous* although the category heading, *Types*, is assumed. This is an effective reader/viewer starting point as the list itemises the instances of waste management to be considered. Solid waste takes 'first place' on the list with liquid and hazardous relegated to the middle and gaseous ending the list. As first and last positioning in a paragraph or list tend to receive a greater proportion of attention in terms of primacy and recency effects respectively, it seems that solid waste enjoys greater salience overall.

Reasons that solid waste as a category tends to top a list (this and others I have seen) may have to do with the fact that it is the 'largest' waste management area globally and is the most understood, common, easy, tangible and least threatening of waste matter management and disposal measures. Consequently, solid waste recycling efforts and campaigns continue to garner the most attention institutionally as well as from the media. The more specialist areas involving hazardous and gaseous waste management are not well known or understood and certainly not given as much campus media attention (nor global attention, for that matter). Although these types of waste products may be more grave and toxic, students are clearly not expected to play their part in their environmental management as they would, say, in recycling and maintaining a litter-free campus.

Alongside a scientific and environmental focus, a business discourse features prominently. Below the waste classification list in darker script and thicker pen strokes, the word *Costs* as category heading is not assumed and heads two seemingly 'given' costs: *Pollution* and *Incentives*. On the right hand side, 'new' costs relate to *Practicality & Feasibility*, presumably of future strategies and ideals. *Costs* is further sub-divided into *Admin* and *Monetary*, the only underlined category sub-division on the right. Below the centre topic is another sub-heading relating to costs: *Budget & implementation*, the third mention of money matters. The fact that

costs are important enough to be listed in three quadrants of the mind map highlights the importance of the commercial business interests of students on the course and an institutional reality that cost-benefit analyses and feasibility are key givens that may preclude certain waste management measures as too expensive. The hard-nosed 'corporate' message seems to be: it all depends on the price-tag¹.

The balanced juxtaposition of *Current Realities* with *Possible Strategies* on either side of the main topic puts them on 'opposite sides'. It suggests a narrative of past action/inaction and consequences (pollution), the current status quo as well as future possibilities, a time line involving theoretical and practical considerations. This arrangement reinforces the tension between reality and possibility. Although there is a narrative 'then-now' arrangement in terms of past and current realities and possible [future] strategies, a conceptual ordering of the text and underlying discourse seems more prominent, as stated. Besides waste classification, comparison and contrast between these categories as well as between universities is evident. Cause and effect in dealing with the consequences of poor policies (pollution) is another way of organising knowledge. Explanations of theoretical ideals versus practical strategies including costs are also evident. Each of these analytical tools of constructing knowledge reinforces its scientific appeal and heightens modality within a scientific domain.

Above and below the centrally positioned scenario topic are two further sub-divisions. The classification below the line can, according to Kress and Van Leeuwen (1996), represent the factually 'real' situation based on empirical data. A legal discourse is evident with an emphasis on government legislation with some capitalised sections and larger writing (*Policy & Legal Fra[me]work* and *SA Constitution & Govt Support*). The focus on legal and constitutional matters and the *Talloor[e]s Declaration* adds a substantive evidence base and a sense of professional gravitas to the content which may enhance credibility. The above-the-line comparison with other universities represents more idealistic and generalised information (Kress and Van Leeuwen 1996). This may make sense in terms of Portia's aim of explaining and comparing existing South African frameworks, policies and support, particularly government support, seen as real, but limited, with the more advanced situation abroad, seen as 'ideal'. Although the legal framework below and comparative message above may seem important, the cramped, side-on writing is not convenient from a reader's point of view and may be ignored. The reason for this is likely to be twofold. Firstly, these two sections are not centrally located along the topic continuum in terms of a left-right reading path and secondly, the side-on writing suggests that either the angle of reading has to change or the page needs

¹ It must be pointed out that an intriguing shift occurs at a later stage when Portia seems to eliminate costs from the discussion as evidenced in later products such as her topic outline. See chapter six.

to be turned from a horizontal to a vertical plane. The physical difficulty of this above- and below-the-line reading path contributes to marginalising these topics and removing them from the forefront of the argument.

Despite the confusing layout, the mind map content exhibits overall textual unity of theme and emphasis of certain key issues. The interrelationship between the scientific, environmental, business and legal discursive ensemble and salience in terms of what is foregrounded, and in what order, heightens modality in professional and institutional domains. This combines with a sense of neutrality and detachment, further realised through informative phrase headings and the lack of emotive or relative sentiments, sensationalism, rhetorical flourishes or interactional resources such as questions or exclamations (Hyland and Tse 2004). This detached authorial stance characterises a domain of facts and figures, a key characteristic of both a scientific past and a numerate future in accountancy. The discursive combination enhances credibility overall and the sense that Portia as designer embodies a certain scientific expertise.

Besides ideational salience, relational salience is heightened through colour (red), size of lettering, use of capitals and/or underlining for some headings and position on the page (centre, left/right; top/down) as well as vertical and horizontal writing. Although red is often associated with positive feelings, it can also carry connotations of danger, fire, anger and strife (Archer and Stent 2011). If Portia wanted to highlight the dangers of toxic waste and undesirable yet common hazardous waste management practices, the choice of red marker may not have been accidental. She may, consciously or unconsciously, have been drawing on representational conventions in circulation in broader society. Certainly the deep, saturated red colour and the scrawled, graffiti-like writing crowding the frame, both vertically and horizontally, contribute to the 'noise' on the page and an overall sense of danger and urgency which may serve rather than hinder interpersonal salience.

Juxtaposed to relational salience, the informative epistemological stance as well as emerging professional identity as discursively displayed, is a contradictory 'school' look to the mind map. The red handwriting is a messy mixture of uppercase and lowercase lettering – sometimes in the same word. The 'font' at times resembles cursive script, which adds a softer, emotive element belied by the factual content. This, together with contractions, abbreviations, spelling errors and sloping lines, suggest a hurried, impromptu approach with minimal if any proofreading and little regard for register. This ontological tension between an emerging professional identity, formally suggested by content topics, sub-topics and 'scientific' classification on the one hand and the 'young', untidy and seemingly linguistically uneducated impression on the other, creates a semiotic disjuncture. In appearance, if not content, the

mind map seems like the work of a school child. This weakens professional modality and sets up an interesting paradox. As Portia seemed to be at a professional crossroads in terms of her career, these mixed messages and contradictory impressions may be a manifestation of her grapplings. It took the oral presentation and feedback session to unravel some of these discrepancies and misconceptions.

5.3.2 A narrative approach: Lindiwe's and Vusi's take on recycling

Unlike Portia's mind map, Lindiwe and Vusi of Team Recycling privileged a narrative framing reflecting past practices, current conditions and future alternatives.

Like Portia, this team was also registered for the accountancy conversion course, having pursued undergraduate business management studies elsewhere. Lindiwe, an older married student, had also worked for eight years before returning to university. Her age and workplace experience were instrumental in topic choice with her younger partner accepting her interest in UCT's current recycling practices and policies and future alternatives in effective resource husbandry. In her course reflection Lindiwe mentioned her marital status and likened good governance, an important concept in accountancy, to good housekeeping, an interesting analogy which seemed to imbue gendered overtones and a traditional take on female roles. Given her return to university and change in career, this too presents an interesting paradox. On the one hand, she is respectful of traditional African gender roles, mentioning her status as wife and mother on more than one occasion and, as will be seen later, tending to 'mother' her partner; on the other, she is seeking a more professional identity within the higher paid career of chartered accountancy. Like Portia, she too seemed at a crossroads both personally and professionally.

Shared characteristics with the previous mind map are the landscape view, the centralised topic and the use of four quadrants although this layout seems even more prominent in the mind map below. Lindiwe and Vusi shifted all writing to the left and right margins with no written sections above or below the main topic of recycling. The starkness of this arrangement, the solitariness of the scenario topic within a sharply delineated 'textbox' and the swathe of white space above and below, emphatically foreground the single word in the middle as do the five arrows which snake out on either side of the textbox, three to the left and two to the right. This arrangement seems to mirror the report format with its clearly delineated sections, all of which start on a new page and the layout is thus suggestive of this separateness.

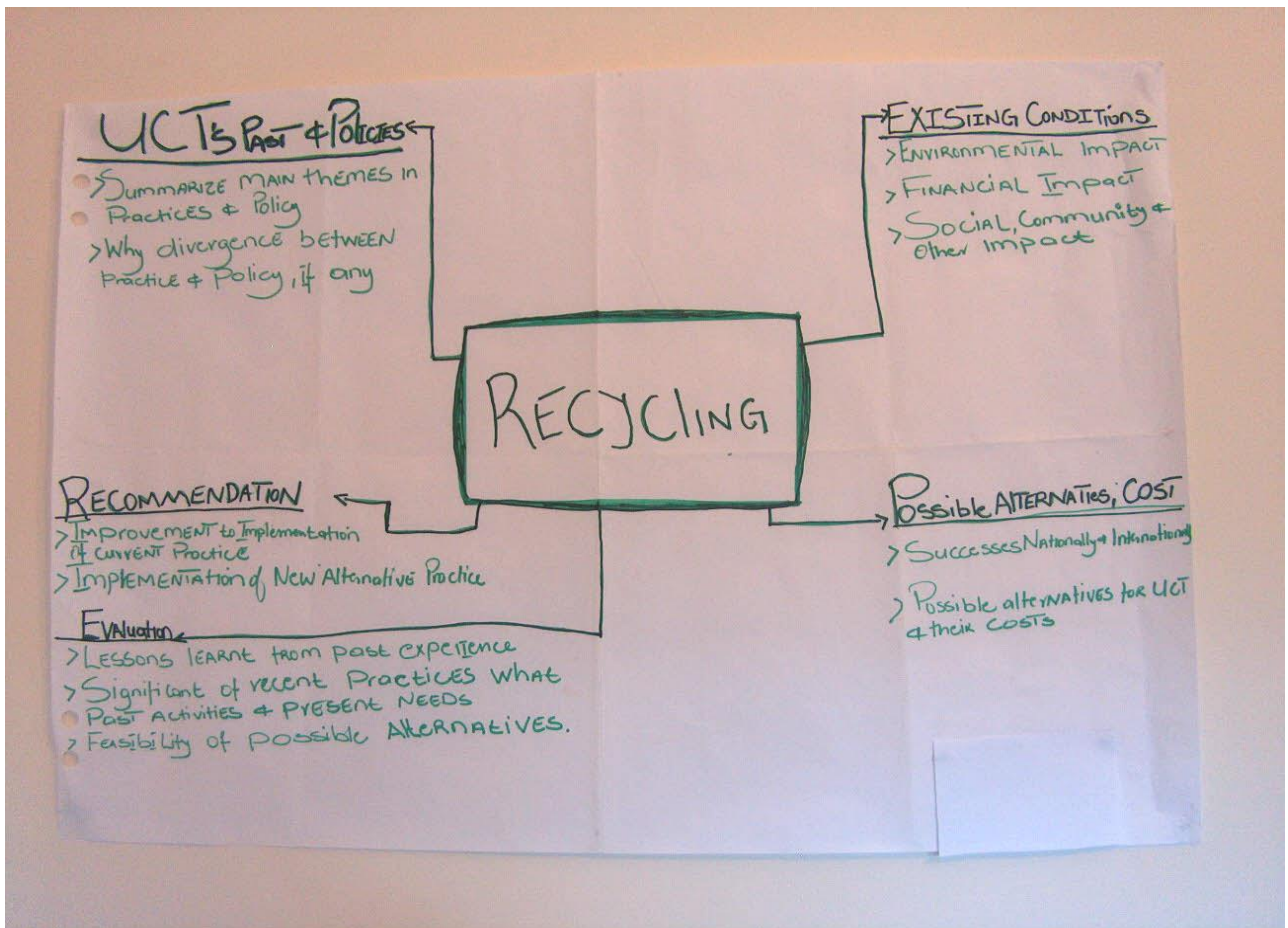


Figure 4: Recycling mind map

Although there may be a similar 'look and feel' to Portia's mind map, equally, there are essential differences. Unlike Portia's arrangement which seemed more like a policy document or scientific paper, this mind map resembles a report in the making. The major headings clearly reflect the report format in terms of body sections (findings), conclusions (*Evaluation*) and recommendations.

In terms of discourse structure, a narrative of *Past [practices] & Policies* is followed by *Existing Conditions* and future *Possible Alternatives*. This seems the most prominent ordering device. Although no numbering is used, the left-right clockwise reading path seems easy at a glance and there appears little confusion about where to begin: the past. Although the team omitted the word 'practices' in the main heading, its presence could be surmised by virtue of the position of '&' and also the instruction-to-self to *Summarize main themes in Practices & Policy*, here in the singular rather than the plural of the heading above. This imperative injunction acts as a reminder to the team of what to do/how to start and points to an underlying uncertainty about what they may encounter. The second sub-point, a question to self, enjoins them to look for discrepancies between past policy and practice ("if any"). Although the mind map starts

with the known UCT situation, the 'given' on the left, the wording of both sub-headings clearly signals that they have yet to start their investigation.

Within the overall narrative arrangement at main heading level, a conceptual ordering pattern is also evident relating to the 'triple bottom line' in management accounting: *Environmental Impact, Financial Impact and Social, Community & other impact*. As discussed in the previous chapter, corporate reporting goes beyond financial reporting to include both environmental and social reporting and this 'planet, profit, people' breakdown is evident in section two of the mind map. An interesting point of emphasis in this section is the placement of environmental impact ahead of financial impact. First position in the list heightens salience. This speaks to the question of sustainability in business and the focus of their scenario topic. It also seems purposefully changed from the usual classification of profit, people and planet. These existing conditions also appear to be 'known' information, not 'new' as one might expect on the right hand side of the sheet although it does underlie the ongoing situation which may well throw up uncertainties and new eventualities. The team's sub-headings also point to their analysis of impacts as dependent on future research findings. In other words, these impacts are yet to be 'found' and are thus 'new' to them. As noted, these impacts are all at sub-heading level, as is conceptual framing; the most prominent perspective is the narrative account of recycling at UCT.

Following in chronological order (and clockwise direction), the next major heading immediately below this comprises *Possible Alternat[iv]es, Cost* with sub-sections *Successes nationally and Internationally* and *Possible alternatives for UCT & their costs*. Once again, subordinate to the narrative structure, a conceptual arrangement is included. A comparison with other institutions seems likely (with a focus on successes, not failures) as well as measures that UCT could take contingent upon their costs. The main heading and the second of the sub-headings are nearly identical thus emphasising the importance of cost when considering any alternatives, irrespective of their success elsewhere. The words 'financial', 'costs' and 'feasibility' reinforce a commerce domain and professional business discourse in terms of cost-effectiveness and affordability of future alternatives.

The final quadrant includes both *Evaluation* and *Recommendation* which coherently reflects the final two sections of a report. Although not called Conclusions, one can infer that this narrative past-present-future section will be used to draw conclusions by virtue of its position before Recommendations and language such as "lessons learnt", "significant", "needs" and "possible". The job of conclusions to evaluate significance and weigh up alternatives seems bound up in these terms. Although given in the singular, Recommendation, one can also infer

from the sub-headings, *Improvement to Implementation of Current Practice* and *Implementation of New Alternative Practice*, that there will be more than one recommendation. Again, a narrative slant is manifest in words such as 'current' and 'new'. This concluding quadrant, in particular, serves as an early indication that an evaluative investigation report will emerge.

Attempts to heighten modality within an environmental discourse include the two shades of green, seen as synonymous with the concept of recycling. The darker shade is used to bold major general headings, the central textbox, underlining and arrows, the lighter hue being used for the more specific sub-headings and bullets (>). The major headings are also generally larger/more prominent and these graphical techniques involving colour, size and spatial arrangement foreground and summarise key data (content) as well as format. Modality in a scientific domain is thus strengthened by the colour as a signifier of recycling, the report-like investigative structure and the ordered in-depth chronology of events and practices. The formal register and authorial distance is further conveyed by the parallel use of bullets, the large number of abstract terms used in all five sections, impersonal style, nominalisation of key verbs such as implement (implementation) and improve (improvement) and the large number of polysyllabic words. Of the seventy-seven words used on the mind map, nearly fifty percent comprise words of three or more syllables. On various readability indices, this places the writing in an 'academic' category requiring a certain educational level of the reader.

It is, therefore, of interest that this serious attempt at presenting a formal professional identity is hindered by seemingly careless errors. This is a shared characteristic with Portia's mind map. The confusing juxtaposition of academic distance and an attempt at professional practice with untidy writing, unintentional errors, omission of words/letters and poor grammar combine to weaken modality. One 'sentence', in particular, makes little sense: *Significant of recent Practices what Past Activities & Present Needs*. The team obviously meant 'significance' but one can only surmise that they wished to evaluate these against past activities and present needs in order to recommend viable future action.

These disjunctures at this early planning stage are common and perhaps are to be expected. It seems likely that students are still feeling their way and elect to use the mind map exercise as a safe and casual opportunity to brainstorm and 'think aloud'. This need not present a negative 'take', given the fact that it is a draft product, open to suggestion and negotiation in class, on the journey to more 'serious' products at a later stage, ones that count in terms of visibility and assessment.

Although a narrative approach is not as commonly used as an analytical structure to organise knowledge in this kind of genre, the merging of both narrative and conceptual structures at main and sub-heading levels works to anchor ‘history’ and alternative measures. Given the background to the topic, knowing what has been done, what is happening and what is planned is both appropriate and necessary. The underlying conceptual comparison between policy and practice and bottom line impacts is equally necessary to fill out the argument. The intertextual and interdiscursive blurring works to reinforce both major domains of professional business and the environment.

5.3.3 A narrative-comparative hybrid: Jenny and Hussein’s ‘green’ building design

Jenny and Hussein, two Finance Honours students, chose *Sustainable Building Practices* as their topic. Once again, social history and habitus affected their choice as Jenny’s father works in the green building industry. Because of her family connection, prior knowledge and presumed interest, this team could strategically tap into this source of primary data during the course of their investigation.

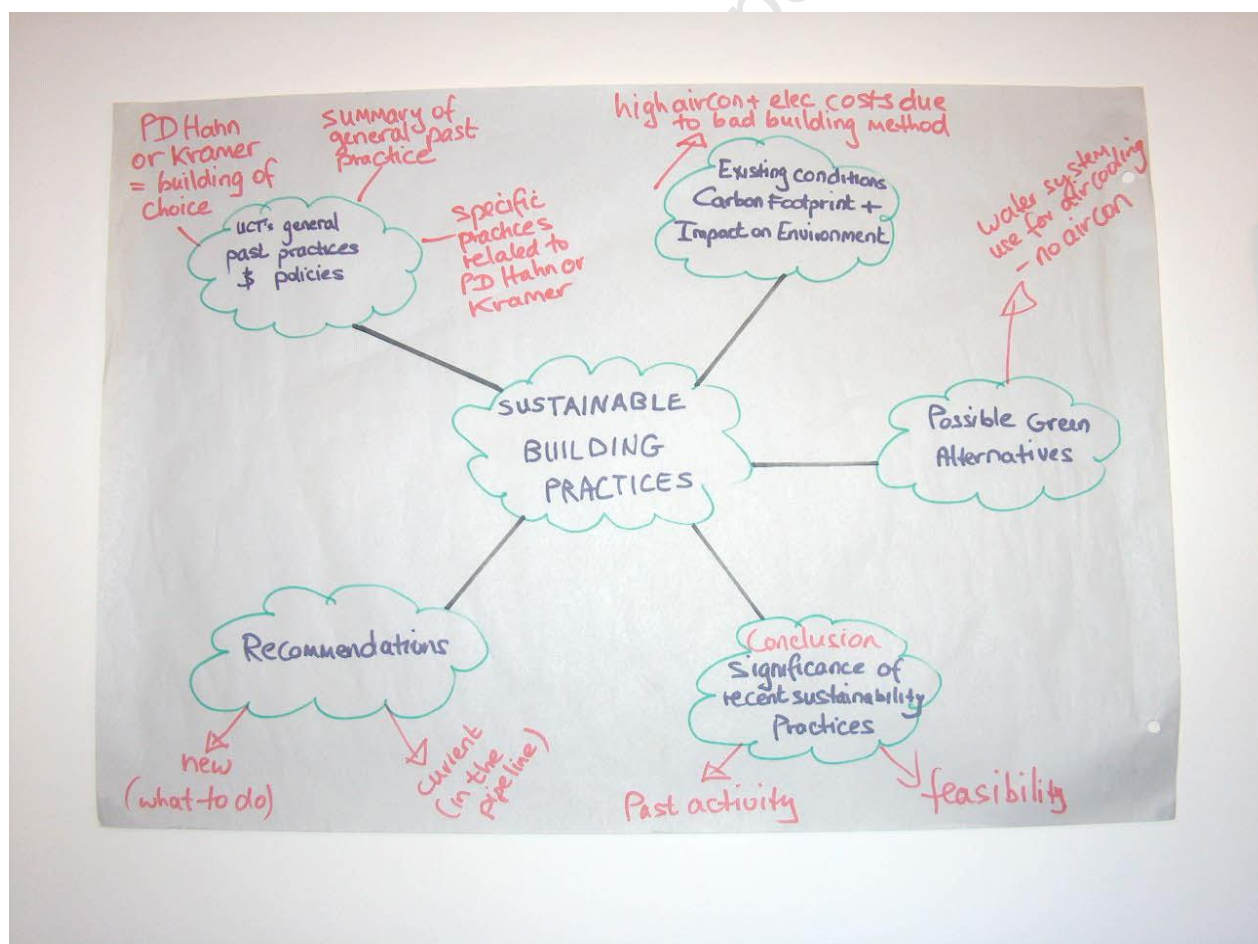


Figure 5 Sustainable Building Practices mind map

At a glance, Team sustainable building also uses an underlying narrative approach. The left-right reading path from *UCT's general past practices & policies* and *Existing conditions* to *Possible Green Alternatives* is reminiscent of the order of the Recycling mind map above and a narrative framing. Clearly on the left, we have the given (existing) situation and on the right, in the position of the 'new', the section on future alternatives. However, Inserted 'above' the narrative (in red), a conceptual framework is introduced. Much greater salience is given to comparing and contrasting the old with the new: a conceptual framework. The nature of the topic – analysing and comparing buildings in terms of green building design criteria – lends itself to an analytical rather than narrative ordering yet, as seen in figure 5 above, both arrangements vie for dominance. A narrative approach may not be as appropriate to this comparative topic as a conceptual ordering and this ambivalence seems evident in Jenny and Hussein's mind map. Unlike the recycling mind map, this creates a certain tension.

Although the topic is centrally located in a landscape orientation and there is no section numbering, the reading path, like *Recycling*, is clearly left to right in a clockwise direction. The topic may suggest that more than one building will be compared or that the practices (plural) within a single building will be itemised and critiqued. The latter seems to be the case as the team makes it quite clear at the very top left of their mind map that they will focus on a particular building: *PD Hahn or Kramer = building of choice*. In another related sub-section, they once again mention both buildings: *Specific practices related to PD Hahn or Kramer*. However, both of these sub-sections are connected to two mentions of *UCT's past practices*, which, as said, characterises a chronological arrangement.

Jenny and Hussein seem to have opted for comparison and contrast as the key way of structuring their argument. They juxtapose 'old' buildings with newer ones, *bad building method* with presumably *green alternatives*, *high aircon and elec. costs* versus *water system use for air cooling – no aircon*. The comparative approach continues in the *Conclusion* section where *Significance of Past activity* and *recent sustainability Practices* are compared to assumed *feasibility* of what is *current (in the pipe line)* as well as *Recommendations* of what is *new (what to do)*.

Although they also mention *Impact on Environment* in section 2 (similar to *Recycling*), they are the first team to look at *Carbon Footprint* (of UCT) or at least of a particular building. Although there is a professional architectural focus, what is not particularly overt, however, is a section on actual costs related to this footprint. Although they hint at savings of 'green alternatives' and mention feasibility in the *Conclusion*, not having a dedicated section in the findings on financial matters is puzzling especially for senior Finance students and a commerce domain.

Once again a certain ambivalence is evident which reflects a wider ambivalence around green practices and commercial interests and global contestation in this regard.

A further disjuncture relates to the design and appearance of this mind map. The team uses green cloud-like bubbles to encircle the title and main topics in purple text. Although the use of green to outline all major headings may suggest a 'green' discourse, these woolly shapes seem somewhat child-like and create a semiotic disjuncture between form and content. Jenny and Hussein seem to have used the pen colours available in class in a decorative rather than functional manner. Interestingly, the darker main heading colours do not seem as arresting as the red arrows and sub-headings. Also of interest is the addition in red of the word *Conclusion* above the purple *Significance* in section 4. I suspect that this particular word arose during discussion as an afterthought while they were writing the red sub-sections and was arbitrarily added without reverting to the 'earlier' purple pen colour. Whatever the intention, it nevertheless also engages attention and links to the report format, coming as it does before Recommendations. It seems incongruous that sub-headings, spatially peripheral and marginally arranged against the edges of the frame, engage the attention to the extent that they do. Whether intentional or not, these red sub-sections, which deal with the most concrete and specific details, stand out the most, lending an air of urgency, as in *Waste management*. The irony of this disjuncture, that peripheral information displayed at sub-heading level seems more prominent than main heading data, is another reason why the conceptual framing in red seems to enclose and dominate the darker narrative account. Had Jenny and Hussein exchanged the comparative critique from its peripheral positioning with the more centralised narrative account, they might have produced a much more articulate message with greater depth and professionalism.

A student rather than professional discourse is reflected in the simple language and informal register by way of abbreviations, idiomatic expressions and rhetorical devices such as "aircon", "elec costs", "in the pipeline", "what to do" and '&' as does the sloping handwriting and inconsistencies in the use of red lines and arrows.

Despite a number of disjunctures, Jenny's and Hussein's mind map is not difficult to follow. Although somewhat hurried and slapdash, reading path is not as difficult as Portia's Waste management mind map and content focus seems simpler. Whereas both prior mind maps seem to have broad, abstract focus areas such as numerous types of waste management across the entire university, involving comparisons with many other institutions, both local and abroad, this mind map has a narrow focus, appropriate to the terms of reference of a short

report. Given the prescribed scope and time or page limit of the oral and written reports to follow, this seemed a wise decision and resulted in fewer content changes later on.

5.3.4 A persuasive approach: Jimmy and Shivani's Ridelink investigation

The final team under discussion is Team Transport comprising two students, Jimmy and Shivani. They decided to investigate UCT's Sustainability Plan for Transport in terms of communication and feasibility. As final-year business science students majoring in marketing, they were drawn to the commercial cost issues but also to the fact that parking at UCT is an emotive and hotly contested subject. They realised that this topic would interest all stakeholders but particularly students. In a country with inadequate, and severely criticised, public transport systems, they were curious to investigate how UCT was coping with transport issues, what they planned for the future and how they were communicating and marketing these issues and plans to the broader UCT community.

Existing university campuses are scattered across the city. The upper campus, situated on the slopes of Table Mountain, is spatially circumscribed with no room for expansion. Given growing student numbers, more satellite campuses are planned which will intensify the transport challenges facing the institution going forward. As UCT's brand and reputation as a first class institution is tied up with stakeholder perceptions and attitudes, how it manages sustainable transport is an issue that requires intelligent handling and commitment.

The problems of parking and transport to and from the upper campus of UCT have been ongoing for decades but have worsened with increasing numbers of students from previously disadvantaged backgrounds. These students can ill afford expensive transport alternatives. Irrespective of options proposed, sustainability is a critical factor. The centrality of this notion is manifest in Jimmy's and Shivani's mind map. Although *Sustainability* is not capitalised, it is positioned above *PLAN – TRANSPORT* in the very middle of the horizontally arranged mind map.

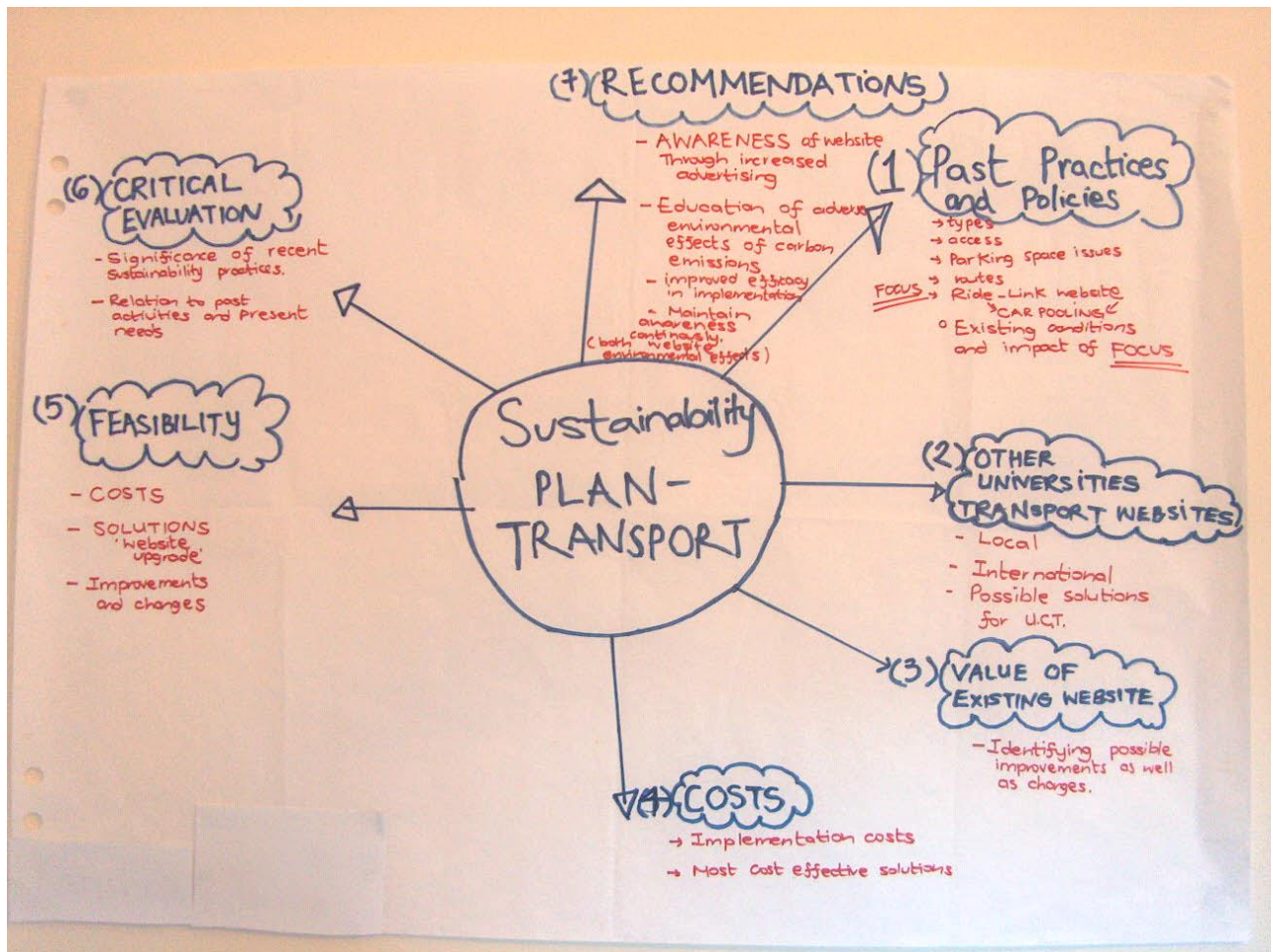


Figure 6: Sustainability Plan for Transport mind map

Team Transport uses narrative ordering to highlight past and existing conditions in terms of *practices and policies* and existing *value* and future *website* changes. Future solutions are also considered under *costs* in section 4. A narrative approach is continued in section 6 in what is seemingly the section on Conclusions: *Critical Evaluation* with subsections underscoring a timeline: *Significance of recent Sustainability practices*, *Relation to past activities and present needs*. A conceptual framework seems equally significant as analytical device and seems to alternate with the narrative. Problem-solution, cause and effect and comparison and contrast are used to construct a persuasive argument about what *improvements and changes* could be brought about at UCT based on practices at *other universities*. Although none of these ways of organising knowledge and structuring the text seems dominant, all contribute to a *critical evaluation* for *improved efficacy* in future and serve to strengthen their proposal and modality in a commercial domain. The 'history' of UCT's actions and the discrepancy between this and other institutions combine as a useful argumentative hinge to strengthen their persuasive standpoint.

An interesting starting point is top right which seems to counter the left-right reading path norm in the West. Without numbering, readers may well have started with section 6. The numbering and clockwise order does prevent initial confusion, however. The first analytical list in section 1 comprises *types, access, parking space issues, routes* and so on. *CAR POOLING* which is indented and bracketed with arrows is also capitalised. Its prominence in this list of subject items adds emphasis which highlights the importance of this concept to the overall scenario topic: the Ride-Link initiative. The twice-mentioned word, FOCUS, is double underlined and also capitalised. The first mention is rhetorically located on the left side of the bullet list directly opposite the term *Ride-Link website*. Arrows as bullets lead the eye to each lined up sub-heading in turn and reinforce the unity and coherence of the section as does the change in bullet from an arrow to a small circle in the last item. This change in bullet icon – similar to the workings of PowerPoint for sub-sub sections – seems to indicate that the conditions/ impact of this focus is a further sub-set of the Ride-Link/car pooling point made above it. The different visual layout of this section compared to the subsections that follow and the fact that it comes first (primacy effect) signals how critically important it is to the audience.

Section 2 uses comparison and contrast to compare *TRANSPORT WEBSITES* of *OTHER UNIVERSITIES* to UCT. The *Local, International* subsections aim to highlight *Possible solutions for U.C.T.* and this analytical focus continues in section 3 with its aim of *identifying improvements and changes*. At this stage, the word website is mentioned three times and one realises that the mind map is less about transport *per se* than the actual transport plan as communicated on institutional websites, both at UCT and other local and international universities. The focus on communication and promotion is foregrounded by terms such as “awareness”, “advertising” and “education” and underpins and is informed by the team’s marketing specialisation. The term website is mentioned three more times on the mind map (six in total) leaving us in no doubt of Jimmy’s and Shivani’s major interest.

Cost-effectiveness is another critical area of interest on the mind map and is dealt with in both sections 4 and 5. Section 4 comprises *Implementation costs* and *Most cost effective solutions* as subheadings and section 5, focusing on feasibility, comprises three sub-sections relating to costs of suggested solutions such as *website upgrades*. The concern with financial matters, characteristic of a commerce domain and discourse, is clearly evident in both sections although what the precise differences in content treatment will be is not as clear.

Each mind map section uses bullets although the arrow bullets in sections 1 and 4 may also function as vectors pointing at the focus areas that interest Jimmy and Shivani most: the Ride-link website and costs. Dashes are used for all the other mind map bullet lists. These do not

'point' with as much strength as the arrows. Whether the change is tactical or accidental is hard to say but as the Ride-link initiative does become the salient focus of draft and final semiotic products to follow, it seems feasible to conclude that this was indeed the emerging focus from the start.

The report format seems to emerge in sections 6 and 7. The evaluation section resembles conclusions in terms of location on the mind map as well the language used in the sub-sections such as 'significance', 'relation to' and 'needs' but this does seem vague at this stage. Section (7) *RECOMMENDATIONS* comprises four bullets: *AWARENESS of website Through increased advertising, Education of adverse environmental effects of carbon emissions, improved efficacy in implementation, Maintain awareness contin[u]ously. (both website environmental effects).*

A scientific cum academic discourse is evident through abstraction, objectification and authorial distance. The use of abstractions such as "adverse environmental effects", "efficacy in implementation", "issues" and "conditions" turns the specific and concrete into the general and abstract. Very few concrete examples are provided other than the mention of parking and Ride-link car pooling in section 1, the website upgrade in section 5 and advertising in section 7 where there is also the first mention of "carbon emissions". As this is the crux of the 'reduction' argument, it does seem hidden and presented somewhat as an afterthought. The use of abstractions at this draft stage is not unexpected as teams rarely have done enough research to know precisely what their projects will cover and generalising allows them to 'play it safe'.

Nominalisation allows writers to remove the action from the finite verb and bury it elsewhere such as in the subject of the sentence, usually a noun (Houp and Pearsall 1977; Kress and van Leeuwen 1996). The nominalisation of terms such as "implementation", "improvements", "solutions" and "education" instead of their active verb equivalents: 'implement', 'improve', '(re)solve' and 'educate' turns processes into noun objects. Even normally action-oriented recommendations, as can be seen above, are nominalised except for the last interactional engagement marker, the imperative bullet: *Maintain awareness contin[u]ously*. This discrepancy also points to a lack of parallel structure in the ordering of elements in a series. Parallelism is a very important notion to ensure and enhance grammatical coherence in a text and the lack of it, as can be seen in the italicized series above, creates awkwardness and confusion (Houp and Pearsall 1977). As coherence in discourse structure is such a key issue in professional writing, more on this aspect is included in chapter eight on report writing.

Although attempts are made to appear formal and professional in terms of register and content focus, the occasional punctuation and spelling error (“continuously”), mixture of lower and upper case and the unequal visual-verbal arrangement of the text on the page and overall use of space seem to suggest a lack of planning. Although using two vibrant primary colours, blue and red, to distinguish main from sub-headings may enhance interpersonal salience and aesthetic appeal, layout does not. Most sub-sections are displayed around the edge of the central topic except bottom left where a large white space is left open. As the team’s names were only added to this corner in class after the mind map was completed, there appears to be no reason for this layout, particularly as sections 4 and 5 overlap in content; if anything their spatial proximity would have made more sense. Although Recommendations, the last section, is given the ‘ideal’ position at the top of the mind map and certainly appears more prominent because of its site of display, leaving a strong last impression (recency effect), it does have less room and the sub-points are squashed with writing reaching and touching the central topic. These seemingly last minute textual additions add to a sense of untidiness. Likewise, as with Jenny and Hussein’s mind map, the cloud-like, woolly bubbles surrounding the sub-topics add a child-like impression. This seems incongruous given the focus on commercial and scientific data. These accumulative factors weaken modality by setting up a disjuncture between form and content.

As with the other mind maps analysed above, this mind map creates a contradictory impression. Errors of varying magnitude of language and layout abound, yet it – as with the others – strongly hints at an emerging identity of a professional communicator and capable researcher motivated by interest and growing know-how of discourses and genre. Despite disjunctures, the evidence of imitation or ‘bootstrapping’, to use Gee’s term, is manifest in the acquisition and incorporation of sample ‘available designs’ (Cope and Kalantzis 2000) demonstrated and critiqued in class. The impression of increasing mastery and ownership is further enhanced by the “scaffolded and supported interaction” (Gee 1990: 141) during the mind map presentations, to be discussed in 5.4 below.

5.3.5 Foregrounding and backgrounding

The table below serves as a summary of some of the key similarities and differences in how knowledge is constructed, foregrounded and realised and some of the tensions which arise due to semiotic choices of design.

Table 3: Mind map comparisons

Characteristics	Waste management	Recycling	Green building	Ridelink initiative
Authorship	Single	partnership	partnership	partnership
Discursive 'regions'	scientific environmental business legal	environmental business academic	environmental professional (architecture)	professional (marketing) environmental academic
Ordering principles	conceptual (major): classification; comparison & contrast; cause & effect; theoretical- practical narrative (minor)	narrative (major): chronology conceptual (minor): classification	narrative and conceptual compete in same sections: chronology and comparison & contrast	persuasive argument: problem-solution; cause & effect; comparison & contrast alternate with narrative chronology
Deixis and reading path	anti-clockwise, no deictic devices, confused reading path	clockwise, no deictic devices but left to right reading path	clockwise, no deictic devices but left to right reading path	clockwise, starts unusually on the right but numbering and arrows assist reading path
Style/register	formal, referential, scientific	formal, referential, abstract, academic	consultative, informal	formal, abstract, evaluative
Disjunctures/tensions	specialist identity and authorial distance versus multiple errors and child-like appearance (‘school’ literacy e.g. misspellings and ‘font’ mixtures)	abstract, academic approach versus poor editing and layout (e.g. use of space)	specialist, professional identity versus ‘school’ identity, informal colloquialisms and childlike layout (e.g. bubbles)	professional, commercial identity versus poor planning/childlike layout (e.g. use of space and bubbles)

Although a narrative story-telling approach is perhaps not as useful in analytical reporting as conceptual ordering, it is common and was often deployed as a default ordering device at this early stage. As seen, it could be identified in a major or minor way in all four mind maps and is presumably known from personal home and school experiences. Evidence of facilitator instruction could also be seen in the adoption of more analytical approaches discussed and

demonstrated in class. For instance “lessons learnt” from a demonstration mind map, found its way into *Recycling* as well as *Waste management*. Discussing ordering principles and patterns of arrangement such as chronology, classification, comparison and contrast, cause and effect, problem-solution and general to particular confirmed the various teams’ abilities to explore significance and causality. Examples include the categorical sub-division such as the classification of waste types into solid, liquid, hazardous and gaseo[u]s as depicted in *Waste management*. The use of narrative and comparative approaches in *Recycling* and *Sustainable building practices* whether in discussion of past/future, local/international practices or various types of impact (environmental, financial, social), points to active engagement with argumentation.

5.4 Transforming the mind map terrain through negotiated design

5.4.1 From exhibition to presentation

At the start of the session, mind maps were hung up around the classroom on walls and boards so a number of mind maps were visible at the same time. The audience had the opportunity to move around and take a closer look before presentations started. Once the audience had surveyed various mind maps in their section they gathered around while team members talked them through the proposed report headings and investigative path².

The handwritten use of markers on a medium such as newsprint – in this case, created from recycled paper – suggests a draft stage, an interim ‘lo-tech’ measure at once old-fashioned and outdated and yet apt in informal rehearsal phase. Equally apt for such an occasion is the flimsy, creased nature of the work, evident in the illustrations above. No one expected a ‘finished’ product, neither of the mind map nor presenters in terms of appearance or demeanour. As physical sites of display, presenters wore their everyday student wear; no instruction was given to ‘dress up’ nor did anyone presume to do so. This, together with the fact that most students informally stood around the presenter, reinforced the ‘backroom’ ethos of ‘off the page’ delivery. The affordance of a mind map presentation as a work in progress aims to provide a breathing space for participants to test ideas in a casual yet supportive and scaffolded environment in a Vygotskian sense (Gee 1990; Gallimore and Tharpe 2002).

The medium of communication, a ‘hard copy’ mind map, comprised writing but also involved speech during the presentation. The interplay of verbal and visual modes during the interaction stimulated interest and aided comprehension on the page which was further

² During 2008, the class was small enough for presentations to proceed sequentially. From 2009 onwards, the class was divided into two sections (front and back) and mind maps were presented simultaneously with the facilitator and researcher observing half the class each.

enhanced, extended and elaborated by speech including tone, pitch and pausing, gesture, movement, posture, eye contact and overall delivery style during the presentation. Although the focus in a mind map may be visual, the interplay of several visual-verbal modes during the interactive presentation created a relational, informative and expressive orchestration of key focus points (Norris 2004). This orchestration proved more necessary for some than for others, particularly as the site of display and reading path/angle were fixed. The clockwise reading paths for *Recycling*, *Sustainable Building* and *Transport* were generally straightforward. Even without helpful interactivity such as gesture, for instance, these mind maps could be followed. Although the Transport mind map incongruously started on the far right side of the page, as mentioned, Jimmy and Shivani ensured a quick uptake of their order by the simple addition of section numbering (the only one of the four teams to do so). The sideways writing and lack of numbering in Portia's mind map meant that a quick uptake was well-nigh impossible. The audience relied on her head tilting and reading while they listened in the main. Although, as confirmed during discussion, everyone started with the waste classification sub-section of *Current Realities*, a natural starting point in the West, Portia then followed an anti-clockwise downwards path, a not-so-usual continuation. My original silent left-right reading path made little sense in terms of the point *Lessions* (lessons) and finally the two subdivisions *Conclusion* and *Recommendations* which seem to be tacked on top left. Although the textual composition is not necessarily conducive to reading the text in an anti-clockwise sequence, especially horizontally, vertically, horizontally, vertically, this sequence made much more sense. Confused initial reading paths and Portia's hesitations during her presentation as she tried to grapple with vertical writing and recall the desired sequence confirmed the need for deictic navigational devices to aid her job as presenter and ours as interpreter.

Despite initial difficulties and the early stage of the research, it was obvious that all presenters knew more about their scenario topics than either their peers or the facilitator. In terms of the pedagogical framework of negotiated design, situated practice and explicit instruction worked together as presenters 'taught' their peers during these oral events. As they prepared for and then participated in class, they taught/learnt tacitly by experiential learning-by-doing. In a post-course interview Portia claimed: "I have learned that it takes a lot of research and understanding of the topic to achieve good work. There's a lot of reading, searching over the internet, having interviews, group consultations, etc...that is involved". She also emphasised having to keep "many balls in the air" and the need for "good collaboration" to achieve this. This sentiment was echoed by others in their assessments and reflections.

Portia's scientific lesson during her presentation not only helped us comprehend her complex topic but also instantiated her identity within a scientific domain. Gesture, particularly

directional pointing and beat gestures, added a sense of authority which underscored the environmental situations and challenges that UCT might face and need to overcome. These bodily modes contributed to meaning making and credibility. According to Jewitt (2009), meaning is distributed across modes. Each mode has a particular area of specialisation and carries a particular load. Kress (2010: 83) also considers what a mode is good for, most apt to achieve and its modal reach. “[/]*Image or speech or writing or gesture*” all cover different (and partial) meanings, all of which are dependent on and influenced by social context and participant culture and identities. What one mode may ‘say’ in one situation may differ from another. Portia’s use of gesture and movement for spatial effect, particularly finger pointing to direct our attention to a particular topic and augment verbal modes, compensated for mind map confusion. Gestures were also aligned with the direction and length of gaze in that presenters often looked at the topic at which they were pointing thus using eye contact to and from the audience to accentuate and punctuate points being made. Speech, gesture and eye contact could act as simultaneous counterpoints, the one to the other, with all playing integral roles in the interaction (Norris 2004). Whereas speech was used “to *name*, to *lexicalize* ...”, *gesture* [was used] to *locate* an entity in the relevant space, to *localize* it in a specific site” (Kress 2010: 166, his italics).

Although meaning is distributed across modes, modal loads and reach are not fixed (Kress 2010). They are shared among and shaped by participants, particularly during discussion. Transformed practice occurred in concert, as collaborative negotiation and convergence. The acts of reading, presenting and feedback allowed for the general process of translation (Kress 2010: 124) whereby “meaning is moved... from one modal ensemble to another, ... from one genre to another”. The shift from reading and viewing to speaking and listening, combined with sound, pace, pausing as well as gesture and eye contact, allowed for additional layers and combinations of meaning. The shift in genre from a mind map to be viewed and read to that of an oral presentation (albeit equally informal) constituted a movement, according to Kress, from “one semiotic domain to another” (2010: 124). This move also constituted a more specific process of translation known as transduction whereby modal entities as meaning-material are moved from one mode to another – from written text to speech, for example, with different affordances and logics (2010: 25).

During oral presentation, speech has the potential for greater reach in terms of audience attention and impact. Some presenters were, however, more vocally confident than others. In Portia’s *Waste management* presentation, the modal load carried by writing, layout, eye contact and gesture seemed greater than speech due to her reticence. Her softly-spoken vocal tone was fairly constant with very little distinction between major and minor points.

Intonational range of voice and volume were therefore less helpful than gesture and gaze behaviour in conveying emphasis, authority and direction. A measure of contradiction in terms of topic salience and authorial engagement was created by 'sameness' of pitch and projection. Although proximity to the mind map, side-on positioning of stance and upright posture contributed to modal integration and embodied involvement, they also seemed symptomatic of her nervousness; the presenter, standing in the shadow, as it were, of the large mind map, seemed to seek comfort and support from its closeness (as some speakers sometimes do with lecterns or tables). Generally, however, projection and audibility were not an issue purely because of the smallness of the group and the proximity to the mind map. With his marketing background knowledge, Jimmy gave a detailed sales pitch of each point on the *Transport* mind map, making this the longest and most confident of the mind map presentations. He enjoyed 'the stage' and his enthusiasm was reflected in vocal intonation and volume, gesture and direct eye contact. "I feel that I speak loudly and clearly when presenting my work but a few people in the course struggle to actually speak their mind, whether is due to accent problem or unclear pronunciation or soft speaking", Jimmy reflected. He noted that "the process by which they [the class] went about [their] task was good to overcome these stumbling blocks."

Growing presenter confidence during this session was partly due to "the process", the supportive informality of the occasion and audience participation but also because the visual-verbal modal repertoire available provided a feeling of security to those who needed it. Besides semiotic work being distributed across modes, audience attention and focus were also distributed across modes, shifting the spotlight off presenters to the display with a change in eye contact and gesture such as pointing. Portia also moved from one side of her mind map to the other when dealing with her vertical writing and 'opposite' sides and this movement served to punctuate the binary 'then-now' narrative, reinforce compositional divisions across space and, equally important, give her something to do. When speech as a mode shifted to dialogue at the end of the presentation, confidence mounted further still as individual accountability was relinquished in favour of collaborative sharing and mutual meaning making.

Despite the casual, hand drawn mind map productions and the lack, in some mind maps, of a meaningful order, the hierarchical display of main and sub-points was clarified during presentation and feedback and order was enhanced. According to Kress, (2010: 23) '*ordering* rests on and suggests an interpretation of the 'priority' among phenomena, where 'prior' can have any one of a number of meanings: prior in 'significance'; prior 'temporally' or spatially, prior causally in relation to the subsequent phenomenon. This can be realized in spatial relations within and between images; as 'first' in a sequence or as last". It can also be realised

through vocal content, arrangement and pausing. Presenters made use of the opportunities afforded during their presentations to develop a metalanguage to explain their narrative or conceptual orders, define concepts, emphasise criterial and salient features of the mind map and point out relationships between concepts. Designer/presenters seemed to regard this stage as an informal pedagogical space to share current progress, future plans and attitudes. A great deal of talk revolved around actions to follow. Jimmy, for example, spent most of his time talking about their methodological plans to gather data. He also, however, used the opportunity to *guide* and *involve* the audience in the transport topic and their approach using both interactive and interactional resources respectively (Hyland and Tse 2004). Interactive resources such as transitions (“then”, “and”, “also”) and code glosses (“basically”) as well as interactional resources such as attitude markers (“obviously”), self-mentions/person markers (“we”, “they”) and engaging the audience with the final question are examples of metadiscourse evident in the following excerpt:

“**Our** topic..... is transport..... Ridelink is a mechanism which allows students to carpool to varsity and see times, places so people can **obviously** ride together... **Basically, we** started off with the policy and **then we** looked at the website and **also** compared with the websites of other universities....“From the comparison, **we** can look at improvements etc, what’s available at other universities such as accessibility, navigation, communication. **We** need to think about” **And where do we go from there?** ... [student] interviews will help – if **they** are aware of it. **Then we** can look at awareness, marketing”

Other presenters provided similar interactive and interactional topic overviews and definitions to flag their audience’s attention and frame the stages of their investigation before discussing interim plans. Those working in pairs used an inclusive “We/Our” style; Portia used the singular “I”.

“Our topic is broadly...”;
“Our purpose is to..”
“We’ve divided into...”
“There’re four major parts....”
“The headings show how we’ll proceed”
“We’ll look at past policy first, what’s been done, then...”
“We’ll compare what’s happening now with plans...”
“And then I will...”
“If I can find someone to talk to...”
“I want to interview....”

During the presentations, the ensemble of visual, written and spoken modes as well as the focus on metadiscourse to guide and involve the audience worked together to clarify content, sharpen focus and elaborate details such as possible alternatives/solutions/ improvements not yet recorded or which faculty or building to choose and why. Modal resources such as embodied speech combined with writing, layout and colour and various iconographic devices

such as shapes, lines, size, spacing and font to create a modal summary of various practices, a précis of what was to come. This mind map ensemble of orchestrated modes, all doing different semiotic work, is thus necessary to amplify meaning.

5.4.2 From critical reflection to redesigning

According to Jones (2009), a display of this kind whether on a stand, wall or board is like a canvas, allowing users, 'social actors' to participate in viewing the display. Viewer participation and feedback permit creator-presenters to ponder, add and amend. This is not a distant relationship. Unlike a newspaper or computer screen where the reader/viewer may have exclusive rights to the material and may have or choose to have a more distant, anonymous relationship, a mind map presentation is quite literally, a 'free for all'. Viewers play a very different role as they are not there to 'consume' but to give feedback (Jones 2009). In collaborative meaning-making, particularly across a diverse group, load-sharing and shifting occurs as partial meanings are negotiated across participants' interests, identities and social contexts. These varying interests and motivations prompted different reactions and responses during the feedback session. The mind map as artefact plus its face to face presentation and interpretation, ensured that meaning potentials had the capacity to become greater than the sum of their interwoven parts with each co-present mode doing different semiotic work at different times and in different ensembles and orchestrations. Tape recorded feedback sessions and classroom observations provide evidence of the collaborative interplay between team participants and their multiple opinions. These recordings confirm that these collaborative activities assist designer-presenters to ponder, interpret and critically review the various social and cultural contexts and perspectives evident in their work as well as the relevance and appropriateness of content, formats and semiotic resources. This enquiry-based session contributed to deepening understanding and knowledge construction, which was very evidently not all facilitator-led or overt/explicit. This reinforces the aim of scenario pedagogy which is to share intellectual productivity for collaborative and long-term meaning making. Teachers as learners and learners as teachers need to critically give and take instruction and feedback in many nuanced ways both in and out of the classroom.

Reflection is a key aspect of critical framing and feedback assimilation. It is not a 'stage' or something that happens at a particular time but is an ongoing, embodied activity that occurs consciously and sometimes unconsciously throughout experiential learning (Jordi 2010). From the immediacy of feelings to deliberate reflective cognition, meaning-makers are always in the process of interpretation during both intra- and interpersonal communication and sense-making. Situated meaning-making comprising all these elements (as opposed to stages) is necessary for transformative practice to occur. Kress *et al* (2000) argue that identity and

knowledge are always embedded in specific lifeworlds. Students need to transform knowledge and not just consume it for it to be sustainable. The combination of these pedagogical elements, in particular, embodied reflection, facilitates that transformation. Each iterative aspect allows students to consider available designs, to design what they consider apt for purpose and audience using an ensemble from a repertoire of available discourses, media, sites of display, genres and modes, and to redesign and transform their practice based on their own interests, identities, lifeworlds and habitus.

Critical aspects of this pedagogical task were ongoing participation and feedback. On more than one occasion the audience appeared to feel that teams were being overly ambitious for a short report and/or should shift focus. In *Waste management*, the mind map seems to cover a great many content areas involving government policy, the Talloires Declaration, numerous other universities as well as four types of waste management. The *Recycling* mind map seems somewhat vague as no scope and limitations are evident. As soon as the audience entered into the discussions, they became critical participants in the transformative process. They advised Portia to focus more on UCT policy with, at most, a comparison with one other university and a choice of one or two types of waste management. Some also found the solid waste category boring and comments such as “been there, done that”, “go for one of the others”, “hazardous stuff more interesting” were recorded. She accepted and agreed with this advice, jotting down notes during the discussion. Her decision to take up peer and facilitator suggestions became clear during the presentation of her topic outline in a later session. Instead of focusing on all four types across the university as a whole, for instance, two types (hazardous and gaseous) were selected and the scope of the investigation was narrowed down to the health and science faculties only. Likewise, Jenny and Hussein were advised to pick a more modern building and to focus on green practices implemented (and what more could be done) rather than focus on ‘bad’ old buildings like PD Hahn or historic practices. They also took this advice, as seen in chapter six. Jimmy and Shivani abandoned a wide angle on transport policies and practices in general and focussed more directly on the Ride-link initiative in later work. In her reflection Shivani saw the mind map as a “tool” for change. Her partner, Jimmy, noted: “[I]t is very rare that the mindmap used in the beginning to plot the desired route remains the same throughout the process. Things change and therefore I think the mind map [should be seen] more of just an idea route because I believe that one should never commit to only one route and be ready for changes and therefore learn to adapt as quickly as possible.” Terms such as ‘process’, ‘tool’, ‘instrument’ and ‘idea route’ convey notions of adaptability, flexibility and a “path for change” as noted in one of the SQ responses.

Statements and questions from the audience provide examples of the guidance given and this feedback was instrumental in opening up a space for redesigning.

Table 4: Examples of feedback provided

Statements	Questions
“Some of your headings are helpful.” “You talked about students.” “The topic seems rather broad.” “Decide what your real focus is and take it from there.” “There is a nice balance.”	“How big is your study?” “Will you also include staff?” “What about....?” “Are you also going to....?” “Can you not possibly see...?” “You could possibly also....?”

This kind of feedback provided direction to speakers of what to do next. Authorial stance emerged and shifted between participants collaboratively. Whereas statements seem more authoritative and emphatic, the questions are more probing and suggestive. The hedged engagement markers in the two last questions are particularly tentative (Hyland 1999; Hyland and Tse 2004).

Role switching and turn-taking ensure an equitable distribution of control and management. At first, autonomy seemed vested in the team as designers as they resolved, out of class, what they wanted to say and how to shape their material. The message was the message represented. In class, before presentations started, the autonomy shifted to the audience as the message now became the message received as they surveyed the mind maps. The affordances of text and layout as visually (but silently) displayed relied on their immediacy and simultaneity on the page as viewers controlled their own gaze patterns and interpretative behaviour as solitary activities. As soon as embodied speech was added during the mind map presentations, control and attention shifted back to speakers initially and then to all participants during collaborative discussions. The affordances of the ensemble of spatial and temporal semiotic resources came into play and multiplied shared and negotiated meaning in unique ways. Another point to be made here is that mind maps stayed on the board or wall throughout the session. According to Kress (2010: 165), this persistence provided a “stable background against which the constantly changing orchestration” of meaning and of knowledge “can be [mutually] developed.”

As mind maps are not considered ends in themselves, they can, in the scenario context, be considered transformative vehicles which allow participants to critically speculate and experiment. As active learners, individuals and teams were encouraged to figure out certain

things for themselves, test them out in the classroom, present their ideas and burgeoning knowledge, receive feedback from the facilitator and peers, negotiate changes and engage in ongoing reflection. Participants instruct and in turn receive instruction. This dialogical process is well aligned to the interactive convergence model of communication (Rogers and Kincaid 1981; Grant and Borchers [2002] 2008) discussed in chapter two where participants are jointly responsible for meaning making, knowledge creation and mutual understanding, if not agreement. Having process-product interventions allows communicators to artificially slow down the process of communication and representation and to receive feedback before continuing. Teams could consider, select, display, present, discuss and accept or reject others' viewpoints. A mind map can also act as an accelerator. Its simultaneous visual-verbal display aims to conflate, synthesise and summarise key concepts which serve to guide participant gaze, allowing participants the opportunity to see the whole before it is written out and/or presented in full. It offers a gateway into the future, a modal summary or abstract which invites critical evaluation as a joint venture.

Draft products such as these play uniquely transformative roles as developmental contributors, as safe harbours for participants to take stock. It was very evident from execution and SQ responses that mind maps are not seen as business products in their own right. They are regarded as educational and epistemological resources for designers to 'gather their thoughts' and engage in and experiment with various visual-verbal practices. They are particularly fashioned to act as planning devices such as Jimmy's "idea routes" not meant for client eyes; abbreviations, contractions, errors, untidiness (lines and writing) as well as informal demeanours and conversational styles seem acceptable at this type of 'behind closed doors' rehearsal stage. The casual to and fro movements of speakers and team members was often shared by the audience who sometimes exchanged places with the presenter 'up front' as they engaged with the mind map, sought clarity or interrupted to provide advice, some accepted, some contested. The relaxed posture, more animated expressions and casual movements were indicative of increasing rapport during the session. Together participants co-created and transformed various mind map designs into [more] streamlined structures to take forward to the next classroom event³.

5.5 Final thoughts

This early developmental stage also contributes to enhanced expertise, confidence and an emerging professional identity, here still characterised by tensions and disjunctures while

³ This is indeed what teams took from these sessions as evidenced by the topic outline adaptations produced at a later session.

students grapple with key issues. On the one hand, these issues relate to understanding what discourses, media, sites of display, genres and modes are at their disposal and how they can select, orchestrate and transform these for meaning making that is fit for purpose and audience. At a macro level, these issues signify how participants can attend to and engage with sustainable business practices and social responsibility. Like 'graduateness' mentioned in chapter one, environmental and corporate citizenship is not a state of being but rather a process of becoming. Every dialogical encounter, both in and out of the classroom, aims to foreground critical elements in ways that go beyond communicative competence to engage students in transformative thinking, feeling and behaving in the world.

Researchers, past and present, such as Vygotsky (1978), Tharpe and Gallimore (1988); Gallimore and Tharpe (2002), Gee (1990, 2004), Lave and Wenger (1991), and Kress (2003, 2010), among others, talk in their work about 'assisted' imitation as students set about learning new and relevant domain-specific or generic discourses. As mentioned, Gee likens imitation to bootstrapping and Lave and Wenger focus on apprentice-like behaviour of newcomers which aims to lead to gradual mastery within an affinity group/space or community of practice respectively. In this classroom, the term affinity space seems more apt as participants do not imitate a master ('old-timer'). As all scenario participants are 'newcomers' they teach and learn together collaboratively. The support given and received by the various teams allows participants to negotiate new understandings and gradually improve their capabilities. All participants as sign- and meaning-makers are motivated by interest and co-design their representational and communicative practices in ways that are deemed most apt to realise their interests and agency. Although each team held a privileged vantage point while their work was being presented and discussed in class, turn-taking allowed other teams a similar privilege. Teams were thus generous and constructive in their feedback efforts, knowing full well that they would likewise benefit from the collective wisdom of their peers and the facilitator.

All along this trajectory, users as designers enter into pedagogical dialogues to negotiate products and processes. As product, the mind map plays a tangible, foundational role upon which to design and build further products; as process, it contributes to professional development and identity.

Chapter six takes another step along this trajectory with the design and creation of yet another set of draft products: the numbered topic outline and sample illustration. Students had a fortnight to transform their mind maps to these verbal and visual configurations for display and presentation in class.

Chapter six: Emerging authorial stance of the professional communicator: transforming mind maps into topic outlines

The instantiation of authorial stance in a draft intervention is not only possible but desirable in the sense that the sooner student teams put their stamp on their material in terms of selection and design, the sooner they can move towards shared understanding and achieving their communicative goals. This chapter seeks to highlight modality as a crucial aspect of authorial stance in professional communication. The chapter follows the developmental trajectory of the three scenario task teams dealing with hazardous waste management, recycling and green building design. It focuses on shifts in authorial stance and ends with concluding comments on their journey towards transforming these draft artefacts into final professional deliverables.

6.1 Exploring hierarchies of verbal and visual design

The second major draft assignment comprised two deliverables. Teams were tasked with transforming their paper-based mind maps into two products to be displayed on overhead projector transparencies: a hierarchically arranged, numbered topic outline and a sample illustration that they may consider using in the body of their oral and/or written report. Although two weeks had passed since the mind map presentations, the various scenario discussions continued both in and out of the classroom. This ongoing conversation also reflected the cyclical nature of communication as depicted in Rogers's and Kincaid's convergence model, discussed in chapter three. The first "and then" as shown in figure 1 on page 15 referred to communicative events that had gone before while the second "and then" pointed to the future: what still needed to be done and what would happen next as teams progressed from draft product and pedagogical process to final deliverable within professional practice.

During the mind map feedback session, critical framing and 'embodied' reflection involving both 'heart and head' decision-making often alerted sign-makers to new ways of shaping and reconfiguring semiotic resources along their developmental trajectory. Based on negotiated discussion, in- and out-of-class reflection as well as additional in-class instruction, teams set out to redesign their material for classroom display. As another building block of design, the more formal, ordered outline affords a different channel of discursive realisation and emerging professional identity and builds on previous semiotic work. Considering, selecting and designing a visual product from a repertoire of available designs was the team's first tandem exercise which raised questions of alignment between verbal and visual material and appropriateness for communicative purpose and audience.

As students explore and merge various discursive, generic and modal practices, the key concepts which arise in this semiotic analysis are participant interest, authorial stance, modality within particular domains and emerging identity as professional communicators. What embodied decision-making – reflecting the cognitive and affective lifeworlds, interest and identity of presenters as sign-makers – seem to have been prompted in the design and construction of these products? Why did these teams select particular words, phrases and ordering principles and arrange these in a particular fashion in their outlines and opt for one particular visual from a wide repertoire of choices? And finally: what struggles with authorial stance cum metadiscourse and professional identity are evident and how do teams grapple individually and collaboratively with these in order to transform their work from draft stages?

The analytical focus will shift between process and product and allow elements within the framework of negotiated design to emerge iteratively as prompted. Contrary to the previous chapter where the pedagogical analysis of the negotiated processes of (re)presentation in class followed the product analysis, here the products and their presentation will be conflated and analysed together. The reason for this is that unlike the mind map which could be silently surveyed in advance as a physical artefact, the transparencies and their presentation go hand in hand, each resource affording different semiotic work. The media and sites of display (transparency, equipment and presenter) and the act of presentation occurred simultaneously. Given this simultaneity, this product/process 'shift' was not so much a permanent act as a multi-layered to and fro iteration of various genres and modes, each with their own affordances. The verbal transparency as artefact could be independently read when switched on but it did not persist in the same way as the mind map previously; it was not accessible to the audience the whole time and its availability was controlled by presenters when it was their turn. The oral presentation of the topic outline, albeit simultaneous to the reading, added another dimension; together these multiple viewing and listening modes aimed to reinforce the cyclical converging and diverging nature of representation and communication.

6.2 Combining media and sites of display

Although this second set of presentations – as draft products and processes – were still considerably less formal than the final oral reports analysed in chapter seven, they did progress from mind map discussions in the round, resembling casual conversations, to front-of-class mediated presentations using equipment such as overhead projector and screen. The equipment functioned as medium and site of display. Although a transparency is no larger than an A4 page, the projection itself was larger than the mind map of the previous session, given magnification and the dimensions of the screen, aided by the light source.

All the elements of where displayed, how displayed and how presented, contributed to meaning making and modality. Whereas mind maps were hung up around the classroom much as an exhibit in a gallery, here the display position was fixed, given the frontal position of the screen. During the mind map session, participants could stroll around the venue like visitors, pausing to view various displayed mind maps as posters or artistic objects before moving on. They were in control and could decide when to move on. It seemed part work, part entertainment especially when they engaged in conversation before presentations started. The affordance of the mind map display heightened the fun element for students although it may have lowered modality in a professional domain. On the other hand, the fixed frontal topic outline 'lecture' was characterised by formal instruction and there was no choice of when to start. As nothing was on display before the projector was switched on and the presentation started, there was also no opportunity for audience engagement in advance. Despite these constraints, the sequential formality of these mediated presentations and typed, printed artefacts (versus casual, hand-drawn mind maps) were seen to heighten modality and professionalism, despite the 'lo-tech' provenance of overhead versus data projector.

Another element which may have enhanced modality in a professional domain is the height of the display. Unlike mind maps which were generally displayed at waist to shoulder height, the elevated illuminated screen created an uninterrupted view of the topic outlines or sample illustration being presented. They rose above the speaker. The presenter bodily orchestrated position, posture, movement, gesture and eye contact to focus attention and direct gaze in relation to projector, screen and audience. Pointers were used to draw attention to particular points of the display as topic outlines or images were explained. The creation of a vector, a line of sight, contributed to coherence and emphasis as topic, direction and pace were dictated.¹

Besides the equipment, presenters were important sites of display in their own right. They boosted interest by directing proceedings and adding explanations to headings and labels as they progressed. Where they stood in relation to the projector and screen and how they moved and used gesture also informed and underscored meaning. The ensemble of visual and verbal modes in both presenters and illuminated artefacts encompassed meaning as combined sites of display. However, the light source inevitably drew the eyes of the audience.

¹ Some presenters used laser pointers which highlighted the point under discussion, most often with a red dot which resembled a sniper's gun trajectory, sharpening attention even more.

Of the two sites, body or screen, the raised and illuminated screen with focussed line of sight had the greater 'pull'.

Of interest was that these teams elected to supply and print their outlines and illustrations onto heat-resistant transparencies rather than hand draw them on recyclable transparencies, using non-permanent coloured pens, all available in class. There was therefore a sense of permanence to the content in contrast to the hand-written/drawn, washable transparencies of some other teams. Whereas hand produced transparencies looked informal, often untidy, the computer-mediated artefacts seemed to attract closer designer attention, particularly to alignment, spacing, consistency, neatness and completeness. Layout became more precise. In terms of effort and money, they also cost more to produce. Printed transparencies also seemed to attract more audience attention and appreciation possibly because they exuded an overall sense of 'professionalism'. There was a tension between 'walking the talk' of a green scenario by producing reusable but not very impressive 'handmade' products with low[er] modality and not-so-green typed/printed transparencies with higher modality in a professional domain. As these printed transparencies are undoubtedly wasteful in terms of energy and material usage, they would, ironically, have lower modality in an environmental domain. How to appear 'business-like' and yet green created a disjuncture which teams failed to resolve. Another irony is that this tension between professional and environmental domains seemed lost on the class for the most part, including various presenters who were talking about the very issue such as Portia, Lindiwe and Vusi. Perhaps Lindiwe with her professional work experience simply could not bring herself to hand in such seemingly child-like, amateur, hand-drawn products despite the topic and marked difference in cost. As 'new' students to the faculty, irrespective of age or experience, the need to assume and reflect a professional stance, seemed paramount.

6.3 Discursive and generic orchestrations

As with earlier mind maps, topic outlines and sample illustrations are underpinned by what Bernstein (2000) would call "professional knowledge" relating to more diffuse fields of practice such as 'business studies'. These artefacts do not instantiate a singular or 'pure' discourse (Bernstein 2000; Beck and Young 2005) or fixed identity. Borrowing from Foucault's body of work, Preece (2009) posits the notion of a 'discursing subject' constructing relationships with various 'discursive fields', much like Bernstein's discursive 'regions'. Continuing with decisions made earlier, topic outlines and sample illustrations are therefore characterised by a number of discursive strands. Although located within a commerce domain and the 'business' of environmental concerns, social rather than economic factors dominate. Evidence of scientific and academic discourses emerge in some artefacts depending on topic choice, the

conceptual treatment of data as well as feedback provided. Some discursive strands merge seamlessly and appropriately construct authorial stance in relation to purpose and audience while others jar and demonstrate the struggles and inconsistencies still being experienced within social semiotic practices and emerging identities.

Belonging to and moving in and out of multiple and oftentimes competing discourse communities – some with more permeable boundaries than others – may prove confusing to students. These movements and accommodations aim to allow students to become more mindful of the rules and norms that seek to govern the ‘communities of practice’ (Lave and Wenger 1991) to which they aspire to belong in the future and the genres apt for these particular communities. At this stage and in particular on this course, these novice accountants or would-be marketers can more accurately be described, to borrow from Gee (2004), a loosely affiliated ‘affinity group’. The sustainability scenario topic itself informs and underpins various (and varied) discursive threads which mesh and merge within the wider domains of commerce and industry and this discursive blurring – with greater or lesser effect – is manifest in their respective verbal and visual products. This is not to say that this blurring is inappropriate and will automatically cause incoherence; it may be entirely apt given the draft stage of the work and the realistic demands of a communicative world characterised by change and hybridity.

In terms of the topic outline, the first noticeable characteristic involves appearance. It can be said that the generic ‘look and feel’ of a topic outline is similar in that it also attempts to “‘fix’ meaning” in habitual ways as Kress (2010: 95) contends in his concept map discussion. One could say that a topic outline is “organised through the affordances” of writing and numbering, “using the semiotic logic of space and the modal affordance of spatial relations between simultaneously present entities.” It is rare that a topic outline would run over two pages so viewers can scan it at a glance without having to turn a page. It resembles a report table of contents (for which it proves a most apt planning device). Unlike the more haphazard ordering of the mind maps discussed earlier, vertical topic outlines dictate a precise order; one starts at the top and works down the page and reads from left to right. There is little room for confusion in terms of reading path.

In terms of layout on the page, the outline is characterised by consistent indentation and spacing to distinguish main from sub headings. Thus the eye may track down the vertical assembly and in an instant ascribe prominence and emphasis to data segments – more easily than was the case with the mind map. It is clear that the major headings provide an overarching umbrella under which the rest of the gathered information is classified in more

concrete detail in a particular order. In the topic outlines below, the hierarchical display of main and sub-points is far more prominent and prescriptive than the mind maps, perhaps reflecting explicit instruction and peer feedback. This exercise in ordering and logical subordination allows students to grapple with authorial stance and modality within a professional domain. Teams need to think about how to distil and abstract information that will provide the essence of their investigative thrust and show connection inductively or deductively, through cause and effect or comparison and contrast. The considered acts of selection and design encourage the adoption of a more formal stance both in product and its presentation. As a member of an emerging affinity group, this exercise may act as a precursor to assist students in developing their thinking and identity as professional communicators.

6.4 Semiotic analysis of verbal/visual integration and ensemble

The various analytical sections that follow are underpinned by a metafunctional examination of the epistemological and ontological meanings as manifest in the modes used, primarily writing and layout in the topic outline and shape and colour in the illustration. These comprise spatial semiotic resources which include writing, size/type of font, layout, shape and colour as well as position and posture of the presenter in relation to the transparency during the presentation. Besides spatial relations, temporal semiotic resources comprise mainly speech, pace, movement, gesture and eye contact during the presentations of both the topic outline and the sample illustration.

As instructed, students considered their visual choices in relation to their topic outlines and likely position in the body of the text. Visual material comprised bar, line and pie charts, photographs, diagrams, flowcharts and tables. For the most part, these sample illustrations found their way into oral and written reports at the next stage (see chapters seven and eight) but this was not always the case. Each team first displayed and presented their topic outline followed by the selected image. Team members took turns to present their material.

The analysis focused on the negotiated and collaborative decisions teams made in transforming their mind maps and how these verbal and visual choices hindered or accelerated their developmental trajectory.

6.4.1 Portia's scientific take on hazardous waste management

6.4.1.1 Shifting perspectives: from profit to planet

Given Portia's scenario topic, her own undergraduate scientific background and interest as well as feedback from the class, issues of environmental management are foregrounded in her topic outline at the expense of commercial feasibility. The term *waste management or*

waste appears eight times. Unlike her mind map, Portia's outline seems at first glance to display greater academic rigour. This may have to do with the choice of scenario, the narrowed scope, the increased formality of the ordered, topic outline genre, heightened environmental modality and the more linear, vertical focus on the verbal, rather than the visual.²

As surmised, this shift in focus may link to Portia's undergraduate science degree, former 'work' domain and identity. Although a few words are recognisable from the mind map such as waste management at UCT, gaseous and hazardous, none of the original content headings, save Conclusion(s) and Recommendations, remains. Arguably, a stranger may struggle to see clear links between the two products. This reinforces the need to look at the developmental trajectory of various teams' work over time rather than a single part of the whole. By including draft and final products and processes in the analysis, the progression of student (and team) interest, professional identity and meaning-making, as negotiated collaboratively, seems more possible.

The content focus in the topic outline below has also narrowed considerably. Although one may be hard pressed to argue that situated practice emerged from the student's direct "lifeworld experience" (Cope and Kalantzis 2000), it seems feasible to conclude that the selection of hazardous and gaseous waste in the chemistry department and medical school was of greater interest to Portia. As a science undergraduate registered for the post-graduate commerce accounting conversion course, this particular student was more familiar with and had greater knowledge of scientific experiments and practices than her commerce counterparts. Her 'schooled literacy practices' (Street and Street 1991) seem firmly instantiated in a scientific discourse. Encouraged by the audience during the mind map presentation to tackle lesser known and more dangerous/toxic waste management practices, she had readily agreed and traces of former domain identity and habitus are firmly instantiated in her topic outline.

According to Street, Rowsell and Pahl (2009: 196), "multimodal texts [can] be understood in relation to the social practices that [are] sedimented within them". The technical and scientific background of an undergraduate science degree is clearly evident in Portia's main and subheadings as well as her explanations during the oral presentation.

² Although horizontal topic outlines may be used to display the data, students on this course opted for the more common vertical outline, no doubt because of its familiar similarity to a book or journal table of contents.

Topic Outline: Gaseous and Hazardous Waste Management at UCT – [Portia]

- 1. Introduction**
- 2. Waste management policy framework analysis**
 - 2.1 UCT's sustainability programme
 - 2.2 Chemical waste management policy
 - 2.3 Bio-hazard waste management
 - 2.4 Proposed plans and initiatives
 - 2.5 Organisational and financial sustainability
- 3. Current waste management practices**
 - 3.1 Hazardous waste
 - 3.1.1 Collection and transportation
 - 3.1.2 Treatment and disposal*
 - 3.1.3 Medical school facilities
 - 3.1.4 Chemistry department facilities
 - 3.2 Gaseous waste
 - 3.2.1 Available facilities
 - 3.2.2 Compliance with legislation
- 4. Hazardous waste management at the University of Waterloo**
 - 4.1 Background
 - 4.2 Overall policy analysis
 - 4.3 Systems and general practices
 - 4.4 The hazardous materials handling facility
- 5. Conclusions**
 - 5.1
- 6. Recommendations**
 - 6.1

(Have chosen 2 sectors of mind map. Conclusions and recommendations will follow in similar order and will be based on implications of current situation and comparison with another university – international practice.)

Figure 7: Topic outline: Waste Management at UCT

Preece (2009:27) argues that identity is “discursively constituted”, “located within a particular setting” and emerges in a “fluid and multifaceted” way “in interactions with others”. This is certainly the case with Portia who positions herself and is in turn positioned by others in relation to her subject matter and sense of identity. Students actively produce themselves through meaningful participation and negotiation and it is this communicative and collaborative immersion with others that releases understanding.

The title of the topic outline has shifted from *Waste management at UCT* to *Gaseous and Hazardous Waste Management at UCT*, immediately communicating the exact scientific focus of the forthcoming report. Before launching into *Current Realities*, as was done earlier, Portia has now anchored her findings by including a section upfront on the *Waste management policy framework analysis*, particularly *UCT’s sustainability programme* (2.1). By looking at the existing situation first, she provides an orientation of the ‘here and now’, a fixed point on the map in terms of what is given (Kress and Van Leeuwen 1996, 2003). This policy framework section includes *Chemical waste management policy* and *Bio-hazard waste management [policy]* (2.2. and 2.3 respectively). In other words, policies come before (and authorise) practices, the topic area of section 3. This epistemological foregrounding of cited knowledge creation underscores the ideational perspective of her scientific investigation and a more emphatic authorial stance. This clarity and certainty is not maintained, however, in either this section or the next.

Less emphatic is a monetary concern. Whereas costs and budget are particularly salient in the mind map – and crucial in a commerce domain – here there is very little emphasis on financial matters. The next two sub-sections of section 2, *Proposed plans and initiatives* (2.4) and *Organisational and financial sustainability* (2.5), may seem out of place under the policy framework heading, particularly the latter section unless these two focus areas are very narrowly defined. As can be seen, *Financial sustainability* merely shares a sub-heading and is placed last in the section. Not only are costs not given their own major section, they did not warrant inclusion in either 3 or 4, an unusual omission in a course such as accountancy. Portia seems to have lost interest in cost-effectiveness and ceased to prioritise economic considerations.

At the start of the course, new to the commerce faculty and possibly lacking in confidence, Portia embraced commercial conventions and ethos and highlighted costs and financial feasibility more than any other aspect. She seemed to reflect an identity not readily her own but one she assumed was expected of her in her new faculty, particularly in an accountancy conversion course. Credibility as a commerce student seemed tied up with a focus on costs

and profitability and she felt compelled to reflect this focus in the mind map. As discussed in chapter three, students came from a wide variety of undergraduate special fields such as marketing, finance and information systems and these interests and know-how are reflected in their work. For Portia, the tension between economic issues and their prominence in commercial domains and environmental features and characteristics as classified in the sciences seems to have led to a decision to change focus completely. Although Portia acknowledged her scientific leanings both in interest and personal identity in a post-course interview, she felt that the conversion accountancy programme would give her an entree into a “higher status” degree with, undoubtedly, better prospects and a more professional profile and identity. Portia possibly believed that ‘converting’ to accountancy and re-shaping her ‘affinity’ (and identity) would accelerate her mobility, secure a more valued knowledge base and enhance her cultural capital (Bourdieu 1991) and professional habitus (Beck and Young 2005). The social contexts of economic versus environmental discursive traditions may often compete and conflict with one another - an either/or opposition rather than either/and synergy and this tension seems apparent in Portia’s draft product trajectory.

This tension is similarly evident in public and private sector interests which may privilege indiscriminate ‘progress’ at the cost of sustainability. Local and global government HE policies, abetted by corporate interests and globalisation, roundly approve of ‘graduateness’ that signifies a flexible, literate, numerate and economically savvy professional, ready for the world of work and able to meaningfully contribute to the economy (Ramphela 1996/7; Price 2009; Preece 2009). Various fields of study find themselves increasingly “dependent on the requirements of the external fields of practice” particularly “business studies” where “commercial considerations are likely to become increasingly dominant not only in shaping the content, but also in determining the pace and directions of change” (Beck and Young 2005: 189). Students, generally first generation university graduates from previously disadvantaged communities, feel especially beholden to their families and cultural affiliations to ‘prosper’ and make them proud (Preece 2009). Feedback from the class to ‘relax’ her commercial stance granted her a respite to tackle her environmental subject in terms of scientific rather than business discourse practices.

A closer inspection of Portia’s topic outline, however, produces a number of inconsistencies in the way she represents herself and her audience which may lower credibility and modality in both scientific and professional domains. The lack of parallel structure in terms of the title and headings and headings with sub-headings hinders structural coherence. The title may have you think that *Gaseous waste* will be dealt with first. Reader expectation may be sustained in section 2 when *bio-hazard waste management* is mentioned second. Section 3, however,

switches places and proportion and reflects the original mind map order by putting *Hazardous waste* first. Under section 2, the sub-headings comprise chemical and bio-hazard waste management. Is chemical waste thus gaseous (and not bio-hazardous)? Section 3 seems to contradict this. This section looks at current realities in terms of *Current waste management practices*. This is further sub-divided into *Hazardous waste* and *Gaseous waste*, the former starting this section. In terms of first position primacy, this may or may not be an important consideration. In fact, unless one is an expert on this type of waste, it is difficult to know what should come where and in what order. Under hazardous waste, both medical school and the chemistry department are mentioned. Although one can assume that medical school and chemistry also have gaseous waste, this is not mentioned under 3.2. From this division, one may also assume that gaseous waste is not hazardous – a questionable assumption – or that it has separate waste management policies and practices.

Despite the order in the title, hazardous waste seems to enjoy greater primacy and salience and comprises four sub-sections in section 3. Under gaseous waste, on the contrary, a much more generic approach is taken with *Available facilities* (3.2.1) being used as a catch-all for both types and location of facilities. On the other hand, *Compliance with legislation* (3.2.2) is part of this section only. The audience may assume at a glance that compliance is not relevant to hazardous waste management which is clearly not the case. In the section 4 comparison with an international university (*Waterloo*) – a much narrower focus is evident than the mind map (*Other Campuses*) and only *hazardous materials* are included; gaseous is not mentioned. Besides ideational confusion in how this information and view of the world are represented, textual, compositional confusion is also evident. At a glance there is overall unity of theme but coherence suffers and emphasis shifts between the two types of waste management. This confusion also creates a disjuncture between presumed scientific expertise and knowledge, on the one hand, and displayed uncertainty and inaccuracy, on the other.

The use of Calibri in a formal, scientific domain could also be seen as a disjuncture. Calibri is regarded as more informal than, for example, Times New Roman or Arial. Editorial policies of some academic and professional journals do not recommend fonts such as Calibri which seems more apt for a magazine, brochure or newsletter. One may argue, however, that this is a draft exercise and as a 'friendlier' font, Calibri may serve to 'soften' the academic rigidity of the outline. Teams may also have viewed this session as an oral rather than written event. Choice and size of font, use of bold or colour, spacing and indentation may have been used to heighten visual interest and build rapport. This may set up an interesting tension between a formal authorial stance in the topic outline as 'standalone' written document to be read and a less formal stance and register as oral presentation to be viewed and listened to.

Despite the inconsistencies and omissions within the topic outline, it appears more formal and impersonal than the mind map. The affordances of each differ. The formality and impersonal style constructs the audience and the relationship with the audience differently to the mind map previously. Authorial distance is instantiated through the use of a formal notation system and referential statement headings. The regimentation of vertical main and sub-headings is augmented by the discipline imposed by the multiple-decimal notation system which clearly delineates hierarchy with subordination of categories at a glance. Phrase headings are uniformly used with no mixture of sentence and phrase headings. In terms of both earlier and later taxonomies on authorial stance and metadiscourse (Hyland 1999; Hyland and Tse 2004), phrase headings show little evidence of interactive and interactional resources such as hedges, boosters, attitude and engagement markers or self-mentions. A single identifiable hedge could relate to the word 'proposed' in sub-heading 2.4 as *suggested* or *possible* plans and initiatives. Rhetorical flourishes such as question headings would have engaged the audience more directly and personally which Portia clearly felt would be 'unscientific'. The only subtle flagging of the reader in the outline itself is the asterisk next to section 3.1.2 *Treatment and disposal* which indicates the likely position of her sample illustration, and the dotted lines in sections 5 and 6 to highlight 'unfinished business'.

Nominalisation further augments authorial distance. Words such as *management*, *collection*, *transportation*, *treatment* and *disposal* rather than manage, collect, transport, treat and dispose create an abstraction which serves as static noun subject matter rather than the vigorous enacting of various practices, made possible through using verbs. Had the above verbs been used in headings, they may also have served as authoritative imperative instructions (recommendations) which would further have engaged the audience more directly and personally. This has been avoided.

Only the first letter of each heading is capitalised (sentence case) and this is consistent throughout except for University of Waterloo, regarded as a proper noun phrase. The uniformity of style and format provides a grammatical and structural consensus and heightens professionalism and modality within a scientific discourse. This distant, referential relationship seems appropriate for the report genre which is regarded as a formal, regulated and impersonal document. The consistent font size and use of bold for major headings reinforces this although, as said, the choice of font (Calibri) is somewhat informal. Although no attention

was drawn to this in the feedback session, it was noted that the font was changed to Arial in the final report³.

Although there is formal grammatical consistency in the topic outline, the note addressed to the reader below the outline has a less formal, oral tone.

(Have chosen 2 sectors of mind map. Conclusions and recommendations will follow in similar order and will be based on implications of current situation and comparison with another university – international practice.)

This note is clearly not part of the topic outline and the use of parenthesis reinforces this separation. The brackets create a footnote which directly flags and addresses the reader and provides a 'by-the-way' oral aside, an interactional engagement marker (Hyland and Tse 2004) which seeks to highlight "the presence of [her] readers and [herself]" (Hyland 1999:102). The first section in the note is a phrase. The subject of the sentence (I) as a self-mention may be missing but is presumed understood: ("[I] have chosen 2 sectors of mindmap..."). Ellipsis is evident in the note as a whole but seems more marked in this opening phrase. Yet, despite this and the less formal '2', rather than 'two', it seems to garner more rather than less salience by virtue of the emphatic "will follow" and "will be based", its concluding position (last impression: recency effect) and the juxtaposition of a phrase and sentence. More importantly, as soon as Portia switched on the projector, she immediately drew the audience's attention to this note by way of explanation. This 'introductory' aside confirmed her narrowed focus based on mind map feedback. It also clearly indicated that she had followed the facilitator's instructions to focus on the body of the report only. The concept of parallel structure was also clearly understood as evidenced in the statement that the "conclusions and recommendations" would "follow in *similar order*" (my italics). Evidence of explicit instruction was also manifest in the statement that the conclusions and recommendations would be "based on implications of current situation and comparison with another university". In this way, Portia provided the scope and limitations of the investigation early on and verified decisions collaboratively negotiated in class. The principle functions of conclusions which include evaluating implications, drawing inferences, labelling assumptions and considering the consequences and significance of the major findings were also clearly demonstrated. All considered, despite the shortcomings and disjunctures, her topic outline portrays a much sharper focus than its mind map predecessor and the semblance of a professional report format from *Introduction to Recommendations*, is evident.

³ At each stage of presentation, only certain issues were highlighted by the facilitator. With further instruction on readability, layout and design later in the course, students, with growing know-how, incorporated appropriate changes of their own accord.

6.4.1.2 Illustrating the waste management terrain and aligning outline and image

The knowledge and understanding about waste management at UCT was further deepened with the explanation of Portia's graphic, an inverted pyramid, where she compared the most preferable to the least preferable waste management practices. The graphic is reproduced below using the same colour scheme, size and font of the original transparency.

Key graphic: [team Portia]

From the 'greenest' option at the top to least preferable option (red) at the bottom. The aim is if waste avoided/reduced from the outset (as mindset and policy) then minimum treatment and disposal will be required (rather than the other way around where a great deal of waste generated and hence a great deal of treatment and disposal necessary). The aim is to have much greater emphasis on avoidance, reduction, reuse and recycling (top half).

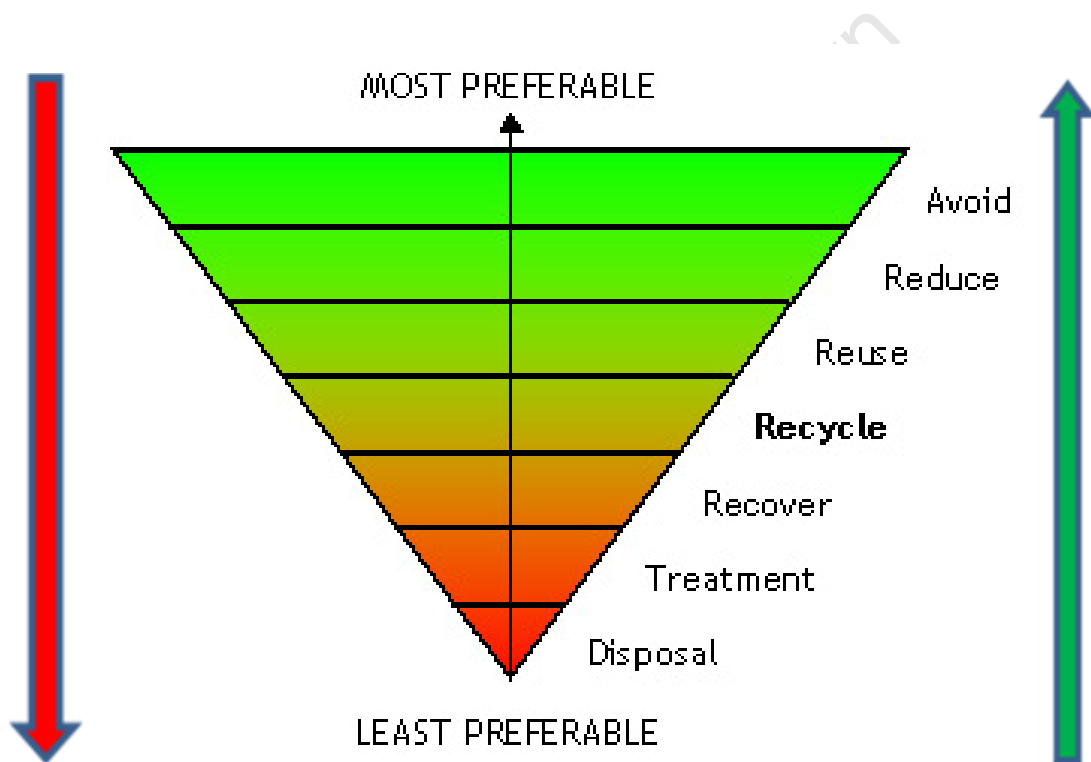


Figure 8: Portia's inverted pyramid: hierarchy of waste management practices

Unlike the bracketed note at the bottom of the topic outline, here Portia introduces the visual material by an aside to the audience. The note above the image is reproduced exactly as per the original. The word 'greenest' in inverted commas leaves the audience in no doubt of the importance of an environmental discourse. The word "aim" is mentioned twice in this introductory text, drawing attention to intention to shift "mindset and policy" towards the "top half" of the inverted pyramid. The use of emphatics such as "will be required" heightens modality even in the absence of verbs "...where a great deal of waste [is] generated and

hence a great deal of treatment and disposal [is] necessary". Her cause and effect reasoning brooks no argument and seems unequivocal.

Besides the dominance of an environmental discourse, an academic cum scientific discourse is also evident in the clearly delineated seven categories of hazardous waste management. The ideational metafunction within the image is mostly conveyed through a conceptual arrangement of data. The classification of waste management from most to least desirable presents the scientific knowledge about what these categories represent and how classified in a concise summary. Single words are chosen. The juxtaposition of the two phrases MOST PREFERABLE at the top and LEAST PREFERABLE at the bottom in capital letters contributes to a sense of compositional balance as does the single bold word **Recycle** to the right of the triangle. Although the categories are joined, each box has a discrete boundary with separate and identifiable waste management practices belonging to each. These are not stages but rather either-and or either-or practices, depending on the policies and mindset of a particular institution.

Despite textual unity of theme, coherence of the message and emphasis of key activities, parallel structure breaks down in the verbal summary. Imperative verbs *Avoid*, *Reduce*, *Reuse*, *Recycle* and *Recover* are used to list particular activities in managing waste. These sound like recommendations and engage the reader directly in terms of authorial stance. Portia signals her affective attitude to the importance of these practices by listing her best to worst preference in waste management categories. The next two actions, describing the least preferable practices, *Treat* and *Dispose* are, however, nominalised. The element of action is brought to an abrupt halt with the use of the nouns *Treatment* and *Disposal* instead of verbs. There is a sense of impersonality, of stagnation, a quagmire of non-action rather than the desired and motivated activity required of a green mindset. Portia signals her distance to what she quite literally considers should be 'non-events'; there is no imperative exhortation in the words 'treatment' and 'disposal'.

The activity which stands out and has the most salience is the bold **Recycle**. Readers commonly understand the concept of recycling as good and desirable yet this image makes the point that it is merely of 'middling' value, a yellowish, as opposed to green practice when it comes to hazardous wastes. Although it stands at the turning point from good to bad practice, it does seem to suggest balance and a pragmatic sense of realism. In other words, UCT may not (as yet) be able to avoid, reduce or reuse but at least she can (and does) recycle. The message seems to be that this is a step in the right direction and better than nothing.

The inverted pyramid relies on still image as the most prominent mode with writing playing a much lesser role. Although all three metafunctions are evident in both the image and writing, I would argue that colour and layout are, in and of themselves, prominent enough to function as independent modes. Kress and Van Leeuwen (2002), Jewitt (2009) and Archer and Stent (2011) argue that colour can function as a mode in particular contexts and certainly in this image, colour plays significant ideational, interpersonal and compositional roles. The colour green has long signified global knowledge and belief systems of environmental responsibility to the point that we speak about a 'green' discourse. The term is sometimes used disparagingly to identify environmental fanatics such as the 'greenies' or 'green police'. Although it has many negative connotations from being green with envy to sickly green, it has been closely associated with hope, growth, development, nurturing and nature. In the context of long-term business sustainability and what is good for the planet, social, economic and political overtones quite literally 'colour' meaning-making. Red, as mentioned during the mind map discussion, may also imbue metafunctional values. Interestingly, being 'in the red' in a business context is to be financially indebted or insolvent; perhaps being in the red environmentally may instantiate a moral bankruptcy. The middling, pale yellow colour (recycling) is, according to this graphic, neither here nor there. As an easy way out, it might be considered a weak response to hazardous waste management practices.

As strong primary colours, both green and red are immediately striking which reinforces the affective, interpersonal relationship with the audience. Green and red are considered 'consonate' colours, both complementary and harmonious (Kress and Van Leeuwen 2002). The irony here is that, despite their attractiveness, they represent binary opposites from good to bad practice which ideationally can hardly represent complementarity or harmony. However, lit up on the screen, these bright, saturated colour gradations have more impact than the writing and are certainly more visible (as is the iconic triangular shape). The much smaller but more formal black writing required clarification during the actual presentation. In terms of authorial stance and metadiscourse, colours may act as attitude as well as engagement markers, appealing as they do through affect and aiming to build rapport and audience commitment.

Besides colour as a mode, Bezemer and Kress (2008) and Kress (2010) have debated the merits of page layout as a mode in their discussions of textbook design. In her work on interactive modality, Norris (2004) also considers the modal affordances of layout and composition. In terms of layout, the centred position of Portia's graphic in the middle of an A4 size transparency also provides a sense of centrality; the image is firmly framed by arrows on both sides and capitalised phrase headings above and below which 'box' and anchor the inverted pyramid within. Framed shape is important with the sharp edges and inverted display

giving the viewer a sense of practices being 'upside down' or the 'wrong way round'. The sharp gem-like point upon which the increasingly broad bands are built suggests a precarious balance. The thin, black arrow rising up the middle of the triangle dissects it in two while the fatter, thicker coloured arrows on either side frame the display and lead the eye both up and down. Viewing the image in a given left to right 'reading path', one starts with the downwards sweep, the fiery red danger zone of *Disposal* and *Treatment* before shifting across to two upwards arrows, ending with the larger of the two on the right. The bands of green aim to overpower and top the 'heat' below and the gradations of saturated colour reinforce the vector up the page. The vector opposition is further highlighted by the arrows pointing in opposite directions, green rising up with the red plunging down, reinforcing the tense relationship even more. Alongside the emotive impact of shape and colour, the scientific classification heightens modality and provides a sense of relational and ideational credibility and impact.

At the start of her illustration presentation which immediately followed her topic outline, Portia did not read the note above the illustration out loud but indicated that various sections of it would be explained as the talk progressed. This did not stop the audience skim reading it as soon as it was switched on although fuller explanations at later stages did clarify meaning as was confirmed during the discussion.

From the 'greenest' option at the top to least preferable option (red) at the bottom. The aim is if waste avoided/reduced from the outset (as mindset and policy) then minimum treatment and disposal will be required (rather than the other way around where a great deal of waste generated and hence a great deal of treatment and disposal necessary). The aim is to have much greater emphasis on avoidance, reduction, reuse and recycling (top half).

Grammatically, as with the note on the topic outline, ellipsis is common. In the opening, the verb (predicate) is absent, once again presumed understood. The cryptic nature of the passage adds to its complexity. On re-viewing it, the note seems more for the benefit of the speaker as an *aide memoire* than for the audience. The passage resembles slide notes that can be added below a PowerPoint slide during presentation preparation. Although these notes are not projected onto the screen, they are visible to speakers, helping them to remember and expand the information they wish to share about a particular slide. Although this note was visible to the audience, it seems to play a similar role.

The oral presentation of this graphic required quite a technical explanation, a mini scientific lecture including operational definitions of terms. Portia used gesture up and down the arrows, eye contact with screen and audience and content links to her topic outline to consolidate her argument and aid comprehension. At first, some viewers thought the broad base meant 'more

likely' in the sense of larger proportion and position on top with the smaller red section being 'less likely' with less emphasis at the bottom of the figure. The opposite proved to be true. Portia drew emphatic attention to what is most desirable, yet least likely (the green at the top) and what is least desirable, yet more likely (the red at the bottom). Although the green bands are most preferable, she explained that it is highly unlikely that one can "avoid" and "reduce" toxic and hazardous wastes in departments such as chemistry and health sciences⁴.

Emphatic authorial stance became far more prominent during the oral presentation of outline and illustration but in both cases was collaboratively negotiated, particularly during the discussion following the presentations. The interaction of participants in communication helped to clarify perceptions and smooth out inconsistencies. Using Hyland and Tse's taxonomy on metadiscourse features (2004), a few examples will serve to demonstrate the dialogical nature of the exchange. Portia started her presentation with statements of personal certainty such as "**I will definitely** cover... and then **I will**..." The self-mentions and boosters provided an emphatic force to her intentions. During her introduction, an audience member asked: "How big is **your** study **now**?" This question related to mind map advice given previously to narrow the focus to which Portia confidently replied: "**For sure, I've** already cut it... **you'll see**." During the discussion and feedback session, engagement markers such as questions were used far more by the audience than the speaker and often included self mentions and hedges such as "**Could** you **possibly** look at? "**You** talked about..... **What about also** looking at...?"; "Are you going to...?"; "**Could** you **maybe**...?" Replies were boosted by personal certainty: "Yes, **I will**.."; "**I have decided**.."; **Yes, definitely**..." and personal hedging: "**If I can** find..."; "It **depends**..." Authorial stance and modality can be instantiated though more than just spoken language, however. As Norris (2004: 65) contends, "other communicative modes" such as posture, gaze and gesture also need to be accentuated in interactions in order for more "complete messages" to be communicated. As these modes will be analysed in greater depth in chapter seven, I will not examine them in this chapter.

Despite some initial confusion about the technicalities of various gaseous and hazardous waste management practices, an audience member, amidst general agreement, noted the "nice balance" between both Portia's topic outline and sample illustration. The audience showed enough interest in the graphic, particularly the colour, shape and the short, sharp, angled classification of terms, to recommend its inclusion later on. They remarked on the colour gradations from cool and desirable green to hot/dangerous and undesirable red. They

⁴ As she discovered during further research (and as noted in her final report) she did find that some hazardous waste products can indeed be reused and recycled and that the University of Waterloo is more advanced than UCT in that regard.

found the use of the red and green arrows added interest and direction, particularly juxtaposed on either side of the inverted pyramid. However, despite its professional finish, it is interesting to note that Portia's inverted pyramid was not included in the final written report as she considered it too "emotive" and "oral" for the formal report genre. Although this is arguably not the case, as 'new' report writers, most teams opted for conservatism regarding choice of visuals and format. Convention rather than creative experimentation was the order of the day. It was, however, used in her PowerPoint presentation and was presented just after the introduction, in an emphatic position of primacy which heightened salience and modality.

Positive audience engagement during the process of presentation and feedback allowed Portia to express readiness to transform her draft products into final deliverables. In her SQ assessment she "strongly agreed" that experiencing different roles and activities (e.g. outlining, writing, presenting, editing, etc.) allowed for wider communication practice and extended skills development and "agreed" that looking at drafts before final hand-in and working through a staged process enhanced planning skills in a controlled environment. In a post-course interview, she reiterated how helpful these draft stages were in terms of content and confidence and how much the facilitation from lecturer and her peers had helped her find a clear focus.

6.4.2 Recycling

6.4.2.1 Narrowing the verbal focus through negotiated meaning making

The transformation of Lindiwe's and Vusi's mind map to their topic outline demonstrates their developmental trajectory from a product characterised by vagueness and abstraction to one with a much sharper focus. Despite displaying three 'body' sections which could be dedicated to future findings, even normally concrete sub-headings appear abstract and comprise very few examples, as shown earlier.

It is interesting that in their reflections both confess to a lack of awareness and knowledge of environmental practices and that in disadvantaged, mainly black communities, 'green' issues are not regarded as priorities. However, Lindiwe's growing awareness and interest in 'good governance' and resource 'husbandry' were instrumental in topic choice and this motivated them to improve their knowledge. Recycling means saving resources and therefore saving money and this is what interested Lindiwe at the outset despite early ignorance. Their topic outline below maintains, in similar vein, the three major sections of the findings but, with the benefit of further data gathering, reframes them in far more specific and concrete detail. It was clear, as soon as they switched on the projector, that they had incorporated audience advice given during their mind map presentation.

Recycling

1. Introduction
2. Method of Investigation
 - 2.1 Interviews
 - 2.2 UCT Sustainability Plan
 - 2.3 Previous Reports about Recycling Efforts at UCT
 - 2.4 Reports about Recycling Efforts at the University of the Witwatersrand
 - 2.5 Reports about recycling efforts at Harvard University
3. UCT's Past Practices and Policies
 - 3.1 Waste Removal
 - 3.2 Recycling Initiatives
 - 3.2.1 Sappi's War On Waste
 - 3.2.2 The "Don't Waste" Initiative
4. Current Initiatives
 - 4.1 Green Campus Initiative
 - 4.1.1 Activities on Upper Campus
 - 4.1.2 Activities at the Residences
 - 4.2 Wasteman
 - 4.2.1 Sorting and Recycling
 - 4.2.2 Cost Implications
5. Possible Alternatives
 - 5.1 Initiative at Harvard University
 - 5.2 Initiatives at the University of the Witwatersrand
6. Conclusions
7. Recommendations

Figure 9: Recycling Topic Outline

Although Portia was the only one to use explanatory notes to the audience on her topic outline and graphic to augment understanding, Lindiwe and Vusi used feedback extensively to implement the kind of changes that needed little explanation. “I saw great improvement in my own approach after getting feedback” Lindiwe acknowledged in her SQ response and, as observer, these changes were easy to identify. It was also clear that Lindiwe and Vusi had worked together to improve their generic mind map headings to create a much tighter and better structured report outline. Although their hard-copy products were brought to class, as requested, they also sent unsolicited copies to the facilitator online for her records. This additional medium of communication, a doubling up, as it were, reinforced their commitment and developing identity as professional communicators.

Of the three outlines under analysis, only one opted to include a separate method section in the body of the report, positioning it appropriately after the introduction. This reinforced their engagement with a professional report genre and confirmed early acknowledgment of explicit facilitator instruction, classroom discussion and textbook readings. Lindiwe’s workplace experience and expertise may have contributed to this decision. A method section is also characteristic of an academic discourse and strong modality by identifying and recording both primary (interviews) and secondary sources of data (document research). In the eyes of the audience, the gravitas these evidential markers provide endows a professional status to the document which in turn may imbue the authors with a sense of professionalism (Hyland and Tse 2004). One could read into this a ‘seriousness’ and thoroughness with which the investigation would be tackled; it aimed to articulate a sense of confidence and expertise, a belief which said: ‘we know what we are doing and where to look for information’

The emphasis on primary information in the method section is made clear through positioning. In other words, data would be obtained first hand from interviewees before the team would consider document research and reports from other institutions. They start their document research locally at *UCT* before moving further afield to *Witwatersrand* (still local) before moving to *Harvard University*, internationally one of the most prestigious universities with a formidable reputation for far-reaching recycling initiatives. This global perspective enhances modality within academic and professional domains by broadening the investigation and their argument. In other words, this is not merely a local concern but one which interests one of the most widely respected academic institutions in the world.

Section 3 of the topic outline mirrors section 1 of the mind map: *UCT’s Past Practices and Policies*. The similarity, however, ends there. Whereas the mind map vaguely instructs the team to “summarize main themes” and includes a rhetorical device about possible divergence

between policy and practice, here Team Recycling includes specific instances of *Waste Removal* and two *Recycling Initiatives*, *Sappi's War on Waste*, an 80's initiative which blazed a trail for UCT as the first ever 'green' movement and *The "Don't Waste"* example which was launched later. These intertextual examples aim to impress the audience by demonstrating how much data they have managed to glean in the interim. This type of specific certainty contributes to building a substantive body of evidence which, in turn, may signal ideational and interpersonal integrity (Hyland 1999; Hyland and Tse 2004).

"Existing conditions" of the mind map is replaced by *Current Initiatives* in section 4. Lindiwe and Vusi provide two examples, the one a student-run initiative called the *Green Campus initiative* (GCI) with two sub-sections (*Upper Campus* and *Residences*). This division sends a clear 'scope and limitations' message to the reader that, despite a number of campuses at UCT, only the upper campus will be considered in this investigation. Including the residences may have been Vusi's idea as, unlike Lindiwe, he was in residence at the time as confirmed by his 'white card' information.⁵ The second example is the commercial enterprise, *Wasteman*, to whom UCT sub-contracts all its solid waste *Sorting and Recycling* activities. This is the only section of the topic outline to include a section on *Cost Implications*. As the GCI, discussed in the previous sub section, is a student-run volunteer organisation, costs may not have been perceived as relevant which could explain this omission. Credibility is enhanced by the clear and streamlined focus which reassuringly communicates certainty to the audience. At a glance it is clear what this future report will cover.

The last section looks at *Possible Alternatives* and here they switch the order of *Harvard* and *Witwatersrand*. In this section Witwatersrand is given more prominence by being the 'final' comparison. Although this may be accidental, it does point to a lack of parallel structure as well as clarity about which of the two institutions the team thought the most important or relevant to their study. This ambivalence was picked up during their presentation when they confided that, due to report length constraints, they may have to choose only one comparative university, depending on quality and relevance of data found.

In terms of ideational perspective, although comparison and contrast, a conceptual framing, is evident, the narrative past-current-future focus of the mind map holds sway. Only these 'body' headings are included in the topic outline (there are no report preliminaries) and headings to the third level are provided. The facilitator had also instructed students not to bother recording generic introductory headings - which would be common to all reports - or to focus at this

⁵ Each student fills in a white card at the start of the course which includes a number of demographic questions, one of which is current contact details.

stage on possible headings under *Conclusions* (6) and *Recommendations* (7). Lindiwe and Vusi followed their terms of reference faithfully, once again confirming acknowledgement and understanding of facilitator instruction. The care, accuracy and respect for instruction was not lost on the audience who commented on their “professional attitude and approach”.

Besides coherently and logically arranged content, layout also contributed to a professional impression. Team recycling chose a royal blue font for their title (font size 14) but reverted to black for the rest of their outline (font size 11). Besides a change in colour and size, they, interestingly, chose Cambria (heading) for the title but Calibri (body) for the rest of the text. These manually made choices must have been intentional and, together with the triple space inserted between title and outline, serve to offset the title still further. In terms of authorial stance, this choice acts like an attitude marker signalling importance. Although indentation is used, there are a few spacing inconsistencies in their use of 1½ and double spacing between main, sub-sections and sub-sub-sections. If spatial proportion and consistency reinforce feelings of importance, then this spatial arrangement does not make sense and may hinder salience and modality within a professional domain. It may be that the team member who typed this did so manually without using the Word features that would have automatically inserted consistent spacing and indentation. This may indicate unfamiliarity with professional practice or ignorance of the need to be precisely accurate in professional document layout. Likewise there are a few inconsistencies in use of capitals and lower case such as *Recycling Efforts* of 2.4 and *recycling efforts* of 2.5. One assumes that careful proofreading would have eliminated these inconsistencies and enhanced professionalism.

These are, however, minor infractions which went unnoticed by their peers. The overall ‘look and feel’ of the topic outline appears appropriate for purpose and audience in terms of a specific and concrete focus which can be followed and understood at a glance. This easy comprehension was clearly evident in discussion and the team was congratulated on its ‘transformed practice’ and a job well done.

6.4.2.2 Team Recycling’s comparative columns – an expression of authorial certainty

Lindiwe and Vusi selected a cumulative or stacked column graph to display UCT’s recycling yields of dry and wet waste over a 3-month period during 2009. A stacked column or vertical bar graph compares the contribution of each value as displayed on the vertical Y axis to a total across various categories displayed on the horizontal X axis. Graphic representation relies on a more specialist, technical knowledge from the audience than a more naturalistic picture or photograph. A cumulative column graph, one of the least popular with audiences (Tuft 2001; Grant and Borchers [2002] 2008), requires even more specialist interpretative

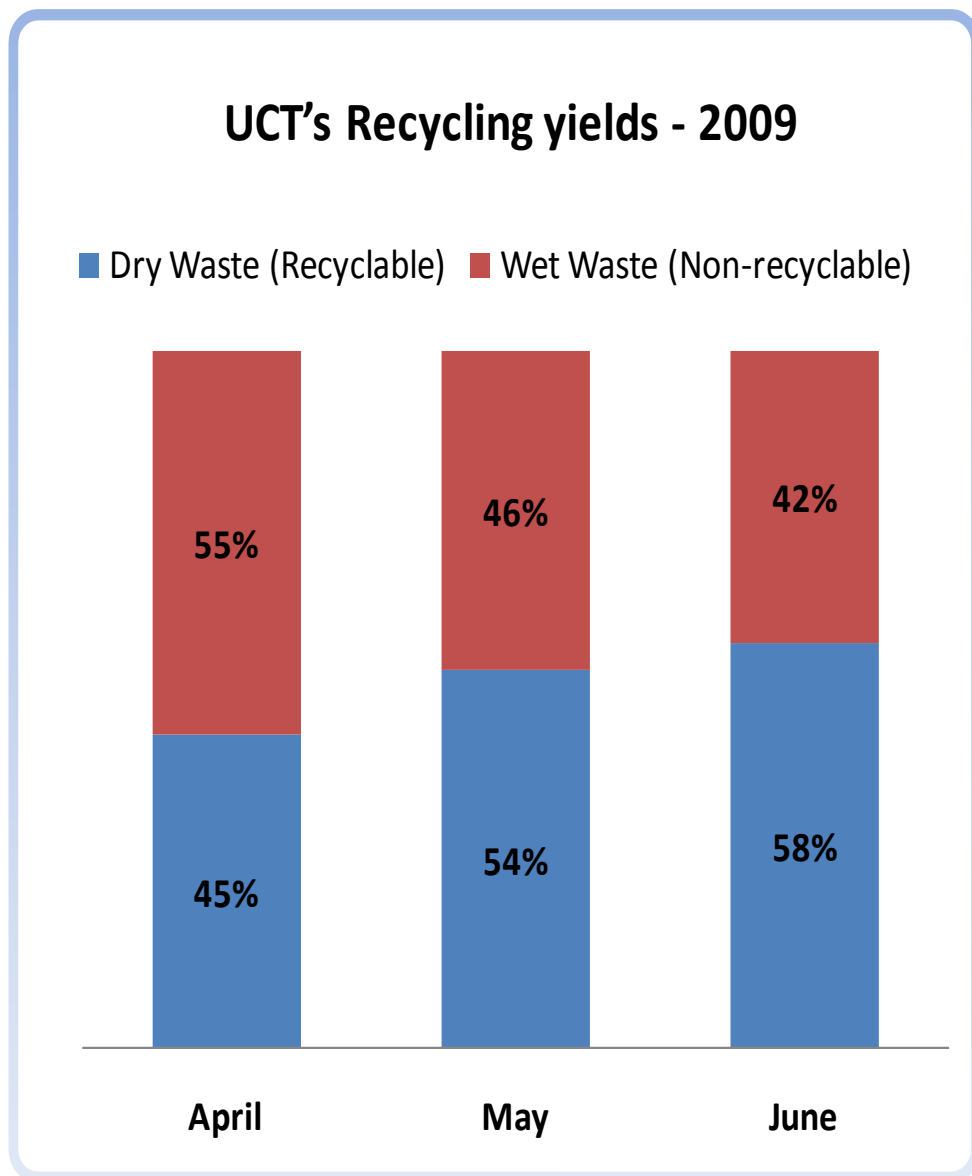


Figure 10: Cumulative bar graph comparing wet and dry waste collection at UCT

and numerate abilities. To counteract the fact that readers generally have to do their comparative reasoning and deductions off both axes, Lindiwe and Vusi inserted their percentage values into each column and omitted their Y axis data labels and markers altogether. By including a key or legend above the graph, only having two variables (date and type of waste) and focussing on three months in one year, as can be seen above, they attempted to simplify the audience's interpretive task.

Bar and column graphs depict discrete information recorded at one time, a measurable point such as a specific date, as opposed to line graphs which function as delineators of continuous

growth over time. Both can show trends but do so for different types of data and purposes. As recycling yields are measured at particular points which coincide with collection (and fee structures), the exact amount can be precisely articulated for monthly comparison. The point about comparing two types of waste is academically clear: the more recyclable waste and less non-recyclable waste, the better, both environmentally and financially. Lindiwe and Vusi aim to show that UCT's recycling yields were increasing during 2009 and this state of affairs reflects well on the institutional mission. Columns which rise like skyscrapers are apt to show vertical growth and help to diminish complexity associated with graphics in general. Although Team Recycling only include three months of data, the trend shown above indicates improved dry waste collection from 45% in April to 58% in June and a concomitant decrease in wet waste from 55% in April to 42% in June. This could be interpreted as improved recycling practices in terms of less wastage and contamination and correlated to greater and more successful attempts at waste separation. These measurable figures, based on Wasteman's tabulated fee structure, enhance validity and reliability in academic discourse and this suggestion of intertextuality, in turn, enhances modality in professional, scientific and academic domains. These statistics correspond to evidentials in that they "emphasize force or writer's certainty in proposition (Hyland and Tse 2004: 169). The implication is that if other researchers had replicated the exercise, they would have been able to verify the results.

In terms of modal load, colour assumes greater primacy than writing and also acts as attitude and engagement markers in terms of authorial stance. Not only do Lindiwe and Vusi wish to express their attitude, they also want to evoke a response from their audience. By combining the ideational metafunction by virtue of the factual knowledge displayed with interpersonal interaction evoked through colour, size, design and overall impression, modality in a professional domain is strengthened. The use of two primary colours, royal blue and deep red, both saturated in hue, offers a solid and clear 'separation' of the two types of waste. The blue is also used in the topic outline title on page 121 and this colour continuity serves to signify the 'good' type of waste. Blue denotes the dry (i.e. good) as opposed to the 'bad' type which cannot be recycled (wet), here denoted with the colour red. Although blue with wet may seem more logical, the use of red may signal danger, negativity, caution (stop!) which has greater symbolic power than the calm serenity of deep life-affirming blue (our blue planet). Besides interpersonal value, ideational value can also be ascribed to the colour choice and contrast. This colour combination provides information as well as relational salience to this team's key message that, if the trend continues and can be extrapolated into the future, UCT should see greater success in its solid waste recycling efforts on campus. This 'success' corresponds to an increase in and expansion of positive, serious blue, long associated with masculine rationality, and a proportionate diminishing of emotive, irrational red.

The word 'yield' is particularly evocative in the title conjuring as it does a good 'harvest' or 'crop'. This feeds into the notion of wholesome, sustaining environmental practices. The term 'yield' also has an economic connotation and is often used in financial domains such as asset management to denote share values or output of precious metals. With its multiple meanings, it seems particularly apt to bridge both 'green' and commercial business discourses. The more formal black writing for text and numbers reinforces the ideational value of knowledge construction, the conceptual comparison of waste types and reinforces an academic discourse.

Compositionally, the three columns are fixed to a horizontal line, a type of foundation upon which the equidistant columns are solidly positioned. Their thickness is mirrored in the spaces between, giving the whole a sense of balance and further instantiating the 'discreteness' of the data. Countering this separation, the whole is encapsulated in a blue frame with rounded corners. As no percentages are displayed on the vertical axis, gridlines are not required for readers to read the data off the axis. No 'noise' is therefore created by horizontal and/or vertical gridlines, data labels and markers. The chart area is clear, giving the graph a clean appearance which also lessens the complexity, usually attributable to this type of graph.

Creating the graph in PowerPoint (rather than Excel or another graphics package), raises an interesting question in terms of register. The simplicity of display seems more appropriate to an oral presentation (with a fleeting viewership) than to a written document where a more precise and formal graphic display would seem more appropriate. The rounded frame in two shades of blue also seems to soften the image making it seem friendlier and more casual and informal. Again this seems to confirm an oral versus written modal appropriateness. It is interesting to note the move to a more precise graphic display with accurate and complete value and category data labels and measurements in both the PowerPoint oral presentation (ironically) and also in the written report at a later stage (see chapters seven and eight). Thus, although confluence of content is evident in both products, there is a disjuncture in register between a clearly formal topic outline and a more consultative PowerPoint graphic, appropriate to an oral presentation. Once again, the argument could be made that, as this is a draft stage in terms of product and process, a more informal style was acceptable.

During their presentations, Lindiwe and Vusi stood on either side of the screen and took turns to display the outline followed by the illustration. Lindiwe presented the topic outline and introduced the graphic, placing it in context before handing over to Vusi to continue. She was undoubtedly the leader (instructor) throughout the project and appeared to have coached Vusi

on his 'script', adding comments when she felt he had omitted important information. Although Lindiwe had years of work experience, it was her marital status and age that seemed to provide a cultural advantage in African tradition. Respect for elders (and she is a good ten years older than Vusi) coupled with status through marriage and work afforded her a respected leadership position. Vusi openly welcomed her supportiveness, however, and it was clear that the presentation was a team effort. "We" language was used throughout: These inclusive self-mentions were combined with emphatic boosters: "**We'll** look at..."; "It was **clearly too** broad, **now we have decided**..."; "Out of that **we** came up with..." and hedged language: "**What we understand so far**..."; I don't know **if we will be able to but we intend to try depending** on how big the whole project gets" to engagement and attitude markers: "**Why should we only** include these two?" followed by another hedge: "**Well, apparently**..." Emphatic boosters linked to what they had already factually uncovered and substantiated and hedges were used to convey supposition, hearsay and information yet to be proved or verified. This combination of emphatics in statements related to their findings and hedges to their conclusions mirrored the report structure and strengthened cohesion and consensus in terms of a combined authorial stance. Their confident engagement, both decisive and questioning, enhanced professional modality as it reinforced their joint 'buy-in', commitment to forge ahead and growing mutual interest.

The vagueness of the mind map seemed, according to the facilitator with agreement from the class, "a thing of the past". The audience appreciated the care taken and provided serious, constructive feedback on both products. Although the graph seemed clear, a few critical comments made against cumulative column graphs in general led to major graphical changes in their final report deliverables. The relationship between (and likely position of) the graphic within the body of the report outline is not as clearly flagged as Portia's asterisk example nor are there sub-headings relating to dry and wet waste management practices. However, Vusi overtly linked the source of the data to Wasteman (4.2) and specifically to 4.2.1 *Sorting and Recycling* in his presentation. Written, visual and oral modes thus worked as ensemble to enhance meaning-making and comprehension, further augmented through participant discussion and embodied feedback.

6.4.3. Sustainable building practices at UCT

6.4.3.1 *Shifting paradigms in design: architecturally and pedagogically*

Of all the scenario topics, sustainable building design resonates with the concept of a sustainable pedagogy more readily. The metaphor of creating a solid, long-lasting foundation is crucial in both construction and pedagogy. Using the building blocks and 'blueprints' of draft products, scenario pedagogy aims to inculcate sustainability in teaching and learning as holistic, collaborative and negotiated practices; similarly, sustainable building practices also seek to provide holistic and credible environmental solutions. Transforming the old and redesigning for sustainable futures seems apt for both buildings and mindsets.

Jenny and Hussein from Team Sustainable Buildings proposed two buildings in their mind map: the old PD Hahn building or more recent Kramer building. During their mind map presentation it was suggested that they consider one of the even newer buildings and, after participant discussion, they decided to investigate the newly completed (2007) female residence building on the middle campus known as Graça Machel Hall (named for UCT's Chancellor and the wife of former president, Nelson Mandela).

As mentioned in chapter five, this team were fairly emphatic about specific issues relating to a building's carbon footprint. In their topic outline, they not only make a clear building choice but also ensure precise scope and limitations: only solar heating and water cooling for air conditioning will be included in their investigation as "possible green alternatives". As the facilitator requested that the body of the report not exceed ten pages, this narrow focus is apt as it strengthens the possibility of their investigative goal being accomplished. An authorial stance of certainty is evidenced through Jenny and Hussein's specific choices, recorded in parallel in their outline on the next page.

Although the content parameters seem clearly delineated, format and layout seem problematic. This topic outline is visually different in layout and appearance to the previous two topic outlines analysed above. Whereas the former examples more closely resemble a report preliminary (table of contents), with clearly delineated sub-sections, this topic outline seems like an informal set of notes, quickly jotted down for the benefit of the writers as sign-makers rather than the audience as recipients. Numbering is sparse (although the instruction was to produce an outline to the third level heading), there is little use of space, save between major sections and no variation in font size or type (Calibri 11). The headings are normal **bold** which does provide some contrast in emphasis as does the use of italics for all sub-sections.

Topic outline (Jenny and Hussein)

1. Introduction

Current situation (older buildings vs. Graca Machel, Kramer)

Cost involved in introduction of sustainability plan into buildings (old vs. new)

Carbon footprint associated with intro of sustainability plans to buildings

Focus on Graça Machel Hall and current new developments on middle campus

2. Current conditions of Graca Machel

Background info

Carbon footprint

Current sustainability plans in place

3. Solar heating

Methods in place at Graca Machel

Other available methods

Effects of methods

Feasibility of implementations of such strategies

4. Water cooling as an alternative to air conditioning

Methods in place at graca

Other available methods

Effects of methods

Feasibility of implementations of such strategies

5. Future buildings on middle campus

Currents plans for new buildings with regard to solar heating and water cooling

Other possible methods

6. Conclusion

7. Recommendations

Changes to Graca

Additions to future buildings

Figure 11: Team Sustainable Building's topic outline

The effect of the italicised informal font is interesting as it more readily resembles cursive handwriting than a more formal font in normal mode. Once again the impression is of informal notes rather than a conventional numbered topic outline. The italics may also evoke a more emotive, personal touch, at once casual and aesthetically attractive, yet unprofessional and inappropriate for the task at hand. As can be seen above, the lack of indentation, spacing and numbering to show sub-ordination of main and sub-headings make it appear more like a draft of a topic outline (itself a draft product) than a conventional, 'formal' topic outline.

There is a tension between vagueness and unfamiliarity with the report format in some sections and a more professional and precise approach in others. On the surface, all report sections seem to be present but discursive and generic tensions in both format and layout emerge which makes it difficult to determine whether this is a topic outline of an academic essay or a professional report. An essay is not a professional genre; a report, whether business or technical, is. Even though both have introductions, the communicative goals and reader expectations of this section differ considerably. A report Introduction aimed at a professional reader comprises 'fixed format' features such as subject, background, objectives, scope and limitations and so on. There may be up to seven separate sections, none of which should pre-empt the findings. As formal report introductions are regulated in terms of format and purpose, the facilitator instructed teams to focus on the body sections only in their topic outlines. Team recycling ignored the instruction (and format) and 'introduced' 'body' sections (findings) to the Introduction, which is entirely acceptable in an academic essay or paper. In an essay, the sub-sections such as *Current situation*, *Cost*, *Carbon Footprint* and *Focus on Graça Machel Hall* could all be used to 'set the scene' in terms of *sustainability* (which is mentioned twice) and to briefly summarise what is to come. In a business or technical report, these four sections are sure to include findings and would therefore be considered inappropriate in an introduction. The *Conclusion* (6) rather than Conclusions once again points to confusion of genre, the former being more appropriate in an essay, the latter in a report. Each has its own function and set of conventions which are apt for purpose and audience and these are not readily interchangeable.

The four body sections do not appear to be concise sub-headings as such but rather lengthy phrases describing what the section will entail. Read together, they provide a succinct summary of each section. However, each one comprises separate parts such as comparison of *older buildings vs. Graça Machel [and] Kramer* (the *current situation*). Then there is *Cost* plus *introduction of sustainability plan into buildings* plus another comparison of (*old vs. new*). *The Carbon footprint* section is also associated with *intro of sustainability plans to buildings*. Finally there is a *Focus on Graça Machel Hall and current new developments on middle*

campus: four sections but each with a number of sub-sections within them. In other words, had these four main sections appeared in the body of the report, they could easily have been sub-divided to the third level. This would maintain the 'summary' in terms of content but show subordination within the topic range, improve the overall structure of the outline and heighten modality in a professional domain.

Section 2 focuses on *Current conditions of Graca Machel* but then adds more *Background info*, more on the *Carbon footprint* and more on *Current sustainability plans in place*. There is a blurring of introductory material with findings which may appear vague and further lowers modality. Sections 3 and 4 cover the two areas of focus: *Solar heating* and *Water cooling as an alternative to air conditioning*. These sub-sections mirror each other and seem more precise at first glance. Parallel structure such as instantiated here generally heightens modality in both academic and professional discourse. These sub-headings comprise *Methods in place at Graca Machel* which presumably covers methods already implemented, *Other available methods*, presumably not [yet] implemented, *Effects of methods* and the *Feasibility of implementations of such strategies*. It is unclear from the last two sub-sections, however, whether the team will look at effects and feasibility of both methods 'in place' and 'other' methods. Likewise, terms such as 'effects and 'such strategies' could cover existing and other. So, although these sections aim to provide a sense of parallel development, overall unity, cohesion and emphasis, the language lacks precision which may lower modality. Once again, separating the headings to the third level may have clarified matters and created a more professional finish. The efforts to heighten modality such as parallel structure are severely eroded by the tensions and confusion caused by all the other paradoxical elements mentioned above.

A further tension arises from the mixture of formal and informal styles. Formal expressions such as 'associated with'; polysyllabic words (in every section); and nominalised words ('introduction of'/'implementations of' instead of introducing, implementing) create a number of headings characterised by indirectness and passivity. These attempts to heighten authorial distance, a feature of academic discourse, are contradicted by casual informality and a hurried approach. Abbreviated words such as 'vs.', 'info' and 'intro' and grammatical errors (*Currents plans*), suggest a hurried nonchalance. For example, in section 3 'Graca Machel' is written out in full but in 4, it becomes 'graca' (shortened and lower case). Only once is the name of the residence complete and spelt correctly: Graça Machel Hall, using the Cedilla 'ç'. As this residence is named for a real person who is still alive and enjoys a prestigious position and profile within the university, country at large and abroad, this type of slapdash 'error' creates a disjuncture which undermines the overall credence of the work.

Despite inconsistencies, Jenny and Hussein correctly end with Recommendations (7) and provide two: *Changes to Graça* and *Additions to future buildings*. Although the lack of either direct or indirect imperative once again points to unfamiliarity with readings, explicit facilitator instruction and feedback offered during the mind map presentations, it does confirm their aim to have two sets of recommendations, one linking to Graça Machel Hall and the other to [future] new buildings. This in turn aligns to the earlier section 5, *Future buildings on middle campus*, which also focuses on *solar heating* and *water cooling* as well as *Other possible methods*, a rather abstract 'catch-all' phrase which may refer to anything.

It must be noted that the only mention of cost is in the introduction, more, seemingly, of historical background interest to the investigation than a major section within the body of the report. Once again, given the importance of cost-effectiveness and feasibility of existing and 'other possible methods', this oversight weakens modality within a commerce domain (particularly for Finance Honours students). Sustainable building practices are known to be more expensive initially but reducing a building's carbon footprint purportedly saves money in the long-term. Proof of these claims is necessary in the body of the report if this argument is to be sustained in conclusions and recommendations for additions to Graça Machel Hall or plans for future buildings.

It was interesting to note that whereas the mind maps of other teams led to more in-depth, specific topic outlines, this team's fairly well focussed mind map had hardly progressed. Given Jenny's background and seeming interest, this was puzzling. With a father in the sustainable building industry, she was privy to far more 'insider' help than other individuals. Besides the reference to water cooling as an alternative to air conditioning, there seems little evidence of thoroughness and expertise in their topic outline. These impressions correlated with their student reflections as Jenny and Hussein, both Honours students, were busy with their dissertations during this period and wrote that "timing was difficult", they had "thesis and major projects running at the same time" and "lots of deadlines". In retrospect, it was obvious that due to work pressure, they had not yet had the time to start their investigation seriously.

6.4.3.2 A naturalistic image: Team Sustainable Building's photograph

Jenny and Hussein illustrated their topic outline assignment with a digital photograph they took themselves of the building in question: Graça Machel Hall. They did not copy an existing photograph off the website but selected their own subject matter, time of day and compositional elements. This bestows an agency to their meaning-making which some other teams using, for example, SmartArt templates or archival material, cannot claim. According to

Kress (2010: 107), “‘Making’ implies a ‘maker’; hence *agency* is central” [his italics]. Jenny and Hussein’s scenario involves sustainable building practices so, as sign-makers, they decided that showcasing the building and illustrating some of these practices would help them represent and communicate key information to supplement their topic outline. The photograph allows them to physically locate the building as a site of display and provide an epistemic summary of its key features. Whereas the sample illustrations analysed above represent aspects of the topics flagged directly or indirectly in the outline or by the speaker, this illustration encompasses and demonstrates the topic choice in concrete detail, no pun intended.

A naturalistic image, particularly in colour, more closely resembles ‘reality’ than abstract images such as Portia’s inverted pyramid or team Recycling’s column chart, for example. A photograph such as the one below is a clear example of a naturalistic image (Kress and Van Leeuwen 1996). The field of interpretation is narrowed in that most viewers will tend to ‘see’ and understand the picture in similar fashion, particularly if the context of the photograph is included. Seeming more ‘real’ does not mean to say that all photographs will automatically have higher modality than a graph, for example. The more real a photograph is within a naturalistic setting, the higher the modality but an obscure photograph, lacking in context, would have low modality within this setting. An accurate, clear graph or diagram may enjoy high modality within an abstract setting where it may articulate greater credibility for a particular purpose and audience. Being apt for purpose is an important consideration.

Although images such as graphs or diagrams may be regulated and communicate generic socialised meanings, commonly accepted in the technical fields in which they operate, they still require an academic knowledge base and expertise for precise understanding and possible extrapolation. This is not the case with an informative photograph, particularly if the subject matter appears straightforward. The subject matter which Jenny and Hussein selected is descriptive and the photograph aims to ‘factually’ display the north side of the building. Although, it does not show the complete building or tell the whole ‘truth’ (nor can it), it does display the ‘entrance’ side as well as how the building is reached, providing a clear ideational perspective in terms of appearance and access. In other words, this is the important side, the starting point and, as a visitor, how one would enter the building. The realism and level of detail which a photograph seeks to bestow aims to boost authorial stance emphatically and enhance modality, both environmentally and professionally.

Jenny and Hussein elected to stand at the bottom of the road leading up to the new residence and photograph the building in landscape mode. Taking the picture in a horizontal rather than vertical orientation reinforces the building’s shape as a long, flat structure, hugging the road

on the upward mountain slope. Had the building been vertical and tall like some other residences, a portrait orientation would have been more appropriate. This orientation provides a contextual backdrop allowing for the inclusion of vegetation opposite the building, the road as vector directing the eye upwards, mountain tops bedecked with soft clouds and a late afternoon, sunlit building on the left, a natural 'given' starting place for the viewer as can be seen below.



Figure 12: Photograph of Graça Machel Hall: light and shade

On display are numerous irregularly placed sunken windows as well as movable steel window shutters which deflect the sun and can be repositioned depending on the position of the sun (time of day and year). These architectural design features relate to some of the key aspects of sustainability outlined above. This visual exemplification provides the information value and ideational perspective of the photograph and heightens modality in environmental and professional domains still further. In the middle of the building, an architectural feature, vaguely reminiscent of the Art Deco period, breaks the 'flatness' of the block, providing some decorative relief. Although this is a modern, recently completed building, this middle block with its glassed-in sidewalk portico below, gives the building an old-fashioned 50s feel. Many of UCT's newer residences are mixed gender yet Graça Machel is for women only. The building seems a curious blend of staid, safe comfort and minimalist functionality which the designers stereotypically, may have felt apt, given their target audience. At the very top, the residence entrance under its wide awning can be seen protruding over the walkway, signposting its importance as entry point and protective shelter from the elements.

The soft yet rich colours, wispy clouds, inclusion of a section of the iconic Table Mountain and trees, presumably green and seemingly mature, contribute to a feeling of sensory connectedness despite the sharp angles and stark modernity of the building's overall design. The camera angle and time of day at which the photograph was shot may too increase audience rapport and heighten interpersonal salience. The angle and time certainly make the building seem more aesthetically appealing than it might otherwise appear in harsh light or front on. Although the photograph with its dark/light contrasts exhibits qualities of a painting, it maintains the realism of an architectural artefact, a three-storied utilitarian building. The way in which the photograph has been composed and framed contributes to and reinforces the sunlit building as foreground; the rest below and to the right is background. One hardly notices the silhouetted students on the walkway or the details below the awning, for instance. Depersonalising the photograph, a feature of academic discourse, allows Jenny and Hussein to foreground the building as sustainable artefact, rather than its residential functionality.

The bluish-gray cloud is typical of Table Mountain (known for its 'table cloth') which may imbue the image with a fond familiarity with which locals may identify; the 'southern suburbs' university at the foot of the mountain offers a solid, protective yet majestic aesthetic. In other words the building may not be all that appealing but its context and leafy surroundings surely are. This reinforces the environmental discourse and makes a naturalistic photograph such as this an appropriate visual choice for purpose and audience.

Although Jenny and Hussein were also clearly a team, Jenny, like Lindiwe from Team Recycling, seemed to take the lead in all activities. Her name preceded Hussein's on all class exercises, formal assignments and reflections and she also took the lead in all oral presentations of draft and final products. More important than being four years his senior – although both in fourth year – was the fact that Jenny's father held a prominent position of expertise in environmental sustainability. This elevated her status in the team which gave her the power to act as the conduit for and gatekeeper of sources of information. Her assumed authority and 'cultural capital', to use Bourdieu's term (1991), was evident in both product and presentation focus. Although Hussein merely followed her lead, particularly in the early stages, he did attempt to become more actively engaged during the final presentation as can be seen in chapter seven.

6.5 Final comments: reconfiguring and transforming the verbal and visual terrain

The first overtly transformative act evident to the audience was the progression from mind map to topic outline. This developmental trajectory reflected decisions around content: what

would be left in, what left out and how what is left in, might be highlighted (verbally and visually), adapted and reconfigured depending on feedback and critical framing, self-reflection and ongoing investigation.

In Portia's case, the technical explanations and inconsistencies in headings were noted and clarified and the discussion session allowed the audience to confirm that in fact gaseous waste is a sub-section of hazardous waste and that the whole report would revolve around both solid *and* gaseous hazardous waste management policies and practices. Whether in science, engineering or medical faculties, chemical and bio-hazardous waste are the most common types. Portia's science background, identity and interest in chemical rather than bio-hazardous waste management practices, were confirmed. The in-class discussion helped Portia reach consensus and, with the help of facilitator and peers, streamline and transform the content to the satisfaction of all participants and herself. Other presentations such as team Recycling expanded key headings by providing detail about steps that had already been taken to gather information such as appointments for interviews as well as concrete examples such as 'Sappi's War On Waste'. Each heading and sub-heading could be extended and elaborated, allowing teams to move from the general to the particular, the abstract to the concrete and to coherently explain the hierarchies within their sets of headings.

Pedagogically, an aspect of situated practice refers to the familiarity that presenters and audience now have of the topic, having first heard and contributed to mind map discussions a couple of weeks before. At this stage, about a month into the course, teams seemed more confident with their material. They had all carried out more document research and contacted various scenario experts via telephone, email, online or in person. The more information they gathered, the more expert and authoritative they became. Deeper knowledge of content and presentation techniques reflected growing mastery over both subject matter and more assured delivery styles, as evidenced in the classroom. The imitative, apprentice-like 'bootstrapping', to use Gee's term, seemed less evident. In their SQ responses, all team members "agreed" and "strongly agreed" that "process writing is more motivating as one can get help before final hand-in" and that "draft assignments contributed to their developing expertise and confidence." All participants also "agreed" or "strongly agreed" that having the facilitator and particularly expert "external sources" for consultation during the course provided a "general overview" of the field, "good support", "real", "authentic", "1st hand information".

Shifts in mode occurred during the presentations of topic outline and illustrative material. The interaction in class co-contributed to negotiated meaning making. These embodied activities also reinforced the relationship by building rapport and deepening understanding

between participants as well as presenters and their material. In some instances, topic outlines were re-shown to reinforce the connection between the outlines and the likely positions of the images within them. The two artefacts became a unit, the one illustrating and reinforcing the other.

Once again, although the focus of explicit instruction was on the classification of verbal and visual content, structural coherence and layout, logical development of main and sub-points and the use of numbering, the experiential activities in class widened the teaching/learning experience to encompass speaking (some prepared, some impromptu), listening and handling questions. This active learning-by-doing – as with the previous mind map session – aimed to consolidate their growing mastery of their respective scenario topics as well as the report genre, format and layout. Studying the topic outlines above, it is clear that the report genre is more than merely embryonic. Students' report knowledge was further substantiated and reinforced during the more formal oral presentations of the topic outline. Mediated by projector, screen and light source, presenters delivered their mini oral reports, mostly uninterrupted. During these presentations, audience members were more passive and waited their turn before participating in discussion. These presentations were far less conversational than mind map presentations and the audience respected this formality and waited their turn to engage in dialogue. Hands were raised for questions and the discussion was mediated by the facilitator. This too is an element of transformed practice and of learning and knowing how to act and what acceptable practice for different genres and occasions involves.

The addition of sample visuals during this presentation exercise, as a separate ensemble of modes, contributed to enhancing participants' understanding and their ability to provide overall constructive and critical feedback. The sample visual was the third draft product being deliberated and participants were becoming familiar and at ease with pedagogical interventions. Role switching saw presenters and audience as engaged participants alternating as speakers, listeners, teachers, learners, facilitators, illustrators, writers, readers, leaders, followers, critics, editors and distributors. Even though only a few of these role functions are overtly examined and graded, the implicit need (and tacit requirement) to explore varied communication practices in order to emerge as effective professional communicators aims to mimic the variable demands of workplace practice and on-the-job change and unpredictability. "You learn things not only in communication but the scenario you are working on" stated Portia.

After seeing every team's topic outline and sample illustration, listening to their presentations and participating in feedback sessions, coupled with 'just-in-time' instruction, students become

more knowledgeable every week on investigative and reporting procedures and the various content areas of environmental concern. Even though students tackle different scenario aspects, their growing familiarity with UCT's sustainability programme and continuing primary and secondary research, are seen to deepen their understanding, commitment and professional identity. Their growing scenario knowledge in related areas and the difficulties and challenges they faced in sourcing primary and secondary data allowed them to ask pointed questions and provide equally pointed and helpful answers. This collaborative negotiation and negotiated collaboration – both are relevant – saw teams teach and learn from one another in terms of process and product and transform their thinking and behaviour. Comments from Portia included: “Small groups encourage *individual* learning and *communal* participation” (my italics). This individual and communal knowledge creation, interpersonally and dialogically negotiated, helped shape their lifeworlds and identity and deepen professionalism and confidence. Luckett and Luckett (2009: 474) argue that “the achievement of selfhood and personal identity are not solitary achievements, but rather forged through interpersonal relations and dialogue.” Quoted in the same article is a critique of Margaret Archer's (2001, 2003) concept of selfhood as too “individualistic and monological” (2009: 474). As Portia has suggested, I would like to hold both these arguments in partnership and posit that identity and selfhood are both individually and dialogically constituted and intra- and interpersonally negotiated through self-talk and talk with others. With every creation, display, presentation and discussion, emerging authority and professional identities became more manifest as students got to grips with their professional disciplines, domains, discourses and personal sense of who they were becoming (Preece 2009; Kapp and Bangeni 2009; Bangeni 2009). Besides communication specific know-how, teams also started demonstrating much greater technical expertise, focus and critical awareness of broader sustainability issues.

These informal draft products comprising mind maps, topic outlines and sample visuals, are imbued with literacy practices “of everyday life”, a way of trying out ‘stuff’ on the road to more “‘schooled’ literacy practices” as instantiated by the professional oral and written reports to follow (Street and Street 1991). The translation from draft ‘off the page’ modal choices and practices to coherent verbal-visual ensemble of final ‘on the page’ professional products represents the migration of draft products to business oral and written reports, recognised and recognisable business genres within recognised and recognisable business and professional discourses and domains.

Chapters seven and eight provide the concrete manifestation of this journey by highlighting their final oral and written ‘client’ deliverables ready for dissemination and distribution.

Chapter seven: Distributing the modal load: the oral presentation ensemble

7.1 Overview

Both mind map and topic outline share the characteristics of draft products, appropriate artefacts for iterative semiotic exploration of available designs, designing and redesigning towards final deliverables: the oral and written reports. Chapter seven engages with two of the teams' oral reports as rehearsal and then final presentation; chapter eight focuses on the teams' written reports which they submitted to the client on the same day they delivered their presentations. Both of these final products emerge as exemplars of transformed practice. These reporting products, each illuminating and complementing the other, serve to represent the scenario findings, conclusions and recommendations and fulfil the communicative goals as set out in the original terms of reference commissioned at the start of the course.

There are several reasons for not including the oral rehearsal in earlier draft product analyses handled in earlier chapters. Unlike the mind map and topic outline which do not resemble the report as such but merely act as planning devices for key elements, the oral rehearsal, known on the course as the 'dry run', is in many ways a duplicate of the final, albeit in rough form. Both talks follow similar discursive, generic and modal paths and 'transformed practice' involves a polishing and finishing rather than the reconfiguration and 'resemiotization', to use Iedema's term (2003), evident in the former exercises. The rehearsal can be likened to an editing and proofreading exercise rather than a planning device. Another reason for including both versions in this chapter is to allow a comparison of collaboratively negotiated alterations and considered improvements in execution and delivery.

Lindiwe and Vusi's recycling (R) and Jenny and Hussein's sustainable building (SB) reports were selected for analysis. The four participants from varied cultural, language, age and gender backgrounds substantially represent course participants and, more practically, covered very different scenario topics. Also, whereas Portia worked on her own, these teams were not only engaged in a collaborative and dialogical relationship with other course participants and external stakeholders but more importantly had to rely on and engage with each other as partners. Although the written reports, as joint product, received a single grade, each oral presenter was marked separately. They did, however, share a mark for their joint PowerPoint presentation.

The analyses in chapters seven and eight focus on how professional communication practice and identity emerge and are instantiated through their textual products and processes and how scenario pedagogy aims to contribute to this manifestation. In particular, the framework of

negotiated design is used as the lens through which the oral presentations are analysed. How do partners begin to negotiate professional identity through their active participation in the presentation? How do they express their own sense of who they are individually as well as collaboratively as a partner in a task team? In particular, speech acts as expressions of embodied professional practice and delegation are foregrounded. Embodied professional practice is exemplified by the modal orchestrations of

- speech, vocal intonation and projection
- dress (appearance),
- posture, gesture and movement,
- eye contact and gaze behaviour, and
- facial expression

Together, these semiotic resources act in concert to instantiate a professional communication identity in the eyes of the audience as interpreters and the speakers as signmakers, rhetors and partners. Each semiotic resource selected may have its limitations but as ensemble, their individual partialities diminish. Meaning can be straddled across modes and media, which, according to Kress (2011) provide the technologies of representation and dissemination respectively. Each element has significance according to its materiality, affordances, constraints as well as “sensoriness” (Kress, 2011). What can be done with sound, for example, differs from what can be done with sight or gesture or colour and, according to Kress (2011), their “complementaries” forge meaning cognitively and affectively to produce embodied meaning.

Another ‘complementarity’ is that of turn-taking within teams. How partners negotiate their performative contributions in terms of content, timing, salience, interpersonal relations and modal load is crucial to establishing rapport and credibility. Salience includes both primacy and recency effects in terms of emphasis and positioning (first and last) as well as proportion. How partners divide up their presentational content and slides and engage with their material, each other and their audience are significant. The choice of modes as semiotic resources and how much prominence is accorded to each in terms of load, logic, specialisation, reach and modality are important considerations as are leadership roles and power relations. *What* speakers say and the epistemological value in ideational terms and *how* they say it and what that communicates interpersonally are both foregrounded in the analysis. The textual metafunction, as instantiated through modal composition, coherence, alignment and integration, is also a key factor insofar as audiences need to interpret spoken and visual messages that are fleeting and do not persist. The more clearly and precisely audiences can follow the structure and sequence of these messages, irrespective of agreement, the more likely rapport and interest will be maintained. Congruence as mutual understanding rather

than agreement is a key factor in professional communication where problem-solving and decision-making play major roles.

Important terms in this multimodal research are ensemble and orchestration (Jewitt 2006, 2009; Kress 2003, 2010). This analysis looks at what semiotic work is afforded by various modes and how modes work together within professional domains and discourses, characterised by interdiscursivity and intertextuality (Fairclough 1992, 1995; Chouliariaki and Fairclough 1999; Candlin and Hyland 1999). The affordances and constraints of modes add nuanced complexity to meaning-making as teams grapple with choices and combinations. As students have a rehearsal before the final presentation, changes are negotiated with facilitator and peers in order for teams to ask questions and interrogate assumptions, resolve disjunctures and inconsistencies, transform their presentational practices and strengthen coherence and confidence in a simulated professional setting. Although participants are not professionals in the workplace but students cast in a role-play scenario within an affinity space (Gee 2003), these presentational practices allow them to explore emerging professional identity in order to narrow the gap between the classroom and the workplace. The inclusion of real professionals in the guise of consultants and audience members aims to contribute to their development as future professionals. This too becomes a collaborative ensemble as partners and audience members dialogically explore, negotiate and shape ideas towards transformed practice.

7.2 Modal choices to instantiate professional communication practice and identity

It is generally accepted that communicative aspects involving the body, territory and space are culturally embedded rather than universally determined (Davis 2002; Kaul and Gupta 2007; Kaschula and Antonissen 1995; Trompenaars and Hampden-Turner 1998). According to Kress (2010) modal reach is also culturally bound, not inherently 'fixed'. He (2010: 11) argues that there is "no reason to assume that the 'modal division of labour' will be the same across societies." These differences may be quite profound. What too may be considered 'professional' practice in one society may be frowned upon or taboo in another. Even within the same country so-called normative behaviours and practices may differ from community to community. Contradictions and differences in terms of gestural articulations, direct versus indirect eye contact, conventions of dress, gender and power relations and use of space and territory abound and may cause anxiety and confusion in diverse professional contexts. Being aware and accepting of difference and hybridity in dress codes is but one example which seems requisite in a multicultural global economy (Grant and Nodoba 2009). Awareness of shifting global practices which are arguably more fluid and flexible than in the past increases

the likelihood of divergence and convergence as equally salient (Rogers and Kincaid 1981; Grant and Borchers [2002] 2008). What may have been seen as a disjuncture or ‘un-Western’ in a hegemonic past, may today be contested and prove more acceptable in a landscape of change, provisionalism, innovation and shifting power relations.

Despite other ‘voices’ and ways of being, the pressure to conform to the dictates of a professional business presentation in contrast, say, to African oral traditions of story-telling, is strong and widely endorsed in boardrooms at the cost of anything ‘other’. These contestations may cause a tension in assessment as pressures mount to privilege other voices and transform practice on a very different scale. So, although shifting global imperatives and power relations may accelerate hybridity and contestation – and assessment practices may need to take stock of these changes – what is validated and privileged in business and industry falls subject to this hegemonic worldview. With so much cultural capital still invested in the West, corporate hegemony persists particularly in the world of corporate finance and management (Verluyten 2000; Human 2005; Kaul and Gupta 2007; De Groot 2008). English as the official language of government, business and education prescribes a certain bias which renders visibly (rules) and invisibly (norms) ‘how things are done around here.’ In other words, students get the message very early in their curricula as future accountants, auditors or financiers that their chances of success will improve if they ‘buy in’ to the system and toe the corporate line. The stakes are high in terms of assessment too so students (and staff) are loathe to take risks that may backfire. Already, in creating computer-mediated transparencies instead of ‘green’ hand drawn products at the draft planning stage, students confirmed the need to appear ‘professional’ according to a particular norm; this need is even more evident in presentations of their oral and written reports although there are a few instances where students attempted to push the boundaries and this has become a growing trend in later presentations.¹

Contrary to other ways of doing things, the so-called received wisdom in terms of presentational ‘graduateness’ is set out in the table below. These dimensions and questions relate to presumed professional communication identity within a hegemonic Western tradition, foregrounding embodied and visual modes. The columns encapsulate the ‘regions’ in content and delivery style which purport to influence modality and authorial stance in a professional domain. How do speakers compose and arrange their presentations in terms of audience

¹ In 2010, a team whose scenario choice involved ethical sustainability, did their entire presentation as a mock interview using masks of prominent politicians ‘mouthing’ the usual promises of ‘action’. The parody of content and format, which flew in the face of the usual oral report genre, worked as a persuasive argument.

expectation? What choices do speakers make in how they use their bodies to communicate and establish rapport and credibility?

Table 5: Bodily characteristics relevant to professional communication practice and identity

Embodied semiosis	Semiotic dimensions	Semiotic choices
Speech and voice	Content and context Style, tone and register Pace and unloading rate Sound Diction Structure of design	Intertextual/discursive choices Linguistic choices Pausing for transitions Volume, projection, pitch and modulation Fluency and clarity in voice modulation and pace Verbal/visual choices to order information (speech and PowerPoint)
Dress and appearance	Demeanour Grooming	Clothing and accessories Overall impression
Positioning and movement	Head movement Posture Gesture Body movement Territory	Angle/tilt of head Physical stance and position Types and occurrence Trajectory of motion Use of space
Eye contact	Direction Open/closed	Gaze behaviour Eye and lid movements
Facial expression	Degree of affect	Degree of expressiveness/animation Use of smiling

Although various sections will be dealt with separately, only key semiotic resources will be selected for further analysis, given the amount and complexity of data evident in table 5. Teasing out several strands relating to team delegation and turn-taking allows me to focus on in-class interactions and support and how these assist students in developing confidence as ‘learner’ professional communication practitioners.

Gestures such as pointing and gaze behaviour that link what and how students express themselves to what they show on a slide may emphasise or enhance meaning making; other directional cum navigational devices may not. Co-verbal gestures that mirror linguistic meaning may be said to be subordinate as both words and gestures have similar meanings. Iconic gestures often fall into this category as they “generally mimic what the individual communicates verbally” (Norris 2004:29). Those that hold different meanings of equal value can be classified as complementary. Abstract gestures such as ‘weighing up’ a particular proposition or beat gestures to reinforce movement or directionality may play a complementary role. Supplementary gestures also have different meanings but are classified as super-ordinate if they ‘add value’ to signification. Some deictic and metaphoric gestures that can be understood by viewing the gesture alone have super-ordinate meaning making potential within particular contexts. Examples of various types of gesture are provided in the analysis below.

Congruent orchestration versus disjuncture occurs when verbal and visual meaning making resources either blend seamlessly or clash and hinder assumed professional practice. The bodily choices speakers make in relation to audience, equipment and partners contribute to communication and interpretation. Of interest are the discursive, generic and modal merges and clashes that arise as students explore and negotiate knowledge and interpersonal relationships, including power relations, between themselves as partners and between teams and their audience. As multimodal ensemble, the affordances of modes and modal load are important to the extent to which, speech, appearance, movement, gesture and gaze behaviour mirror, complement or supplement each other to realise ideational, interpersonal and textual meaning and coherence.

In terms of content and delivery professional communicators need to consider:

- | | | |
|---|---|--------------------------------------|
| representational and communicative alignment with <i>purpose</i> | ⇒ | verbal/visual <i>relevance</i> |
| interpersonal aptness for <i>audience</i> . | ⇒ | verbal/visual <i>appropriateness</i> |
| textual and structural unity and salience for purpose <i>and</i> audience | ⇒ | verbal/visual <i>coherence</i> |

It is important to state that there is no fixed template for designing and presenting a presentation; a right way and a wrong way. A range of possibilities exist, depending on

purpose, audience and socio-cultural context and occasion. How audiences gauge professional communication practices during an event such as a business presentation relies on a combination of factors and their take primarily on relevance, appropriateness, coherence and overall focus on communicative goal. As this presentation follows on draft oral processes during the semester, speakers are already aware of and have been prompted to make choices based on situated practice, explicit and implicit instruction, critical framing and embodied reflection (their own and based on feedback received) in order to transform their practice (Cope and Kalantzis 2000; New London Group 2000). The more students own this iterative process, as set out in the framework of negotiated design, the more meaningful the co-construction of knowledge becomes.

In the analysis below, the discussion is initiated by looking at video as pedagogical tool before focusing on authorial stance and modality as instantiated through the dimensions of embodied speech. Two sets of frames as multimodal ensemble are then analysed, focusing in particular on the orchestration of speech, gesture and facial expression including eye contact. How these modes may index matches and mismatches is analysed in both sections.




7.3 Pedagogical observations and comparisons made possible through video recording

7.3.1 Video as a tool for teaching and learning

The use of video as pedagogical tool allows students to view themselves for reasons of personal evaluation and feedback. Although, according to Jewitt (2003: 177), “[t]he camera encodes a viewing position, both in terms of distance and in angle of representation” to instantiate involvement of subjects and viewers or lack thereof, this was not the facilitator’s primary intention in this instance. She was not attempting to make a video with scripted camera movement, for example. She did not plan her camera angles or shots but aimed to ensure a balance for each team member to provide opportunities at playback for students to get a good overall impression of their delivery style, both visually and aurally. The sound was kept constant across the session which allowed for student feedback and comparison on vocal clarity, intonation and projection. The variation of shots with accompanying soundtrack also allowed me, as researcher, to select key analytical moments.

In the table below, examples are given of long, medium and close-up shots.

Table 6: Distance and coverage of various screenshots

Screenshot distances	Coverage	Examples
<p>Long shot:</p> <p>Lindiwe and Vusi during their final presentation (R report)</p>	<p>As the camera was not static but actively managed by the facilitator, some shots were taken at wide angle to take in speakers, their presentation slides and their interactions with each other, the equipment (laptop and screen) and the audience. How and where they stood and moved could more easily be established. Location and posture as well as dress were more visible in these instances.</p>	
<p>Medium range:</p> <p>Lindiwe during her final presentation (R report)</p>	<p>At other random moments, the facilitator zoomed in from long shot to medium range displaying torso with greater attention paid to shoulder movements, arm/hand gestures as well as frontal stance versus profile view.</p>	
<p>Close-up:</p> <p>Jenny during her rehearsal (SB report)</p>	<p>Close-ups allowed for clearer observation of eye contact and gaze direction, facial expression and head movement.</p>	

7.3.2 Authorial stance as an element of professional identity

Characteristics of a professional business stance are endorsement and cited authority, particularly in what Hyland (1999) calls, the 'soft disciplines' such as business studies and professional communication as opposed to the 'hard sciences'. As professional identity may seem more blurred in these so-called soft disciplines than in "established' professions" (Beck and Young 2005:188) such as engineering or medicine, for example, students may be more inclined to resort to opinion leaders and external sources for confirmation and substantiation of findings. Ideationally and interpersonally, more "overt intertextuality" (Hyland 1999:111) is evident in these interdisciplinary fields to construct knowledge, engage support, strengthen arguments and enhance professional identity. Students used both verbal and visual semiotic resources to underpin and reinforce mutual meaning-making and understanding, bolster confidence in themselves and their material and encourage the audience's confidence and trust in their delivery and content.

7.3.2.1 Authorial voice and modality

During both talks speakers drew on their sources to substantiate their findings and boost their arguments. Lndiwe and Vusi (R) used data sourced from the Green Campus Initiative (GCI) and Wasteman, institutional comparisons (for example, UCT and the University of the Witwatersrand [WITS]) and findings from prior studies on recycling data, practices and measures (for example, the War on Waste [WOW] campaign) to foreground their argument and reinforce their authority. Jenny and Hussein (SB) used local architectural data and global comparisons of green building practices (for example, London's 'Gherkin' building) to imbue their findings, conclusions and recommendations with 'truth' value. These evidentials (Hyland and Tse 2004) and comparative examples made verbally through speech and visually through embodied delivery and PowerPoint, aimed to enhance modality in a professional domain. Speech assisted by technology allowed speakers to "set out a claim, comment on its truth, establish solidarity and represent their credibility" (Hyland 1999: 105). The variety of modes and media contributed to the intertextual nature of their presentations which aimed to elevate their authoritative stance.

During the question and answer session, Lindiwe (R) amused the audience when, in a parody of this convention, she commandeered a late team arrival as the 'planned' arrival of the very 'experts' she was awaiting to answer a particularly tricky question.

"But we do have a team who have just walked in who will be.... who are going to be talking about student communication in respect of, you know, the sustainability plan and communicating to students...."



Figure 13: Lindiwe 'welcoming' another team of 'experts'



As this team just happened to arrive at this point, she cleverly used coincidence in her role-play situation and hastily added them to her 'script'. This adroit improvisation worked to simulate a professional practice that got her 'off the hook'. Instead of undermining her authority, she was seen to enhance it by taking command of the situation and (re)negotiating contextual meaning with, presumably, a more 'expert' other.

Earlier, during the rehearsal session, Lindiwe introduced the team's name incorrectly substituting 'global' for 'green' in their fictitious company name, Green Planet Consulting. This slip of the tongue also caused amusement as it seemed to elevate the team, their subject and context to a global stage rather than the more mundane recycling practices of a local institution. Attempts to instantiate a global identity and international benchmarking also aimed to elevate presentation content within both local and international contexts to enhance credibility in a professional domain. By introducing the iconic 'Gherkin' building, Jenny and Hussein also introduced international benchmarking into their oral report to elevate the status of the sustainable building design content and context.

Lindiwe and Jenny took responsibility for a greater proportion of their respective presentations from a primacy, timing and positioning perspective, confirming both their cultural capital and positions of power within the team (Bourdieu 1991; Fairclough 1992, 1995). During the rehearsal, Lindiwe delivered a straightforward introduction of the topic and speakers and spoke for nearly two minutes before handing over to Vusi who set out the objectives of recycling before giving a narrative account of UCT's two major recycling projects. Lindiwe then

finished off the presentation by comparing the efforts of both UCT and WITS. Of the 12 minutes they took during rehearsal (two minutes over the recommended time), Lindiwe spoke for seven. Feedback centred on the lack of a hook² to command attention in the introduction and overly detailed and descriptive findings which lacked emphasis and impetus. Although they cut their final presentation by just over three minutes, Lindiwe's time 'on stage' was double that of her partner whose narrative had been criticised the week before. She also reframed her comparison as an argument to encourage UCT to greater efforts so as not to be "outdone by WITS". In the SB presentation, Jenny not only spoke for longer but was responsible for the international comparison, the more sophisticated part of the presentation. The sections Lindiwe and Jenny handled seemed to draw more audience attention, in part due to their wider application and internationalism. The type of content they presented was regarded as more 'interesting' and 'global' than the shorter, local sections handled by Vusi and Hussein. Audience attentiveness could also be attributed to length of section and the confident delivery style of both women. They seemed to have exercised more say in division of labour and content choice. Peer feedback during the rehearsal session may also have contributed to decision-making as both women received more positive feedback than their male partners.

Vocally, both Vusi and Hussein were more subdued and softly-spoken than their female counterparts. In giving feedback during the rehearsal, facilitator and students focussed on vocal tone, projection and diction, describing their presentations as being somewhat "monotonous" and lacking "oomph". In Vusi's case, audibility was noted in particular. A steady voice, appropriate vocal projection and clear diction may serve as proxies for confidence and certainty whereas the opposite may be true reflecting heightened nervousness, anxiety and uncertainty. During the rehearsal, Lindiwe had started the recycling presentation. Besides reshaping the content, the order of speakers was also changed. Perhaps in a bid to boost Vusi's confidence and not keep him waiting, Lindiwe persuaded him to open the final presentation. In an attempt to include a hook and enhance rapport, Vusi asked the audience a direct question. However, this backfired somewhat when he fumbled the wording.

"Good morning, ladies and gentlemen. Did you know that, er, waste recycling is the simplest way of saving....? Did you know that, er, waste recycling is the safest, is the simplest way of saving carbon emissions? Ninety percent of the energy used to recycle one tin can be saved by recycling one tin."

² A hook can be defined as a strategic presentational device to raise audience interest and curiosity at the outset and establish a positive first impression. Examples may range from thought-provoking quotations, statistics, anecdotes or rhetorical questions to visual and/or aural stimuli.

His hesitant opening which saw him 'start again' and repeat his opening question lowered modality in a professional domain and weakened his overall credibility, despite it being an arresting fact and a good idea as such. This repetition is typical of a rote learning style where speakers tend to recite their words. If they stumble or get lost, they seem unable to improvise and continue but feel compelled to start again and repeat their script as learnt. Lindiwe took over at this point and was responsible for the full introduction including the objectives which Vusi had previously handled. He then discussed the UCT contribution in a more conceptual categorical framing than 'story-telling' narrative which strengthened the argument and audience rapport. Focusing less on a chronological account, this section was shorter, yet seemed sharper and more to the point. Lindiwe once again compared UCT to WITS using argument rather than description to weigh up implications. Being responsible for drawing conclusions and making recommendations also put her in a powerful position as primary decision-maker. Her imperative style, persuading UCT what they "should" and "must" do in future, served to engage the audience directly and reinforce professional modality. At the end of the presentation, Lindiwe confidently opened the floor to questions which she then answered, injecting the humour as previously mentioned when she commandeered the arrival of another team. The camera remained on her until the end. The fact that the audience's attention (and camera) stayed with her during the question session consolidated her leadership position and boosted her confidence as practitioner. Although Hussein listed their recommendations at the end of the SB presentation and called for questions, Jenny immediately took charge and answered them, once again highlighting her topic 'ownership' and leadership credentials.

The firm notes of finality and friendly collegiality, coupled with the intelligent handling of questions, ensured an overall positive recency effect which left the audience satisfied with both presentations *as a whole*. Despite Vusi's hesitant start and Hussein's general nervousness, therefore, their joint presentations were regarded as textually more coherent, authoritative and professional than the earlier rehearsals.

7.3.2.2 *Visual modality and PowerPoint*

As evident in Table 6 on page 147, neither party used cue cards during their presentations nor was there any evidence of a written script. As can also be seen, each team used PowerPoint to augment their words and bodies. They used their slides on screen or the laptop as well as introductory turn-taking verbal links as mnemonic prompts and, having rehearsed the presentation the previous week, neither team relied too heavily on these discursive prompts nor did they merely read their bullet points. Despite the more reserved presentations of Vusi and Hussein, the teams' familiarity with their material, lack of notes, complementary verbal-

visual slides and carefully negotiated division of labour enhanced their credibility as professional presenters. An example of Team Recycling's slides, presented to the audience as a hand-out, can be viewed in the appendices on page 229.

The order of the slides followed and reflected the textual structure of the respective presentations, moving from the general to the particular. Lindiwe and Vusi designed eight slides comprising their title slide (see Table 6 on page 147), an overview slide and three body slides on the Green Campus Initiative, UCT Waste Management and comparison with University of the Witwatersrand respectively. Their final slides comprised one each on Conclusions, Recommendations and Questions. Jenny and Hussein created twelve slides comprising an Introduction to Heating and Cooling Practices at UCT (two slides), one slide on UCT's older buildings and five slides on the Graça Machel female residence, photographically depicting the building and its geographical location. These were followed by two slides on Sustainable Heating Measures, diagrammatically illustrated, two slides on Sustainable Cooling Plans with accompanying photographs and two more slides on other available methods, one of which displays a photograph entitled "London's Gherkin". The presentation ended with two final slides on Conclusions and Recommendations respectively. These slides represented the narrative and conceptual ordering frameworks that each speaker used to describe and explain past and current initiatives and recommend future action. Both teams also used classification (types of waste) and causal analysis (old versus new buildings) to provide evidence of their findings and further their recycling and sustainable business arguments. (See chapter eight for closer analysis of discourse structure.)

The distribution of data across the slides varied as team members out of class negotiated what to depict on each. They had to consider the compositional relationship between visual and written text, areas of specialisation of each and choices depending on what they were trying to achieve. A visual rather than verbal load was far greater in photographic, diagrammatic or graphic slides whereas the opposite was true of numbered lists of conclusions and recommendations. Others, like the recycling title slide in Table 6 on page 147, juxtaposed the visual and verbal for shared emphasis. Using colour and providing a photographic display of the cooling features on the Graça Machel residence and Gherkin building (SB report) and mounds of litter and colour-coded bins (R report) seems more apt and fit for purpose than describing them verbally³. The modal logic and reach inherent in visual design is greater for audience interpretation, irrespective of linguistic competence. Besides representational accuracy and clarity, the affective impact of colour and image makes a lasting

³ The discursive, generic and modal role of these images is analysed more closely in chapter eight, the written report.

impression which persuasively reinforces the necessity of introducing cost-effective measures of building design and recycling. A verbal argument in the conclusions, followed by a list of implementation steps in the recommendations, contributes to enhanced cognition. The ideational, interpersonal and textual metafunctions are realised in speech, words, image and delivery style which together create an orchestrated ensemble of negotiated meaning making.

As speakers determined the pace of the presentation and when to change slides, the use of slide hand-outs served to compensate not only for pace, unloading rate and lack of persistence, but also for the partiality inherent in each slide. Acknowledging perhaps the fleeting nature of speech compared to writing, Jenny and Hussein also included their report executive summary on their hand-out to add value to their oral presentation. As these were distributed in advance, audiences could read ahead and move to and fro autonomously. It is worth noting that although these supplementary practices emerged in class during situated practice and instruction, the facilitator did not prescribe them and their use was entirely optional. By including hand-outs – a different genre - for slides or financial statements, students demonstrated their understanding of the affordances and constraints of various semiotic resources. A balance sheet, for example, is too detailed as a slide but apt as a hand-out which audiences could take away and study at their leisure.

Given time constraints, each team had to decide what to foreground both verbally and visually and to précis their reports accordingly. In particular, given explicit instruction and modelling of PowerPoint behaviour, they had to be very selective in terms of words chosen for display. The recycling slide presentation comprised 210 words and six images and the sustainable building presentation comprised 252 words, 13 numbers and nine images, distributing the modal load linguistically, numerically and pictorially. Besides the use of numbers in the text, each slide in the latter presentation was also numbered. This conventionalised practice enhances professionalism as presenters can easily locate a slide during question time which acts to speed up proceedings.

Both teams elected to use ready-made PowerPoint templates from the repertoire available in the menu although they chose the colour scheme, selection of images and font size. Templates are useful for novice users who have not yet mastered the more sophisticated features of the software, which are “difficult to access and (learn how to) use (Djonov, O'Halloran and Van Leeuwen 2010). Neither team used clip art nor image bank samples, however, electing greater customisation of their visual material. Jenny and Hussein physically took their own photographs and used diagrams provided by the architects. The only picture they downloaded off the internet was of London's 'Gherkin'. The internet, acting as a conveyor

and distributor of previously organised knowledge, provides opportunities (as do other sources) for transferring 'ready-made' semiotic resources from one context to another to serve a different purpose. Lindiwe and Vusi used existing photographs made available by their sources at UCT and Wasteman. Possibly reflecting the more fleeting nature of the oral genre, the fact that teams were 'given' visual material or that they didn't see the need to 'duplicate' their citation practices (more overt in the written reports analysed in chapter eight), saw very little acknowledgement of sources on slides. Lindiwe and Vusi also designed their own graphics in Word which they then imported into their PowerPoint presentation, displaying their familiarity with this particular software practice and numeracy in general.

The similar look of each slide created a unity of style which reinforced the impression that these were jointly authored presentations. They also used colour, spacing and bullets (at two levels) with indentation and font size variation to represent the various sub-levels. Each set of slides functioned as a summary to the oral presentation in similar fashion to the summary of the written report but, taken on its own, the slide presentation as genre seldom functions as a 'standalone' product as it requires spoken verbiage to co-instantiate the slides. Although PowerPoint is often criticised for its reductionist and synoptic tendencies (Tufte 2001; Grant and Borchers [2002] 2008; Martin 2010), too much writing and continuous prose is contrary to good slide design. Presenters have to be extremely selective in their verbal and visual choices and to view their slide presentation as a complementary product. Although this may pose numerous threats to accuracy, completeness and validity, the ensemble of speech, writing and image coupled with viewing and listening simultaneously work to enhance unity, coherence and emphasis. Each mode may have its affordances and constraints but the combination of modes and media allows for the distribution of meaning across them. Despite this combination of spoken text and visual display, choices have to be made and much more material omitted than the written document, for example. The audience, for the most part, focuses on what is said and displayed rather than what is absent. Although they may address gaps during the question session, the bias and distortion that may arise during a so-called informative oral report may go unnoticed or be considered inconsequential. The onus on presenters to honour the data seems greater during the oral than the written report and, with so little time, choosing what to privilege, becomes a real test of professional practice. As evident in the hand-outs combined with their embodied presentations, both teams managed to coherently convey the gist of their written reports and to appropriately spread the verbal and visual load in terms of logic and specialisation.

A downside of software packages such as PowerPoint is that slides are pre-set and cannot be changed during the presentation. Although some students, particularly during the last few

years, have used sophisticated animation of procedures, film clips and other web links, given time constraints and advice to keep it simple, many stick to the basics, as was the case here. Despite attempts at multimedia approaches, students still have to decide in advance what to include and how to order their presentation. They do not change this on the day, during the actual presentation or question session although they may re-show a particular slide or even 'extra' slides, not included in their original, if warranted by particular questions. Unlike an interactive whiteboard, for example, PowerPoint does not allow for interaction nor is frequent interruption encouraged during a more formal presentation when time is of the essence. The informal mind map discussion was more conversational and interactive, although the product itself was 'fixed' as was the topic outline and sample illustration. Nevertheless pencilled changes could be made during discussion and I suspect the word Conclusion (see page 83) was a last minute addition to Jenny and Hussein's mind map (hence the different colour). Inserting one's own identity into this 'template' genre becomes more possible with practice, know-how and on-going changes to presentation software and technology as these mature and expand into more interactive and customisable products. One of the few unplanned interactive asides during the final PowerPoint presentation was Lindiwe's impromptu deviation and this did entail comments and laughter from the group as mentioned.

Despite the generally static and pre-ordered nature of PowerPoint and, according to Tufte (2001), the often lamentable and mechanistic 'powerpointlessness' inherent in its ubiquity, it is, like many other presentation applications, common in professional practice and its explicit instruction is necessary for workplace applications. Combining this practice with all the other exercises in which students participate as well as the use of video playback for students to view their presentations allows the embodied reflection so necessary in multimodal meaning making within scenario pedagogy.

7.3.2.3 Dress, authorial stance and power

Dress and grooming can also be viewed as manifestations of authorial stance and heightened power and credibility if they work to realise a sense of professionalism in both the team as senders and the audience as recipients. How presenters appear to self, each other and audience and the impression created may reflect their level of confidence, both cognitively and affectively. Tan and Yuet See (2009: 369), using a Hallidayan framework, argue "that any kind of semiotic system (clothing included) functions to make" ... "*experiential*" ..., "*interpersonal*" ... and ... "*textual or compositional meaning*" (their italics). Communicators seek to promote an air of knowledge, professionalism, authority and rapport and to impress their audience before they have spoken a word. They are hopeful that appearances will count in their favour to realise all three metafunctions.

In terms of dress, differences in interpretation seem evident from video footage. In both the rehearsal and final presentation, Lindiwe’s dress is similar irrespective of the nature of the session, as can be seen in screenshots of the rehearsal below and final presentation (see pages 147 and 149). Although no comment was made, it is interesting that she removed her glasses for the final presentation in contrast to her rehearsal. Whether out of vanity or realising that the reflection may hamper eye contact, she decided to present without them when audience members, other than her peers, were present. This was the only change, however.

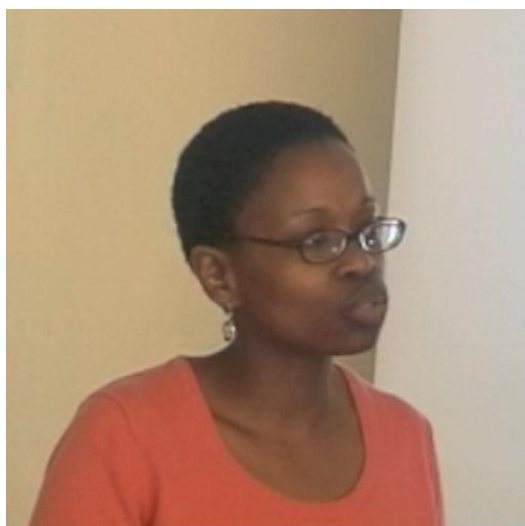


Figure 14: Lindiwe during rehearsal

Rather than the more dramatic shift of jeans to suits of some of her peers, Lindiwe wore smart skirts and slacks throughout the semester. As can be seen in figure 16, Jenny’s appearance changed more radically moving from a student ‘classroom’ appearance of grey top and tied back hair to a more corporate impression and neat styling. Despite wearing her hair down during the final presentation, she appeared more neatly groomed and professional than at her rehearsal.

Both Vusi and Hussein transformed their appearance from normal student wear throughout the semester (jeans, open-necked shirts or T-shirts with windbreakers/hoodies) to formal wear. They aimed for a boardroom appearance.

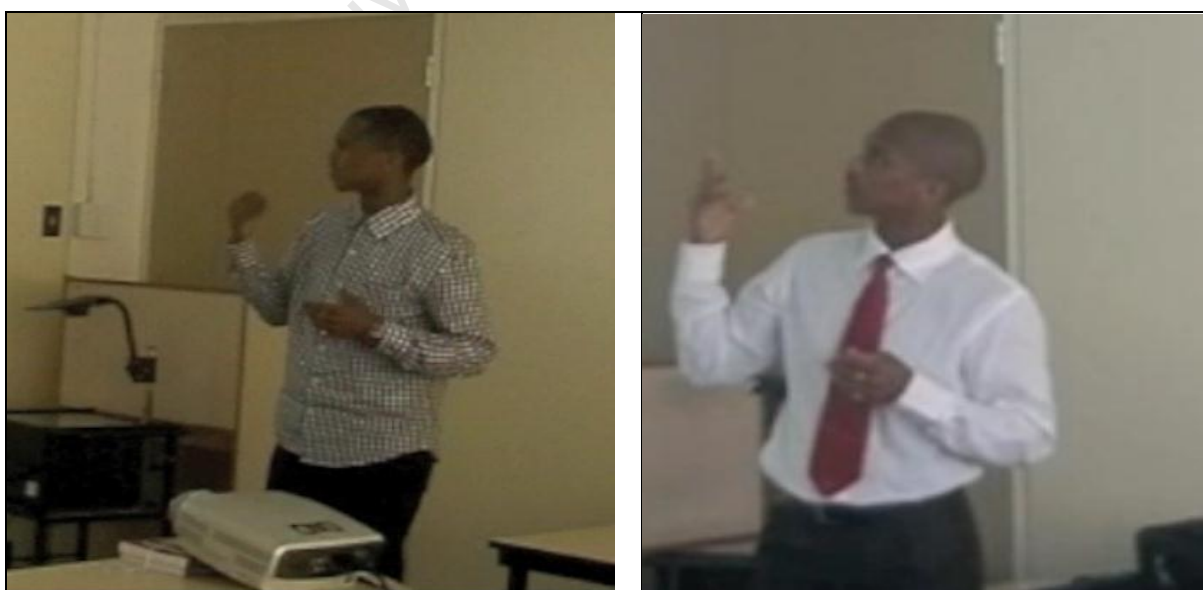


Figure 15: Vusi during his rehearsal and final presentation

The ubiquitous 'suit and tie', epitomising a Western professional identity, was adopted by both males during the final presentation. In fact, all but two males in 2009, irrespective of background, purpose or audience, wore a suit and tie during this session even when the occasion did not warrant it. Some talks were targeted at internal audiences such as the GCI which comprises staff and students. Although these speakers undoubtedly looked smart, one could argue that a clash of discourses may result by blindly following a particular convention; formal dress may not be appropriate for this type of audience⁴. The decision to 'dress up' may have resulted from the feedback they had received the previous week to make more of an impression. As it is easier to change clothing than state of mind or demeanour, both men elected to appear as formal as possible in the hope, perhaps, that they would exude greater professionalism.

Some research has found that employees, particularly males, are reversing earlier trends of casual dress in the workplace believing "that they were not being taken seriously because of their casual dress" (Kiddie 2009). The tie, in particular, has been associated with the male corporate image for centuries in American and European society (Kiddie 2009) and as a social emblem of belonging, a 'bonding icon' according to Stenglin (2010). Besides interpersonal meaning, the tie also carries substantial ideational meaning to convey a uniformity and level of homogeneity which aims to assure the audience of masculine business expertise and acumen, thus conflating appearance with knowledge, credibility and respect (Kiddie 2009; Grant and Nodoba 2009). If equated with a corporate 'business' persona and community of practice in the making, then someone who 'looks the part' may be seen to 'fit in' professionally.

In Vusi and Hussein's case, however, the quality of their appearance seemed inconsistent with their demeanour for the most part. This lack of congruency may have hindered more than enhanced audience receptivity in places. Vusi removed his jacket as he 'got down to business' and his presentation did improve after a slow, practically inaudible start and fumbled opening. Despite his language difficulties, his smart appearance and more interactive delivery style seemed to enhance his confidence during his second stint as speaker. Devoting most of his attention to his slides rather than the audience and they, in turn, redirecting their attention away from him to his slides, allowed Vusi to adopt a more relaxed demeanour. He seemed more comfortable 'out of the limelight'. Despite his formal jacketed appearance throughout, Hussein seemed the most ill at ease of all four speakers. His seemingly unfamiliar clothing

⁴ It is important to note that the facilitator did not prescribe dress but merely recommended that speakers dress according to context, purpose and audience.

proved restrictive and he fidgeted with his cuffs, suit buttons and tie in a distracted and distracting fashion. Watching the video, there seems a mismatch in his appearance and demeanour. Despite the professional look and the no nonsense formality of the corporate 'dark suit', his awkwardness inhabiting it belies the authority that he may have wished his clothes might bestow. The mismatch of clothing and delivery may also be regarded as a clash of discourses. Given Hussein's background, a cultural mismatch may also have underlined his awkwardness.

Although all presenters settled for darker and more muted and conservative clothing during their final presentations, Lindiwe's clothing appeared more striking in terms of colour contrasts during the course and she seemed unafraid to draw attention to herself. Both she and Jenny (as with many other women) wore long trousers and could be described as smart and business-like rather than formal. They appeared more comfortable in their outfits than the men in their suits and this may have been true, literally so, given the softer, more yielding fabric and styling of their clothing. Lindiwe and Jenny's calm attitude, aligning with their confident styles of delivery, resulted in greater congruence between appearance and content. Another point worth mentioning is that their appearance seemed at once modern yet quite 'masculine'. This may reflect shifting power relations (Fairclough 1995) and more feminist perspectives (Guy and Banim 2000). Whereas in earlier corporate and institutional settings, women were expected to wear dresses, skirts and stockings, now the question of 'who wears the pants' is blurred with more women in the workplace overtly signalling a more androgynous stance in selection, style and colour. Lindiwe and Jenny's choice of trousers is clearly salient yet also clearly Western, as their dress may not be acceptable in many African, Middle Eastern and Asian contexts (Grant and Borchers, [2002] 2008; Grant and Nodoba 2009). Both women may also have been signalling their ongoing leadership credentials by 'wearing the pants' at their video presentations. Their greater cultural capital, by way of age, experience, scenario background and topic choice, allowed them to assume command from the outset and maintain it throughout the course.

7.3.2.4 Movement, territorial distance and 'ownership'

In both presentations, Lindiwe and Jenny were physically closer to the screen and the laptop than their male counterparts and this management role was very evident in long shot as can be seen in Table 6 on page 147 and figure 18 below. Being in charge of equipment put them in a more powerful position as gatekeeper and monitor. Presenter location differed in both teams, however. Lindiwe and Vusi stood on either side of the screen at quite a distance from each other and remained in these fixed positions throughout. During the rehearsal, Lindiwe started the presentation by introducing herself and her partner, the scenario context and

speaker breakdown. She alone handled all slide changeovers, with Vusi operating in a much more marginal 'sidekick' position, less powerful in all respects. Jenny and Hussein positioned themselves on the same side of the screen, sharing territorial space and swapping positions intermittently to signal a change in turn taking. Jenny also assumed a more prominent position in terms of the length of time she held the floor and her location. During both the rehearsal and the final presentation, Jenny stood further to the front. She sometimes physically hid her partner Hussein from view while he hovered in the background. Even when he was talking, she merely turned side-on and watched him intently, as if monitoring him.



Figure 16: Jenny and Hussein's rehearsal and final

Her position, like Lindiwe's, seemed more powerful in terms of content, quantity and delivery style.

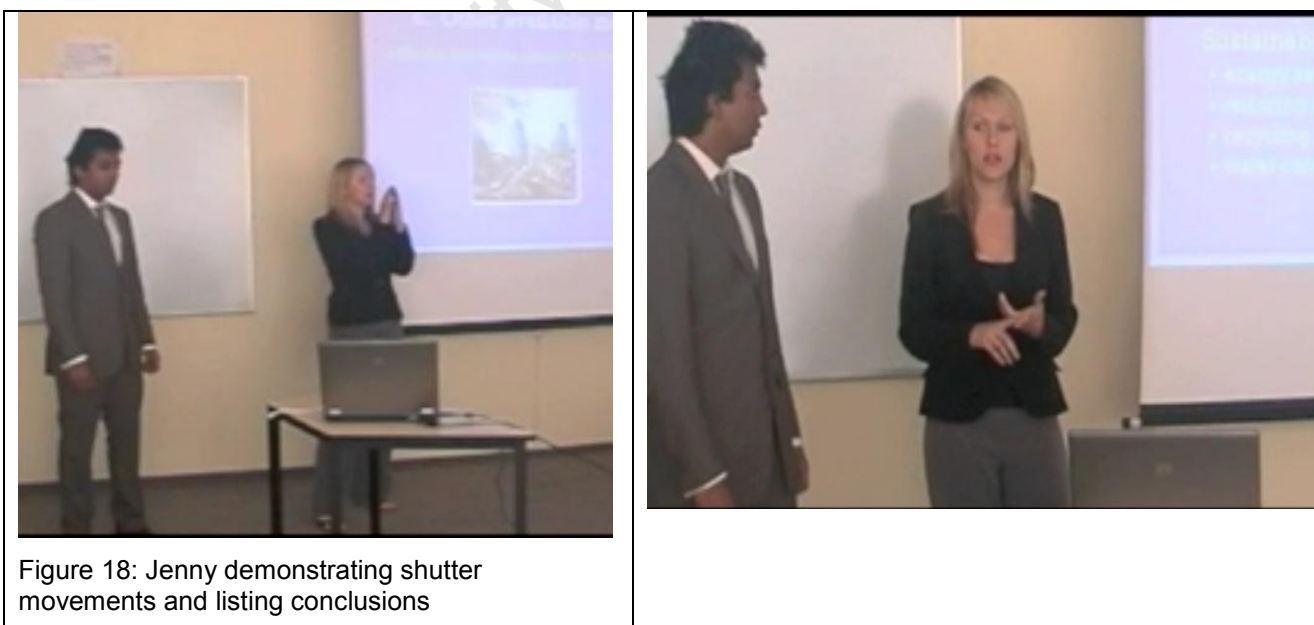


Figure 17: Hussein and Jenny in rehearsal

Of interest is that during the rehearsal, Jenny and Hussein stood alongside the laptop and both reached for it during slide change-overs, sometimes simultaneously as can be seen alongside. This happened on a number of occasions. This issue was resolved for the final presentation when they reached an understanding on their division of labour. Jenny did all her own slide changeovers and although Hussein did most of his, Jenny took over while he engaged with his slides during the air-conditioning and window shutter explanations.

She did not invite him to return the favour while she was demonstrating the opening and closing of the window shutters on the London Gherkin building, however. Although she had her hands full, gesturally speaking, she was quick to control the laptop while Hussein moved sideways out of her way as can be seen in figure 18 and section 7.3.3 below. This too may relate to power relations in the team as Jenny seemed to want to manage every aspect of her own section as well as overall control. Although some teams changed their slides remotely, merely swapping the device when it was their turn, neither of these teams elected to do so. Not using the equipment fully or being able to freely move away from the laptop may render a more static delivery style and hinder credibility in a professional domain. This seemed to confirm their status as novice equipment users.

Of all the modes critical to effective presentations and embodied delivery, gesture is arguably one, if not the most, significant metafunctionally to enhance understanding, credibility, rapport, coherence and emphasis. According to Varela and Shear (1999), in their research on first-person consciousness, motor neurons and the sensory areas in the brain are activated when an action is observed. These activations elicit empathy and engagement which may heighten rapport between speaker and audience and develop trust and credibility, particularly if motivated gesture autonomously or as co-speech mirrors, complements and/or supplements the speaker's words to enhance and speed up comprehension.



Both Lindiwe and Jenny used gesture to mirror, complement or supplement verbal and intonational modes so that their speech and use of pausing aligned with content to enhance understanding. Their ratio of iconic, pointing and beat gestures (Norris 2004) was higher than

either male, particularly Hussein, adding an assertive quality to their delivery styles. In the above screenshots, Jenny uses an iconic gesture to demonstrate the shape of the 'Gherkin' building while during the conclusions, she listed various implications using beat gestures. Further examples are analysed in section 7.3.3. below.

Examples of supplementary gestures were evident at the end of Lindiwe's talk. During audience applause, she clapped and then gave Vusi a thumbs-up sign before tackling the question session. Whereas most of her gestures, to generalise across the entire presentation,



Figure 19: Lindiwe signifying approval

could be said to mirror or complement meaning, playing subordinate or equal roles to the spoken word, both the clapping and thumbs-up sign are examples of abstract supplementary gestures. These signs added value to understanding between speakers rather than with the audience. Not relying on speech at all, it could be said that they played super-ordinate positions (Norris 2011). Clapping and the thumbs-up sign as signifiers of affirmation are globally understood. The fact that Lindiwe clapped while facing Vusi before ending with this sign, indicated her approval and reassurance.

Taking space bodily also conveyed an assertive confidence which translated into feelings of relaxation, even fun. As observer of speakers and audience during both presentations, this sense of greater relaxation created a sense of rapport and enjoyment. In contrast, Hussein seemed relieved at the end of his recommendation section and made a move to sit down before the questions started. Jenny smiled at him reassuringly and signalled their continued attention. Her meaning, also silently conveyed, combined with eye contact and facial expression to halt further movement. Both Lindiwe and Jenny's actions and demeanour overall can be seen to construct a professional identity and a position of authority and power within their teams.

7.3.2.5 Eye contact, expressiveness and links to confidence and credibility

Gaze behaviours change depending on social and cultural situations and contexts. Purpose and audience will also influence eye contact norms within academic or corporate domains. In more casual settings, such as the mind map 'exhibition' and presentation, gaze behaviour of all participants seemed more random than structured. According to Norris (2004: 38), "the

more structured the interaction, the more structured the gaze will be". As the final oral report is a highly structured activity, the distribution of gaze also tends to be more structured. Speakers direct and re-direct their attention from laptop to screen to audience as they engage with their material and the audience tends to follow the speaker's lead in this regard, particularly if gaze, body positioning and gesture work as vectors to influence deictic directionality.

Lindiwe and Jenny used eye contact with the audience to full effect and ensured that their gaze behaviour included both sides of the audience. Eye contact was inclusive taking in various members of the audience on both sides of the room. Even when Jenny was demonstrating the opening and closing of the Gherkin building shutters, as shown in figure 18 above and the sequence to follow in 7.3.3, she kept her eyes front, looking to left and right rather than at the picture on the screen. Her focus of attention is clearly observable in these screenshots so that although she is talking about a building, she foregrounds gaze and gesture rather than speech and image to convey the impact of the movement of the shutter cones.

Movements of body and eye tracking were steady and unhurried for both women. Their square-on body posture and direct eye contact reinforced their sense of control and professionalism. As mentioned, Vusi's delivery style improved during his second stint. His eye contact, however, was quite restricted and often reserved for the screen as can be seen in figure 15 above and the sequence in 7.3.3 below. Being turned away and seemingly reliant on his slides also broke the audience connection and undermined credibility and authorial stance in a professional domain. When he did glance at the audience, he only included those people directly in front of him (his left, audience right). He never looked at the audience seated in front of Lindiwe, almost as though they were her preserve and even when he did look up, his eye contact was fleeting and more oblique. This may have cultural implications for many black students for whom direct eye contact and lengthy gaze behaviours may be regarded as confrontational and disrespectful (Grant and Borchers [2002] 2008; Kaul and Gupta 2007). The tension between Western conventions and traditional practices, particularly in black rural communities, may have caused him some discomfort in the classroom. This ambivalence and heightened levels of anxiety seemed to affect vocal tone and audibility as well. His much older and more experienced partner, Lindiwe, did not display any discomfort despite a similar background. She was the most animated in terms of facial expression, smiling at her audience when urging UCT not be "outdone" by its opposition, WITS, and joining in the laughter, as can be seen in figure 13 on page 149, during the question session. Jenny too presented an open body posture, facial expression and steady gaze which seemed congruent with her delivery style overall.

Hussein appeared the most somber and deadpan of the four presenters and when he looked up, he was inclined to look more directly at the camera than the audience, as can be seen alongside. Moving from camera to screen, he seemed to avoid his live audience. His limited eye contact and generally tense demeanour worked to distance the audience which may negatively impact rapport.



Figure 20: Hussein and Jenny during final presentation










There seemed a definite relationship between heightened confidence, direct eye contact, assertive square-on body posture and strong, motivated movement and gesture. If modes, as ensemble, work together, meaning and credibility are enhanced.

7.3.3 Modal ensemble: orchestrated meaning-making

Multimodal meaning making as constructed ideationally, interpersonally and textually is the focus of the following two excerpts comprising a sequence of nine screenshots, taken at 5 second intervals. Each frame has been numbered for easy reference. These are from Lindiwe and Vusi's recycling and Jenny and Hussein's sustainable building practices presentations respectively. In particular, the 'what' and the 'how' of embodied delivery and how this modal ensemble may realise or hinder professional communication practices and identity are the focus of the analysis. Arrows are used to indicate the directional vectors created by gaze behaviour, hand and arm movement. Light and dark arrows are used against dark and light backgrounds respectively. Dots are used for pausing. Their spoken words are placed below each shot.

The first excerpt is of Vusi during his second stint in which he interacts with his audience and slides during his discussion of UCT's dry waste collection.

Table 7: Excerpt 1: Vusi in action

Vusi's recycling presentation extract		
		
1) If you see it, it is from April to May....also June, there is an improvement.....	2) Ja, there is this improvement in figures which is interesting....	3) While you are doing this, you can... you can also save some money....
		
4) end up paying less than the R47 000 per month	5) and looking up to June, we've got a it's increasing so it's good.	6) Unfortunately, because this project is a recent one, we do not have the actual data
		
7) of how much is exactly or where....	8) of how much dry is actually become recyclable.	9) I'll give up to [Lindiwe] who will [inaudible]



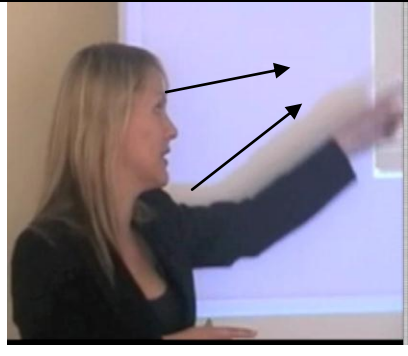

Ideational meaning is mostly realised through the spoken word, the data, as conceptually argued. Vusi, through comparison between months provides the evidence for “increasing” amounts at “less cost” (4 and 5). He uses causal analysis to offer the disclaimer “because” (6) which coupled with the attitude marker “unfortunately” provides a hedge to the factuality of the ‘evidence’ (Hyland and Tse 2004). As there is no “actual data” as “project” so “recent” (6), he claims that it is impossible to generalise or draw reliable conclusions about amount of

recyclable dry waste (7 and 8). Although Vusi does have some “actual data”, which is graphically displayed in PowerPoint, the audience realises that he means that there is too little data as yet (only three months’ worth) to discern a trend. Listening to the presentation it seems obvious that, as a second language speaker, Vusi grapples linguistically and struggles in places to articulate his argument. The elliptical style and errors of expression and grammar make comprehension difficult in places. As the graph itself is clear, easy to follow and depicts what Vusi is trying to explain, the verbal-visual combination facilitates comprehension. Although usually associated with interpersonal meaning, clothing may also instantiate ideational meaning (Cardon and Okoro 2009). The formality of Vusi’s clothing carries ideational ‘weight’ insofar as “professional characteristics” such as “authoritativeness and competence” may be associated with it (Cardon and Okoro 2009: 357).

Vusi uses gesture, eye contact and colour in the main to instantiate interpersonal relations. The focus from the start is on “improvement” (1). Turning to his audience, he confides that “this is interesting” (2), a rhetorical aside which had members nodding in agreement. His pointing gestures and gaze behaviour direct the audience’s attention to the bottom and top of the graph which aligns with the “less” and “increasing” claims and the monetary savings that can be made (4 and 5). The juxtaposition of the head from image to audience punctuates this aside and invests it with a salience which aims to enhance rapport as he engages with them directly. The open-handed gesture, which underscores the attitude marker, “unfortunately” (6), helps to plead his innocence in terms of this gap in the research. Turning away from the graph and facing the left section of the audience (his left), he uses his hands like scales to “weigh” up the recyclable amount and the up-down gestural opposition underscores the imbalance, the lack of certainty (7). This abstract, complementary gesture reinforces the argument as it goes beyond mere repetition of meaning. His final gesture (8) before he literally ‘hands over’ to Lindiwe in slide 9, echoes a rotating, washing movement which imitates the symbolic action of recycling as change, cleanliness, renewal and transformation. The use of colour in the graph and Vusi’s tie may also invoke an interpersonal reaction and attract attention. The red tie, in particular, stands out visually in terms of salience. The colour red as accessory in a corporate setting has been associated with status and power (Tan and Yuet See 1999). Although these attributes were not linguistically or vocally evident in terms of expression, diction, fluency and clarity, they may have helped create a more ‘articulate’ image overall during this section. Textually, the spoken word, technology, image, body position, gesture and eye contact – as fleeting as it was – worked as ensemble to enhance unity, coherence and emphasis.

The next excerpt is from Jenny's presentation where she demonstrates the workings of the cooling mechanism in London's Gherkin building, introduced above.

Table 8: Excerpt 2: Jenny's demonstration

Jenny's sustainable building practices report extract		
		
1) The building opens during very hot temperatures...like a pinecone, allowing air to be drawn through vents	2) down the building. This flow of air down these vents	3) cools down the building during these periods. In the winter or colder periods, the building closes up again,
		
4) allowing air to be trapped inside the building and then, along with the sunlight	5) shining down directly on the building -	6) as you can see, it's all made of glass - the building heats up to be warmer during the winter period.
		
7) They also use the system of double glazing on the outside of the windows	8) and single glazing on the inside with a cavity in between. This acts in the same way as a ceiling acts.. as an insulator.	9) It keeps extreme hot or cold air on the outside allowing the inside to stay at a comfortable room temperature throughout the year.

The amount of spoken text is noticeable in that Jenny, as a first language speaker, gets through more data with little evidence of unmotivated pausing or hesitations. Her expository use of language is pitched at a consultative level, appropriate for purpose and audience within an oral genre. Her gestures frame her message in such a way that comprehension is assured. In the shutter movement section of her talk, Jenny's arms and hand movements emphasised and complemented her spoken language to portray how the shutters worked. By first steeping her fingers (1 and figure 18 above), she demonstrated the shape of the building, using an iconic gesture to represent an object. This gesture aligned with her words and, by 'repeating' what she was saying, could be judged as subordinate to her spoken words. She then rotated her hands inwardly and outwardly to imitate the opening and closing of the shutters which she likened to a pinecone (1). Her evocative use of metaphor and synchronisation of speech and gesture facilitated comprehension. The complementary gesture and metaphor added value to her explanation and, as a mode, this set of gestures could be said to have equal value.

The oppositional sliding gestures (3), imitating the motion of the shutters, reinforce the image of both sides of the building 'closing up' for winter. A number of thrusting and pointing gestures are used to indicate the downward motion of both air through the vents and sunshine on the building as well as to draw attention to the overall glass construction (2, 4-6). She indicates what is inside with two identical arm gestures astride 'the building' (7) before clasping her hands into a single unit to represent the inner cavity (8). Her final gesture, palms downwards, signifies the satisfactory temperature balance and sustainability of this cooling and heating mechanism "throughout the year" (9). How load is distributed across various modes for seamless multi-layered meaning making is particularly evident here. The gesture/speech relation seems carefully divided, each performing different semiotic work yet mutually synergistic. Speech is fleeting and immaterial whereas gestures in space carry a materiality which sounds do not possess. The materiality of the image, visible throughout this sequence, underscores the discussion and holds it together. The speaker as designer, taking the affordances and constraints of different modes into account, determines how each mode fits together and partners one another interactively (Jewitt 2011). It seemed clear that Jenny's eye contact did not follow her gestures, for the most part, but overwhelming held her audience, creating a powerful gaze engagement with them. When she did glance at her image ("as you can see, it's all made of glass"), the swinging head movement underlined meaning, the strength of which heightened ideational and interpersonal salience. Her assertive and confident posture adjacent to the screen adds to her professional identity within the arrangement of the venue.

Whereas the mind map 'room as gallery' distributed power among all participants with dispersed eye contact and freedom to move, the topic outline with sample illustration session served a more pedagogical framing with 'room as classroom'. In both sequences above, 'room as boardroom' seems more feasible with the formally structured and orchestrated ensemble of these team presenters confirming their growing confidence as professional practitioners in a commerce domain.

7.4 Final comments

Behaviours which may be more imitative and assisted at the outset, particularly in earlier sessions, become progressively more expert with scaffolding and support (Tharpe and Gallimore 1988; Lave and Wenger 1991; Gee 2003, 2004). Vygotsky's ZPD narrows as student teams become more empowered in their learning (Hay and Barab 2001). As they develop the know-how and affinity within a professional domain, they also become more mindful of what is fit for purpose and audience in their own eyes as well as those of their audience. This shift may be greater for some students than others. As Vygotsky (1978) contended, although students may work and learn collaboratively and socially, each team member would have his or her own ZPD with some individuals needing more support than others. This is certainly the case in the sample teams discussed above. Significantly, this support and know-how did not only come from the facilitator but also from student peers, partners and external experts. Both Lindiwe and Jenny managed the process and played dominant roles within their respective teams. In her partnership with Vusi, Lindiwe came across as a role model and mentor, an observation that was reinforced by audience appraisal and the facilitator's response to Lindiwe as team leader. Although one might question Vusi and Hussein's 'growth' in terms of emerging professional identity and confidence, their transformed practice, collaboratively negotiated, saw crisper and shorter presentations with the stronger party in each team taking the vocal lead. This, as partnership, confirms a professional response where not everyone presenting in the workplace may require equal 'air-time' (or to speak at all) but jointly succeed in realising a professional team identity and enhanced authorial stance as partners.

In chapter eight, an analysis is made of their joint written reports, the final product for assessment. Although sustainable business practices is the overarching scenario topic under investigation on this course, this exercise in professional writing acts as an exemplar of a sustainable business practice in its own right. A commissioned report as a legal document becomes the joint responsibility of the recipient (as commissioner) and the writer(s), particularly in the case of an evaluative investigation report.

Chapter eight: Disseminating a professional communication identity through the final client deliverable: the investigation report

8.1 Overview

The written investigation report is the culmination of all the draft products that have preceded it and the professional manifestation of the report genre. These reports, based on the mind maps and topic outlines analysed in earlier chapters, are also closely related to the oral reports discussed in chapter seven. Task teams work on both these products simultaneously and decide what is apt, both verbally and visually, to include in the document as well as the presentation. Verbal and visual choices determine what gets written/spoken and what is displayed in the text or on a PowerPoint slide. Both products comprise material resources which are shared with an audience, who in turn participate in the process of reading, listening, seeing and interpreting. Business reports and presentations remain two of the most common communication practices in the workplace, particularly in a commerce domain (Knight 1999; Wardrope 2002; Grant 2003; Kaul and Gupta 2007, Grant and Borchers [2002] 2008). Allowing investigative teams to grapple with and negotiate these semiotic choices within situated practice, to work collaboratively and attend to instruction and feedback facilitates the transformation from draft products and processes to professional communication practices within the multimodal scenario classroom.

In the first sections of this chapter, I highlight trends in professional communication practice and identity manifest in a number of reports. Providing a context for report writing as a whole anchors the analysis of specific verbal and visual instances in later sections. Like chapter seven, I privilege two products: the recycling report of Lindiwe and Vusi and the sustainable building practice report of Jenny and Hussein. These two sample reports are reproduced in the appendices. I use report and dissertation page numbers and the codes (R) for Recycling and (SB) for Sustainable Building to identify extracts and images. These documents were collaboratively authored and each member of the task team received the same grade (unlike the oral presentation which was individually assessed). Whereas Lindiwe and Vusi's report was considered to be above average as a professional document and received a higher grade, Jenny and Hussein's short report obtained a lower but passing grade.

The framework of negotiated design on page 39 is usefully employed to examine negotiated discursive, generic and modal practices and the interdiscursive and intertextual nature of verbal and visual resources in professional texts.

8.1.1 The rhetorical relationship and design task

Students use many verbal and visual semiotic resources in the design of the written report. For Kress (2010), the designer as rhetor has to make choices at every stage of the design process. Major modes comprise writing and layout and include choice and size of font, headings (bold and underlining), numbering (Roman, Arabic and multiple-decimal), and spacing/indentation of subsections. Visual modes comprise, in the main, image and colour. Size, layout and spatial arrangement are also important as placement of an image within a verbal document such as a report contributes to meaning-making as part of the modal ensemble as well as to knowledge production.

Although the format of a traditional report may look settled as can be seen by comparing the two sample reports, each is unique as a product of design, depending on the rhetorical relationship of and between purpose and audience and their choices of semiotic verbal and visual resources and compositional elements. Who is involved and with what effect are fitting questions that are mutually negotiated at the start of the investigation and throughout the life of the project as agreed-upon parameters act to guide the process.

Each team of report writers has to consider what is apt to represent and communicate meaning. If their primary task is to define, explain, analyse and evaluate, then the written mode may be more appropriate. If they wish to display, depict, illustrate or demonstrate meaning, visual images such as photographs, diagrams and graphics may prove more appropriate. Every report submitted over the period under study (2008/9) used verbal and visual modes to a greater or lesser extent to do different semiotic work. Both samples do likewise with Lindiwe and Vusi (R: 231) arguably privileging visual modes to a greater extent than verbal ones in the body of their report. According to Kress (2010) interest and logic will prompt modal selection that is fit for purpose and audience. Expertise also plays a role as students learn how to use the technologies of design available to them such as computer-mediated communications (NLG 2000). "The accelerating pace of innovation in technology over the past several decades has brought about profound changes" (Mirabito and Morgenstern 2004: xi). New communication technologies have not only shifted power relations and created a "democratization of information" (Mirabito and Morgenstern 2004: 7) but have widened the choice of the possible. Sophisticated but user-friendly software word and graphics packages have shifted the autonomy of use from specialists to anyone who has access (Oblinger and Oblinger 2005; Medhurst 2009, 2010). As these technologies proliferate, access, especially among senior university students such as these, abounds. Although the repertoire of visual and verbal semiotic resources has widened considerably, how and where

used are decisions each team has to make in order to establish discursive coherence and fulfil their representational and communicative tasks.

8.1.2. Discursive clashes and struggles

Characteristics of academic and scientific discourse may clash with the demands of professional communication in a multilingual and multicultural workplace (Candlin and Hyland 1999; Bangeni 2009). In academic essays and papers students are encouraged to use agentless, nominalised and often passive and highly formal discursive constructions in their texts to provide a scientific authorial distance. They are encouraged to repress their personal identities, to move away from 'self' and 'subjectivity' and to recognise particular dispositions to use language in particular ways (Chouliaraki and Fairclough 1999). Many students, particularly EAL students, struggle to acquire academic writing practices when they enter university (Kapp and Bangeni 2009; Bangeni 2009; Preece 2009). Professional communication practices, aimed at audiences who may know a great deal less about a particular subject than academic readers (particularly those tasked with grading), put additional demands on students. Having recently learnt to navigate the complexities of academic genres with varying success, many now find themselves having to shift their perspective from a more formal and objective academic style to a repertoire of formal and consultative, objective and subjective styles, more apt for the variety of discursive and generic writing practices within a professional, particularly corporate, domain (Candlin and Hyland 1999; De Groot 2008).

Whereas academic genres such as the essay may more narrowly define purpose and audience in terms of generic integrity, professional business writing is characterised by hybridity (Chouliaraki and Fairclough 1999) and varying rhetorical contexts that may emerge and develop over time. Interdiscursive 'genre mixing' (Kress 2003) may prove confusing for students, particularly as professional writing can be seen as a composite of generic and discursive practices that help us "construct our professional identities, and carry out our social and occupational roles" (Candlin and Hyland 1999: 10). Designing, reshaping and merging discursive practices appropriately takes time, experience and know-how. Discourse clashes tend to undermine professionalism in terms of institutional practice and participation which may result in an erosion of confidence on the part of writers and receivers. Managing this hybridity to minimise these clashes may prove challenging.

The composite nature of reports is reflected in its format. Although order of sections may vary depending on the type of report, most reports comprise a number of purposive sections (Houp

and Pearsall 1977; Grant and Brocherds [2002], 2008; De Groot 2008). Both sample reports comprise a title page, letter of transmittal or covering letter, terms of reference, synopsis or executive summary and table of contents. Lindiwe and Vusi also include a list of illustrations although neither devised a glossary, preferring to use operational definitions and explanations in the text. “Dry waste is the waste category that has potential to be recycled” (R: 13/235) is one such example. These preliminaries are followed by the introduction, an optional separate method section (Lindiwe and Vusi only), findings, conclusions and recommendations. Lindiwe and Vusi and Jenny and Hussein include a bibliography and reference list respectively although neither team add appendices.¹

An investigation report, as an act of commission, primarily serves a decision-making function, reciprocally negotiated between sender and receiver. As an exemplar of professional writing, a report, based on these commissioned terms of reference, holds a particular “degree of reciprocity....between writer and reader” (Candlin and Hyland 1999: 9). In this chapter, this reciprocity in terms of purpose and audience is examined so that the negotiation of meaning and co-construction of knowledge are shown to contribute to work-based effectiveness and professional identity within an affinity group.

8.2 Reciprocity as rhetorical device: an act of negotiation

The terms of reference are determined before the investigation gets underway. They form a ‘metafunctional’ crux insofar as all participants in the process create, negotiate (and agree to) the parameters of knowledge construction and contextual criteria as well as the order in which these will be tackled. How writers position and construct their audience and manage audience expectations is part of fulfilling these terms to the satisfaction of the reader as well as establishing credibility in a profession domain.

Unlike creative writing such as poetry which is influenced by a purpose to express personal feeling and is not subject to commissioned and time-based instructions such as terms of reference, professional writing is task orientated. It holds particular relevance at a particular time and may become outdated as situational factors and issues change, emerge and evolve (Houp and Pearsall 1977; Grant and Borchers [2002], 2008; De Groot 2008). Most terms of reference will include two temporal markers: the date of commission and the date of submission. Lindiwe and Vusi’s dates, 31 July 2009 and 5 October 2009 respectively (R: 2/231), serve to contractually bind them to a particular timeframe for their investigation. Jenny

¹ Although report writers may use a bottom-up, direct approach starting with recommendations, before concluding and ‘ending’ with findings, a more traditional top-down, indirect approach presents the findings first and it is this approach which is taught on this course.

and Hussein omit their submission date on both their title page and terms of reference (SB: I/242-3). As reports (like minutes) may have legal implications, this omission could have consequences in a professional domain involving a specific target audience such as a client. In this assignment, students chose a range of 'clients' from institutional staff members such as their course facilitator to external stakeholders such as environmental consultants. In Jenny and Hussein's case, although they selected their facilitator, they provided a fictitious identity making her the "Director of the Property Services Unit" (SB: I/243). The role play simulates an authentic practice which aims to heighten modality by showing their knowledge of the convention. They appropriated a 'realistic' audience and purposes to inform and persuade. Although both teams aimed to base their persuasion on sound factual argument, rather than opinion or feelings, they did not always succeed as the analysis shows.

Just as writers position and manage their audience, so the target audience constructs and manages the writers. This mutual instruction giving and receiving exercise creates a rhetorical and inter-dependent relationship. The audience awaits the report as a precursor to action. In the two sample reports, the terms of reference are almost identical in that teams seek to replicate as accurately as possible the scenario instructions they received to "investigate", "determine", "discuss", "critically evaluate" and "make recommendations" (R: 2/231 and SB: I/243). The details may differ with scenario topic but the task defines what the audience expects and the order the investigation will take. According to Bhatia (1999: 26), "Audience characteristics in professional contexts can hardly be over-emphasised." Who they are in terms of job status and power relations as well as knowledge of and interest in the subject matter imposes constraints "on the process of genre construction" and encourages this negotiated reciprocity.

Despite the discursive and generic variability and rhetorical nature of report formulation, it is nevertheless taught formally and explicitly within the scenario context as a series of regulated practices. For most students, even at this level, report writing is not common. Unlike the Humanities faculty, many students in numerate courses such as accounting do little sustained writing. Questionnaire respondents confirmed that they had done an academic essay or research paper during the course of their studies and some a mini thesis cum research paper in final year but most writing exercises comprised short passages and multiple-choice type tests. Few had ever written a work-based business report or other professional writing genres. Another common refrain was that nearly all their learning and writing was "theoretically-based" and "individual". When asked what their favourite learning style was, however, an equally common refrain was "collaboratively", "practically", "learning by doing" and "class activities (as we are doing now)". This echoes another type of reciprocity common to the professional

domain: that of dialogical partnerships and team work, both face to face and online (Arnett 1992; Kaul and Gupta 2007). Although group work was acknowledged to have its problems, team writing and presenting were seen as key practices in the business world, that they would “play a major role” and that “it’s easier to spot each other’s mistakes” when working with a partner.

Another aspect of professional communication with which students seem unfamiliar is their contextual contingency upon other practices. The report may make up only one element in a basket of professional literacy practices that occur within the workplace at any given time (Candlin and Hyland 1999; Archer 2004; Grant 2003, 2004). It is usually contingent on prior work and may result in further communicative acts. For instance, Lindiwe and Vusi’s and Jenny and Hussein’s sites of investigation gave rise to correspondence and/or requests for interviews or meetings with planning and environmental experts like John Critien and Sandra Rippon². During the same time period, their mind maps and topic outlines were being designed and developed into oral and written reports. The cycle in a work-place setting seeks to create multi-directional communicative tentacles, all of which act to fulfil particular, agreed upon communicative goals. In scenario pedagogy, this basket of draft and final products, embedded within a professional context and designed and presented over the course of the semester, aims to simulate this aspect of cyclical contingency.

Verbal and visual texts such as reports can be regarded as recognisable, “prototypical instances of social and institutional practices” in which “particular discursive conventions are seen as ‘authorised’ and valued by social groups, institutional sites, or discourse communities” (Candlin and Hyland 1999: 7). These notions of reciprocity and collaborative meaning making resonate with the dialogical convergence model of communication discussed in chapter two which highlights the on-going and dynamic interaction of participants over time and their desire “to unite in a common interest or focus” (Rogers and Kincaid 1981: 65). Questionnaire respondents talked about “the steps that should be followed” and how the collaborative meaning making helped them “in building up to [their] final project.” The ‘and then’ reminders in the convergence model signal the contingent context of continuity and ‘situatedness’ within the professional setting that participants inhabit. The cyclical nature of a report is indelibly tied to its Latin name, *reportare*, “to bring back” (Grant and Borchers [2002] 2008: 128) which is used generically in the public and private sector to describe fact-finding and decision-making activities. Teams work towards ‘bringing back’ their results and providing authentic solutions (recommendations) based on the evaluated significance of their conclusions.

² As mentioned in chapter four, John Critien is the Director of Property and Services at UCT while Sandra Rippon is an external environmental consultant. UCT is as one of her major clients.

8.3 (Inter)personal engagement and links to modality

Sections throughout the report such as the executive summary, conclusions and recommendations as well as colourful images such as graphics and photographs go beyond informative functionality to summon social and attitudinal responses. Their ideational and interpersonal sender-receiver relationships are held in mutual balance to act as a pivot of persuasion, based on fact. Other practices instantiate a primarily personal and interpersonal engagement with the reader, intended to build rapport and enhance interest and affect. These include the title page to capture attention at the outset and the letter of transmittal which adopts a dialogic perspective and directly addresses the client. Unlike the impersonal findings section in a report, the letter's personal approach acts to cover and engage the data (and the receiver) and initiate the authorial reciprocity referred to earlier.

Both sample reports have a title page and a letter of transmittal. Lindiwe and Vusi (R:228) place their letter at the front to indicate its separation from the report *per se* and to signal its function as a cover document. Jenny and Hussein (SB:242) place their title page first and include their letter within the overall structure of the report, turning it into one of the preliminaries, albeit unnumbered and not included in the table of contents.

8.3.1 The entry point: title page

Title page layout is important as most readers have much vying for their attention in the workplace. Unlike a captive audience of markers who are paid to read students' work, no one in the world of work is forced to do so and documents are routinely ignored, shelved (and forgotten about) or even binned; there is no guarantee of an audience particularly if private and public sector employees and office bearers are inundated with paperwork. The title page needs to market the document and entice the reader to turn the page and continue reading. According to Chouliaraki and Fairclough (1999), the commodification of language and layout is "designed to sell". No matter how 'informative' a report is, all evaluative reports such as these, aim to persuade.

The title page functions to identify the parties involved and their position and provides a snapshot of what is to come. It locates the report in terms of the nature of the investigation and provides a date of submission, a temporal marker which situates the report functionally (i.e. time and place). As mentioned, dates of commission and submission are important features of working documents such as reports which have a task-oriented lifespan. Jenny and Hussein's (SB:242) report title page does not stipulate who it is for nor provide a date of submission. When filed, this could create future confusion which may impact implementation

and follow-up. The convention of adding these details acts to simulate a professional communication practice which could mitigate this uncertainty risk in the workplace. It could also be argued that the addition of student numbers (instead of Green Campus Initiative [GCI] membership) may undermine the professional 'role play' element of the SB task team investigators. Their centred title does, however, capture attention and encapsulates the focus of their scenario topic: UCT Sustainable Building Report: Graca Machel Residence Hall. Lindiwe and Vusi's (R:230) title is more problematic in that their large, centred and capitalised report title which fills the top third of the page is actually not the main focus of the report (Operational Plan for Sustainability). The much smaller sub-title – The Impact of Recycling – is. Had their explanatory covering letter not come first, this may well have confused readers initially. Their title page does, however, include all the conventionalised title page data (to/from/date). It also simulates a professional identity in that they take on the role of consultants to the university as members of Green Planet Consulting. By elevating their role from students to professional consultants, they seek to establish their credentials early on and align themselves with 'masters' rather than amateurs or 'apprentices' in the Lave and Wenger sense (1991). Using planet in their name further reinforces a global, universal appeal which may instantiate an international stature.

An arresting layout, use of colour and insertion of images such as logos may signify professional identity still further. Jenny and Hussein (SB:242) include two logos on their title page, prominently centring the university's blue and black logo in the top third of the page. As a logo instantiates the brand of a company or institution, it is associated in the mind of receivers with the reputational value of that particular company or institution as well as the products and/or services it offers. A university's brand instantiates knowledge and learning. As UCT has an excellent reputation locally and globally³, placing its logo on their title page may act to endorse the report and its high status academic provenance. It may also enhance reader confidence in the veracity of its contents. According to Kress and Van Leeuwen (1996) the top position can be considered 'ideal' which may serve to elevate the report still further. In terms of reading path, it is a natural starting point. This, together with size, colour and position, draws the gaze of the reader. Although the circular writing which surrounds the Spes Bona logo may be difficult to read, the fact that the university's name is in three of South Africa's official languages (English, Xhosa and Afrikaans) may further reinforce its multilingual appeal by aligning this investigation to an institution which values redress and inclusivity. These are the three official languages of the Western Cape, further underscoring UCT's interest in the community in which it is located.

³ In various international academic surveys, UCT has consistently ranked in the top 200 universities in the world, the only African university to do so.

The GCI logo appears in the bottom right corner and is repeated as footer on every page of the SB report. Although smaller, the repetition underscores its importance to the project as a whole. It acts as a physical link between report sections and a conceptual link between this organisation and the tertiary institution, UCT, to which it 'belongs'. As a new and young organisation within a much older establishment, its position on the right is apt, echoing Kress and Van Leeuwen's (1996) point about the 'given' and the 'new'. The green circle in which the GCI letters are encapsulated further signifies and represents a 'green' discourse. In comparing the two, the UCT logo seems more institutional and conservative, particularly the crest with its symbols of learning and knowledge such as the lamp and open book. The anchor adds steadfast gravitas and a sense of foundational depth. The GCI logo appears more jaunty and modern with its angled abbreviation and easy to read name alongside. Despite their differences – and possibly because of them – the use of two logos aims to 'double' the authoritative stance and credibility of the report.

Lindiwe and Vusi (R: 230) do not include institutional logos or any other images on their title page. As members of Green Planet Consultancy, they have situated themselves outside of the university as independent consultants. They frame their data within two broad blue bands above and below the text and two narrow bands on either side. The framing acts to highlight their topic and enhance the spatial balance between the text and the blank space. The variation of font size and use of bold, colour and indentation contribute to a professional finish. Both title pages aim to impress and stimulate the interest of the reader and start the process of co-production of meaning.

8.3.2 Building a professional relationship

As the name suggests, the letter of transmittal acts as product of dissemination. It 'covers' the report insofar as it signals to the reader, presumably the person(s) who commissioned the report, what the report is about. With its different discursive and generic characteristics, a letter is able to do different semiotic work to the report. Whereas the report, particularly the findings, has a strong ideational focus in terms of how knowledge is constructed and conceptualised, the letter aims to summon attention, engage the reader interpersonally and focus on salient insights found during the course of the investigation. The interpersonal metafunction thus plays a dominant role in this text. In commercial terms, it both advertises and markets the results of the investigation as well as the expertise of the report-writers. Lindiwe and Vusi's (R:230) letter is directed at their facilitator whom they formally address as "Dear Ms Kalil". By engaging her directly by name, they aim to build rapport and immediacy in terms of authorial stance (Hyland 1999; Hyland and Tse 2004). By adding titles to their own

names in the close (Mrs/Mr) they posit a sense of respectful collegiality. This practice serves to level status differences, diminish power relations and reflect the correspondence between two sets of professionals consulting on equal terms. Jenny and Hussein (SB:242) use an impersonal “Dear Sir/Madam” approach in their letter yet ironically create a role play situation in their terms of reference where they refer to the same person (Ms Kalil) as the director of the Property Services Unit at UCT, a purely fictitious role and position. As they know the client, this impersonal salutation is puzzling and may distance the recipient and undermine credibility in a professional domain. A ‘Dear Sir/Madam/Occupant’ type of letter, so ubiquitous in spam contexts, may also negatively affect reader attitude (Candlin and Hyland 1999). As this is the first ‘introduction’ to the report investigators, with high salience from a primacy perspective, this vague, impersonal practice may detract from overall ‘marketability’ of the report contents and negatively affect the GCI brand.

According to Hyland, (1999: 104), “the use of first person pronouns and possessive adjectives to present propositional, affective and interpersonal information is an important feature of stance as writers can present their material or perspectives subjectively.... interpersonally..., or objectively.” Both sample letters use self-mentions and other person markers such as “I”, “we”, “me”, “he”, “us” as well as “our” to further mutuality and intimate that this investigative endeavour is a joint venture. Subjective examples from these sample covering letters include: “**We** enclose....” and “**We** also obtained...” (R), “**I** enclose...” and “**We** also researched....” (SB). Statements such as “In **our** investigation, **we** were able to gain insights into ...” and “...**we** were assisting (sic) by...” (R) explicitly address interpersonal relations while “The report compares...” and “The contents of the report demonstrate ...” (R) uses an objective approach to distance the results from the researchers. The latter seeks to instil a semblance of objective neutrality and factuality to the findings and enhance modality within a professional domain. By layering the key information in a cloak of subjective, interpersonal and objective authorial markers, both teams attempt to persuade their readers based on hard fact and not opinion.

The subject line of a business letter serves as a précis of the contents for a busy reader. Both sample letters include informative subject lines which act to emphatically pinpoint the focus of the reports. Jenny and Hussein (SB) keep their subject line descriptive and specific: *Sustainable building policy at UCT focusing on Graca Machel Residence Hall*. They move from the general and abstract to the specific and concrete, allowing the reader to grasp the ‘bigger picture’, the overall context of the report, as well as the precise focus of this particular report. Lindiwe and Vusi (R) include an evaluative marker at the start of their title: *Impact of Operational Plan for Sustainability at University of Cape Town – Recycling*. The first part is general and relevant to all the sustainability scenarios. The word *impact*, however, hints that

an evaluative rather than merely informative report will follow and confirms that conclusions will be drawn. The last word is separated by a dash to reveal the specific focus of this report. The offset word, *Recycling*, stands out as the last impression made on the reader, heightening the recency effect.

In seeking to make their opinions and claims more acceptable and credible, both letters use intertextuality to construct reader acceptance of the arguments they posit. Jenny and Hussein (SB) are less overt in their use of evidentials, merely mentioning “the numerous designs that the architects included”. As architects could be regarded as experts in the green building context, their role in the report acts to endorse the major findings. Lindiwe and Vusi (R) are more specific in their letter and thank a Property and Services staff member by name for his “extensive knowledge”. They further cite the usefulness of a particular academic journal in providing data. The attitude of the writers comes across strongly in the final paragraph particularly in Lindiwe and Vusi’s (R) letter which urges the university to “respond to this need” and talks about the “extensive data” necessary and “great scope to provide valuable feedback to all who have an interest in a more sustainable University of Cape Town.” The latter implies that Property and Services staff have it in their power to make a difference, persuasively hinting that doing nothing equates to limiting other individual initiatives. Jenny and Hussein (SB) use discrepancy to ‘show up’ current practice. “No sustainability policy document is currently available..... This report recommends that such a document be put together....” Both letters point the way ahead by offering author assistance going forward. By reinforcing their role as GCI members (SB) and Green Planet consultants (R), they aim to elevate their professional identities, reinforce their status as members of an affinity group and encourage a tacit acknowledgement of expertise.

In both letters there is some inconsistency between “I”/“me” and “We”/“our”. As both authors are signatories, the “I” approach creates a disjuncture which may undermine professional modality. Nevertheless, by placing both names on each letter and signing them personally, the authors commit themselves to the contents and the topic. The signatures also have the power of contract which, together with the terms of reference, adds credence to their findings, conclusions and recommendations. Including the Green Campus Initiative logo at the bottom of their letter, Jenny and Hussein (SB) also aim to provide further evidence of their ‘initiative’ and endorsement.

8.4 De-personalised representation to enhance professional communication identity

In contrast to the personal, direct and active approach in the letter, the report – particularly the findings - aims to be impersonal, distant and often agentless. The stark contrast in style and register between the two genres is marked. The letter seeks to persuade and although the persuasion may be based on fact rather than opinion, affect plays an important role, as seen by the number of interactive and interactional metadiscourse resources mentioned above, particularly person, engagement and attitude markers (Candlin and Hyland 1999; Hyland and Tse 2004). The report, on the other hand, relies mainly – particularly in the findings – on cognitive meaning construction, with its primary purpose to inform. Although Kress (2003) challenges the reification and separation of cognition, affect and emotion, arguing that all three are evident in all texts, it is useful to distinguish between dominant and subsidiary purposes in communication. The major purpose of the findings is to inform. Although a subsidiary purpose of an investigation report may be to persuade, particularly in the conclusions and recommendations, once again, all persuasion requires a factual basis if the document is to be considered credible in a professional domain. The underlying message to the reader is that a factual approach is taken which is characterised by a formal, impersonal and referential style and register to give credence to the notion that it will ‘speak truth’, particularly in the body of the report or, at the very least, aim to do so.

8.4.1 Report orientation and links to ‘inbuilt redundancy’ and parallelism

Although no sign is redundant, semiotically speaking, the term ‘inbuilt redundancy’ is useful to examine how writers frame similar information in different report sections to conform to the conventions of those particular sections and to the report genre as a whole. This ‘repetition’ may be verbal but visual modes are often used to replace or augment meaning-making. Besides redundancy, section parallelism⁴ relates to the similar order in which information is handled in each part of the report particularly findings, conclusions and recommendations. This structural ‘thread’ enhances unity and coherence and facilitates reader expectation as manifest in the table below.

Although the term redundancy may have a negative connotation and generally refers to unnecessary repetition, in the case of a report, this concept takes into account that readers do not as a rule read the entire document. They may well only read certain ‘stand-alone’ sections that should therefore make sense to a busy reader even if read in isolation. Managers, in particular, do not read a report from beginning to end nor do they attend to each section

⁴ Although parallel grammatical structure is equally salient in establishing coherence within texts, I am using the term in a broader sense here to relate to data correlation across sections.

equally. In a number of annual surveys, such as the well-known American-based Westinghouse survey which originated in the sixties (cited in Houp and Pearsall 1977: 68-70), readers pay most attention to the executive summary with a 100% readership. This high readership is not surprising given that it encapsulates key verbal and, more recently, visual information. It is often published separately and disseminated widely whereas the report proper may only reach a small albeit highly salient minority of decision-makers. Its forward position as one of the key preliminaries also signals its importance (primacy effect). Its role in relation to the rest of the report can be likened to that of a topic sentence in a paragraph. Both teams (R: 231 and SB: 243) place their summaries up front after their terms of reference, allowing readers to access the data quickly and engage with the essence of the subject matter. By considering reader expectations and convenience, this formatting seeks to enhance modality in a professional domain.

Report readers in business and industry are often characterised as being a 'mixed' audience comprising lay and specialist readers (Grant and Borchers [2002] 2008; De Groot 2008). Although academics usually know more than their students about the subject matter they are grading, this is generally not the case in terms of scenario topics such as waste or transport management, sustainable building practices and recycling. The course facilitator is a 'novice' in reality while some of the external stakeholders are more expert in the field: an authentic mixed audience. This is an important consideration which teams need to keep in mind. Besides the report task designating readership, so level of expertise may also guide who reads what. Therefore, as all to most readers read the summary, introduction and concluding sections, these aim to be written at a level of language suitable to a wider audience whereas the more numerate and statistical findings may appeal to a smaller, more technical and specialist reader. The former sections tend towards a more narrative framing while the findings, in particular, place greater reliance on conceptual frameworks such as classification, operational and analytical procedures, comparison and contrast and cause and effect. The differences in content and format are explicitly taught and practised in class so that students become aware of section functionality and how this influences language, style, tone, vocabulary, content and discourse structure. In both sample examples, the description and narrative remain at a higher level of abstraction (the general) in these overview and introductory sections whereas the findings provide more specific and concrete technical facts and figures (the particular). This arrangement also affects stance features and metadiscourse choices (Hyland 1999; Hyland and Tse 2004). The letter, as analysed in 8.3.2 above, is generally characterised by self-mentions, person, attitude and engagement markers to build rapport while the findings rely on evidential emphatics and boosters to build certainty. Hedging is common in the conclusions where writers speculate on likely implications while necessity

modals to express writer attitude such as ‘should’ and ‘must’ are useful in recommendations. These variations in authorial stance are also evident in the table below.

Table 9: Redundancy and parallelism at work in conventionalised report format: Recycling

	Letter	Summary	Introduction	Findings	Conclusions	Recommendations
Function	Abstract verbal overview: personal, relational engagement with reader	Abstract verbal/visual overview: impersonal précis of key findings, conclusions and recommendations	Abstract verbal overview combined with specific orientation (what, who, why and how?)	Concrete verbal/visual details: impersonal emphatics/ ‘facts’ to boost certainty; narrative and conceptual framing of statistics, etc.	Concrete verbal details: impersonal hedging and inferential evaluation of implications based on findings	Concrete verbal/visual details: imperative engagement toward implementation steps/courses of action based on findings and conclusions
Example	We enclose our completed report which evaluates the significance of the current recycling initiatives at the University of Cape Town (UCT) in relation to past initiatives. The report compares UCT’s initiatives to....the University of the Witwatersrand (WITS).	This report describes an investigation and evaluation of the impact of the operational plan for sustainability at the University of Cape Town (UCT) with a focus on the university’s recycling initiatives..... The report also compares UCT’s initiatives to WITS).	This report describes an investigation and evaluation of the impact of the operational plan for sustainability at UCT with the focus on the university’s recycling initiatives..... The report then describes the details and facts related to recycling at WITS.	3. Recycling at the University of Cape Town 3.1 UCT’s Past Practices 3.2 Current initiatives 3.2.1 Student Initiatives 3.2.2 Institutional Initiatives 4. The University of the Witwatersrand (WITS)	5.1 Incorrect sorting of waste increases the operational costs of recycling. 5.2 Lack of detailed data on the rate of separation and recycling means that progress cannot be monitored. 5.3 Lack of commonalities between the available data restricts comparability between universities...	Separating of waste at source should Wasteman should record and provide P&S and GCI should publish..... UCT, together with other South African universities, should establish....

The format of a report and the verbal-visual modes appropriate to each section has evolved with variable readership and format functionality. As can be seen in the sample reports starting on page 230, the report preliminaries provide the orientation that allow readers to determine at a glance what the instructions are (terms of reference), key insights (executive summary) and verbal and visual structural layout (table of contents and list of illustrations). Before readers reach the introduction, they are familiar with all the broad details of the investigation and how the data has been textually ordered. The contents page, based on the

topic outlines analysed in chapter six, goes further by showing subordination of main and sub-headings and page numbers for easy navigation (R: 6/233 and SB: III/244). Each preliminary report section also starts on a new page, designating its importance as “a discrete semiotic space” (Kress 2010: 149). This convention, which is usefully employed in both sample reports, acts to spatially separate and frame the task allocation. Although this layout lengthens the report, the white space adds a ‘restful’ quality which may speed up rather than hinder comprehension.

Each report section, whether preliminary or main, is linked. The report proper which starts with the introduction links back to the terms of reference and summary, as evident in the table above. It may introduce methods used (R: 8/233) even if the report has a more detailed method section in the body of the report (R: 9/234). Given the brevity of their report, Jenny and Hussein elected to have a single method section (SB: 2/245). In contrast to an essay or article, report introductions offer a stylised ‘fixed format’ approach, intended to fulfil reader expectations and speed up comprehension of the ‘scope and limitations’ of the investigation (R: 7/233). The findings section which reaches back to embellish those presented in the summary and follow the outline in the table of contents and the introductory plan of development also intimates what is to come by establishing a platform for conclusions and recommendations. The parallel structure, linking of information and repetition of key documented data supplies the reasoned substantiation which is the hallmark of an evidence-based, authoritative study. Each section has its conventionalised role to play. As can be seen, both sample reports practise inbuilt redundancy to accomplish these aims and both succeed to a greater or lesser degree in certain sections. It is evident from the facilitator’s remarks (SB: II/243) that Jenny and Hussein do not provide a “systematic summary of the original” and that their summary does not succeed as an effective ‘stand-alone’ document. Although the Graça Machel residence is the major topic of the report, the only information provided remains at a high level of abstraction: “....., newer buildings such as Graca Machel have employed a sustainability plan with regards to heating and cooling.” There is no summary of key points for a busy reader who would have to consult the full-length report. According to the grader, Lindiwe and Vusi (R: 3/232) provide a “balanced, coherent, systematic and readable summary”. They provide a brief overview of their recycling topic, a précis of their four major findings, key conclusions and recommendations. The summary alone provides readers with adequate coverage of the context and content of the original, all of which reinforces a sense of professional identity and confidence in their research. Although ‘repeating’ a key visual from the report in the summary is now standard practice to enhance readability and its independent status, neither team applies this convention. Jenny and Hussein do use bullets to highlight their three major recommendations (SB: II/243). Lindiwe

and Vusi include informative, underlined headings to differentiate the text and frame the content (R: 3/231). The underlined headings in particular allow the reader to skim read – a desirable attribute for a professional audience.

Although Jenny and Hussein's summary may seem incomplete, their paginated table of contents (SB III/244) provides an in-depth overview of their report to the third level of heading. This is a marked development from their earlier topic outline analysed on page 129. Lindiwe and Vusi's table of contents (R: 6/233) communicates a narrower focus than their earlier and possibly over-optimistic topic outline (see page 120). That WITS only (and not Harvard) has been elected as a point of comparison is clear to the reader from the start although there are few sub-headings. The facilitator's comments in the margin and at the end of the findings (R: 19/239) intimate that more sub-headings to enhance readability and differentiate various sections in the text could have been used. The long, essay-like sections in the body of the report make the reader's job more difficult to grasp the information (R: 12-19/235-239). Without paginated subheadings listed in the table of contents, information is also more difficult to find, working against the objective of 'redundancy'. Although they include a list of illustrations (R: 5/232) its position ahead of the table of contents and lack of pagination erode the usefulness of conventionalised practice. These slippages may detract from overall professional modality. That some professional practices are followed and others not points to some success in imitative behaviour or 'bootstrapping' to use Gee's term. The learning curve is evident as teams seek to accommodate these practices and yet adapt and reshape others.

8.4.2 Co-construction of knowledge to instantiate professional practice and identity

Whereas the interpersonal metafunction is constructed to be more persuasive in the covering letter, in the report itself the ideational metafunction in realising discourse is constructed as more objective and factual, particularly in the findings. As can be seen in earlier draft iterations and mentioned above, both narrative and conceptual frameworks are at work here. The former is mostly manifest in the situational 'story' of recycling and sustainable building practices at UCT and their past, current and future trajectory; the latter in various classificatory and analytical systems.

8.4.2.1 Verbal narrative and conceptual framing: discursive merges and clashes

Narration in terms of past, current and future initiatives is a major ordering device in both the recycling and sustainable building practices reports, more so in the former than in the latter. As narration in professional and scientific domains relies on factual 'stories', describing a chronological event or sequence, is the most common approach. This is not to say that

narration and description are one and the same merely that the two often go hand in hand in documents such as reports.

Academic discourse, particularly essay-writing at senior level, encourages students to avoid description and to replace this with more critical thinking and argumentation. The major function of academic texts is to develop an argument and to engage with issues critically rather than descriptively (Lea and Street 1999). The segmented report, on the other hand, calls for a different functional stance in so far as various report sections require multiple epistemological dimensions. Whereas certain sections of a report may rely heavily on narrative as well as descriptive and explanatory ordering principles and internal arrangements of fact, other sections demand organisational frameworks characterised by coherent analytical argumentation and evaluation. This delineation is more separate than that practised in an essay and contributes to workplace functionality and reader expectation in a professional domain. As report sections such as findings, conclusions and recommendations fulfil different linguistic and semiotic roles and as readers can skim and scan because they understand this differentiation, speed and convenience are assured. The verbal and visual layout – particularly headings, numbering and images – further contribute to what Barthes might have termed ‘readerly’ texts (cited in Lemke 2009: 142).

Introductory and background sections of the report use narrative and descriptive approaches to provide orientation and context. In the extract below, Jenny and Hussein (SB: II/243) not only locate the study but move from the general in their opening topic sentence to the particular in the rest of the paragraph in order to provide the precise scope and limitations of their investigation. By mentioning heating and cooling twice in this short paragraph, they leave the reader in no doubt of the focus of their report. Emphasis, as an element of discourse structure, is evident through repetition.

“This report presents the current situation at the University of Cape Town on sustainable building practices. Specifically, heating and cooling practices have been examined. Older buildings are discussed generally, while the Graca Machel female residence on the lower campus is looked at in detail with regard to their policies on sustainable heating and cooling.”

An indirect, impersonal style provides the authorial distance which the authors deem apt for purpose and audience. The use of the passive construction in the second and third sentences is entirely appropriate as their investigative roles and authorship are assumed. Although “is looked at” is more colloquial than “examined”, used previously, the style is generally formal, albeit somewhat clumsy in places (here and elsewhere).

Lindiwe and Vusi (R: 3/231) use a descriptive and explanatory approach in the opening paragraph of their summary to 'set the scene' and provide a brief overview of the report contents.

"This report describes an investigation and evaluation of the impact of the operational plan for sustainability at the University of Cape Town (UCT) with a focus on the university's recycling initiatives. It evaluates the significance of the current recycling initiatives at the university in relation to past initiatives. The report also compares UCT's initiatives to the current recycling practices of the University of the Witwatersrand (WITS)."

The four mentions of the term 'initiatives' (past and present, at UCT and WITS) leaves the reader in no doubt of the key focus of this report either. As with the previous example, the report as agent and subject is highlighted rather than the authors to create the necessary objectification and distance. Nominalised verbs, 'investigation' and 'evaluation' rather than investigate and evaluate, "shifts focus from *actions* in time to *states of affairs* or *object-like phenomena* out of time" (Kress 2003: 95, his italics). By objectifying actions and processes and removing the authors as agents responsible for these actions, meaning shifts from the particular to the general. This is a shared characteristic with academic conventions, particularly in introductory sections comprising overarching abstractions rather than specific details. This passage exemplifies Lindiwe and Vusi's impersonal and formal approach which acts to characterise them as neutral, unbiased and objective investigators. Another convention, explicitly taught and evident above, is the use of abbreviations in brackets after the name is used in full at the start of writing. By applying these conventions, they acknowledge their growing familiarity with both professional and academic practices negotiated pedagogically in class.

In one short paragraph clear evidence that both narrative and conceptual frameworks will be used, is also provided. In the findings (R: 10/235), the focus remains on "UCT's Past Practices and "Current Initiatives" and the story of process is carried verbally and visually (see 8.4.2.2 below). What should happen in the future becomes clearer in the Recommendations. A past/current timescale as well as analytical and comparative framing (UCT/WITS) underpins the entire report, coherently representing history with 'impact'. The repetition of the word 'impact' links to their covering letter subject line as well as report sub-title. Besides impact, the word 'significance' also signals an evaluative bent, once again hinting at the role of conclusions in an investigation report.

Further evidence of expository story-telling as well as description is evident in both reports. Jenny and Hussein provide "background information" and explain past and current

sustainability practices in order to set up an argument in later sections (SB: 2/246). Within their narrative framework, conceptual and analytical devices are used to further their argument for change. In the passage below cause and effect are used to set up a proposition that the size and number of windows “results in” cooling and heating problems. Jenny and Hussein reason deductively from the general to the particular in their causal analysis.

“The old buildings at UCT were not built with sustainability in mind. They have small windows in general, with most of the lecture halls having no windows at all. This results in the building having to rely heavily on air-conditioning and heating to control the temperatures in these buildings.”

By describing existing buildings and their evident heating and cooling shortcomings, their job to describe “sustainable heating plans” in section 4.2 of their report (SB: 3/246) becomes easier. The discrepancy set up by comparison and contrast between the old and the new in terms of efficiency and costs acts to substantiate their findings, allowing them to weigh them up in the conclusions in section 6 (SB: 8/248). Being able to do so persuasively, however, may have been more convincing if they had relied on verifiable facts and less opinion. Although the above statements may generally be true, a more referential approach would have strengthened the argument. Is the above statement true of every “old building” on campus and how would they classify old? The use of relative terms such as ‘small’, ‘most’ and ‘heavily’ does not specify the actual measurement, number or degree. The use of imprecise, often sweeping statements, tends to undermine the credibility of the findings overall which in turn leads to conclusions and recommendations which are not fully substantiated (SB 8/248).

Lindiwe and Vusi use both temporal markers and produce emphatic evidentials by way of carefully researched facts and figures to substantiate their claims: “...as far back as the 1970s”; “In the 1990s..”; “In 2002...”; “In late 2008...”; “...in April 2009; “for the three months starting April to June 2009” and so on. Not counting dated photographs or dates recorded in their bibliography, 29 dates are recorded in their report, factually situating their research in time and place. Precise costs are given and tabulated. Types of management initiatives are classified. Recycling yield comparisons are recorded verbally and graphically. The depth of the findings allows for more clearly constructed conclusions (R: 20/240) which aim to flesh out the probable consequences of the findings and the challenges facing the university.

“The **failure** or **unwillingness**.... (*evaluative attitude markers*) has **resulted** in (*cause and effect proposition*). The sorting of waste increases the ...costs ...**because** (*transition to substantiate reasoning*).

The **trend** is an **encouraging** development **because**.... (*evaluative attitude marker, transition*). It **means** that (*code gloss for problem/solution proposition*). The **result** of this This has the **impact** (*cause and effect proposition; evaluative consequence*).

Having such information **would** enable**This in turn** Making such information available ... **would** (*hedging, problem/solution proposition*).

...WITS custom built its own MRF and is **therefore better positioned** (*transition, evaluative attitude marker*) [than UCT] to control its own recycling activities (*comparison and contrast*).

By drawing inferences and tracing an argument, Lindiwe and Vusi provide a solid platform for the seven specific and concrete recommendations which follow in parallel. Their referential, evaluative and imperative approaches taken in the findings, conclusions and recommendations respectively confirm their growing awareness and know-how of the functions of these sections as well as the language and register differentiation which characterises them.

Both teams shift from the personal style (subjective stance) of their covering letters to an impersonal style (objective stance) in their reports. They demonstrate their understanding that what is appropriate in one particular discursive and generic practice may not be in another. Like much academic discourse, the report, as mentioned, is generally characterised by nominalised and agentless constructions, often passive. The findings section, in particular, aims for authorial distance. In the report proper, the 'action' moves from the investigators to the results of the investigation as subject. "The report presents..." (SB: 11/243); "The report describes..." (R: 7/233); "The investigation was mainly restricted to..." (SB: 1/245). "The report was requested" (R: 2/231); "The finding[s] of the report give..." (R: 8/234). Besides the abstractions above, more concrete objects under study are transferred to subject position in order to distance the author doing the investigating, reporting or analysing: "Articles were researched..." (SB: 2/245), "The graph shows...." and "The photos below show..." (R: 13/236); "This four-category system of separation at source was implemented" (R: 11/235).

Where discourse clashes occur, the credibility the report seeks to affirm, may be eroded. On page 3 (page 246), Jenny and Hussein revert to a personal style: "**We** found no evidence..." instead of the more neutral and dispassionate: "No evidence was found..." On page 6 (page 247), they state: "There are some basic ways to make **your** building more environmentally friendly." This direct address to the reader jars with the more formal and impersonal style of the majority of the findings, especially as it is not the readers' building. The discourse clash stems from the fact that this exhortation reads like

a set of friendly 'household' tips or instructions which readers may find in an article in a magazine, newspaper or website or as part of an instructional talk. As these genres are aimed at a different audience and serve different communicative goals, a more appropriate register is required. The 'chatty' style seems out of place in a professional document such as an investigation report. In this section, the authors also use attitude markers signalled by complements or adjectives: "Solar panels are **perfect** for...", "London's 'Gherkin buildings as a **perfect** example of sustainable building", "The **best** example of..." "The building....has a **unique** aerodynamic shape..." (SB: 7/246-7). Much of this excerpt sounds like advertorial copy rather than factual findings. Parts of speech like adjectives, adverbs and complements which qualify or modify subjects and complete objects are generally inappropriate in factual texts which seek to provide concrete, specific and referential information, rather than assumptions and personal opinion. The validity and reliability of the section is called into question as is authorial credibility. This is not to say that a more evaluative style may not be appropriate in the conclusions. Given the blurring of boundaries between genres and discourses and the hybridity of the genre as a whole, students may elect to use more attitude and engagement markers in report conclusions (as evident in the covering letter.) The appendices too may contain website information, brochures and other types of copy reflecting a number of generic and discursive possibilities.

Intertextuality is evident in that Jenny and Hussein provide a reference to a B. Naidoo article of 2009 as well as 'renewable energy' website details in their findings. There is no indication, however, whether they are quoting directly from these texts. With the sudden change in register, the chances are that the style of the original has been followed. The grader surmises as much in her comment in the margin where she advises the team to "adjust for this context" and to "avoid lifting" the writing style and content of others. The informal, colloquial approach and evaluative opinions (theirs and others) cloud the factual neutrality of the findings in this section.

Although Lindiwe and Vusi seem to have more successfully bridged the discursive challenges of the genre as a whole, like Jenny and Hussein, they are not exempt from slippages. Examples which cause discourse clashes and undermine modality arise from inconsistent word choice and errors of grammar, punctuation and spelling. The word "photos" mentioned above (R: 13/236) is an abbreviation more apt to an informal text or oral genre. Another discursive anomaly relates to the use of an evocative question instead of the factual and neutral headings used in prior sections: "What are the obstacles to successfully separating waste at its source?" (R: 17/238). This reads like an

extract from their oral presentation script rather than from the text of a formal report and results in a clash of genres. Editing and proofreading, as commendable communication practices, may well have contributed to a professional finish. Examples include: “The wet waste **is goes** to landfill.” (R: 3/231); “The **reports starts** by giving details of the procedure used **together** information”; “The **finding** of the report **give...**”; The **conclusion** of the **reports** point out, the impact of” (R: 8/234); “This **is** turn will provide valuable...”; “It is not possible to **asset** whether **of** not UCT...” (R: 20/240). Although second language issues may contribute to errors, it seems more likely that a careful reading before submission would have eliminated many of these. The point is not that readers cannot follow the meaning but that the professional identity of teams as consultants may be tarnished in the process. As a more appropriate style and use of language for purpose and audience may enhance communication practices in a professional domain, these examples contribute to undermining authorial integrity and identity. Slippages in style, tone and language may suggest discursive and generic tensions as teams come to grips with a professional identity.

Despite clashes and slippages, teams do display an understanding of the composite demands of the report genre as a whole and explore a repertoire of styles, levels of language as well as modes to represent and communicate meaning. Evidence of a ‘school’ discourse is less obvious in these final reports than in earlier draft products and this has as much to do with their visual choices.

8.4.2.2. Visual narrative and conceptual framing: emergent professional communicators

Many early texts on business and technical writing privileged language and relegated visual communication to a single chapter, usually at the end of the book and strictly focussed on graphics (Shurter, Williamson and Broehl Jr. 1965). This stance reflects how reports were constructed. Writing was paramount and visuals, usually designated ‘graphic aids’ were relegated to the appendices. They were never acknowledged as modes in their own right and were all too often designed by other ‘specialists’ and attached to the report separately. Later texts paid more attention to images besides graphics as well as other visual “mechanical elements” (Houp and Pearsall 1977: 174) such as captions and numbering systems to enhance readability. Although they also advocated a more integrated verbal-visual approach, the role of visuals remained subordinate to language. The advent and proliferation of digital technologies and screen applications has seen an accelerated expansion of multimodal communication resources which has transformed the design of documents such as reports (Mirabito and Morgenstern 2004; Kaul and Gupta 2007; Grant and Borchers [2002] 2008; De Groot 2008.) and created a “complex interplay of a range of modes” (Jewitt 2002: 172).

Both teams use images in their findings to illustrate, demonstrate and represent processes and procedures involved in heating and cooling (SB) as well as recycling (R). The interpersonal metafunction is instantiated primarily through shape, layout and colour while narrative and conceptual frameworks work to realise the ideational metafunction. The textual composition of these images in terms of location, size and relationship with the written mode contributes to engaging the reader and enhancing overall unity, coherence and emphasis.

Jenny and Hussein's first image (SB: 4/246) is a diagram illustrating the working of solar gatherers and heat pumps to heat water for residential use at Graça Machel. Their introductory paragraph is included to provide the context for this image. Spacing and font (Calibri) is reproduced as per the original.

4.2.2. Solar gatherers

Solar gatherers collect water which is heated using solar energy to a warm temperature. This water is then transferred to the heat pumps. This allows for less energy usage by the heat pumps as the water heated by the heat pumps is already significantly heated.

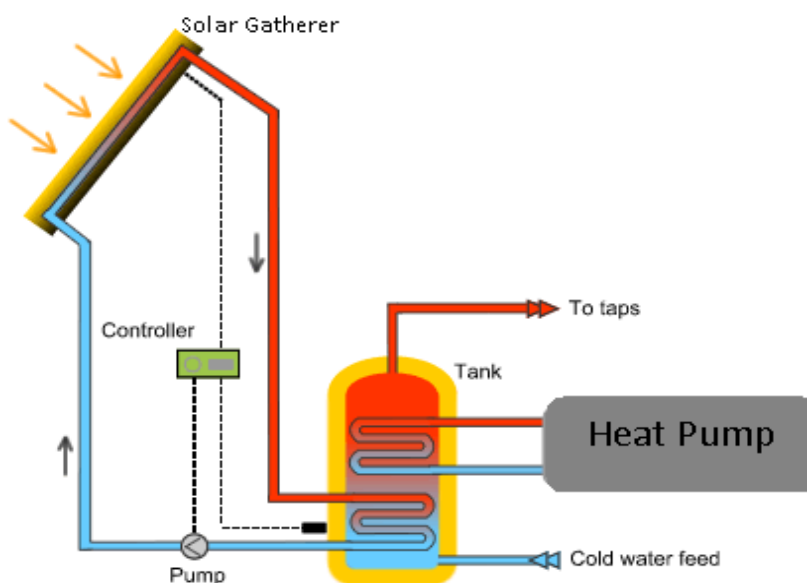


Figure 21: Heat pump illustration in SB report

Whereas naturalistic colour photographs of the kind used in these reports may be classified as descriptive of 'real world reality', images such as diagrams which combine both visual and verbal modes function very differently in terms of social semiosis. According to Kress (2003:111), a diagram is an abstracted, generalised form of representation which is "not the realism of the everyday world, but the realism of the scientific-technological world". As these commerce students are working in the realm of environmental issues and technical procedures, using diagrams is apt and may heighten modality in the "scientific-technological world" they are seeking to inhabit. Abstract images such as diagrams display often complex processes in conventionalised form to simplify how things work and relate. The simplification contributes to an accurate illustration of the heating process. The modal load is carried more by the visual than the verbal, with the labels playing a subordinate role to the image and arrows in terms of explaining the concept of heating.

The ideational and textual metafunctions are clearly constructed through how knowledge is instantiated, composed and ordered in the diagram as well as the report text in which it is embedded. Although a technical description of the process of heating is foregrounded, it is coupled with causal analysis of the work of solar gatherers in relation to the heat pump. The verbal and visual modal ensemble comprising surrounding text, labels as well as the layout, positioning and colour of images coheres to enhance unity. The arrows as vectors also contribute to displaying the 'story' of how heating occurs from the time cold water is pumped to the solar panel, gathered and heated on the roof, subsequently transported to the pumps for further heating and storage and finally conveyed to the taps for residential use. The technical exposition (the how) and the chronology (the when) are not mutually exclusive ordering principles and both contribute to the explanation of process. The clarity of the image in terms of simplicity, size and labelling may ease technical understanding. The 'easiness' also serves to prompt and sustain reader interest and a positive attitude. Besides reinforcing the ideational data with blue and orange representing cold and hot water respectively via the yellow solar panel and the grey metal heat pump, the colours and textual composition and positioning may work to enhance credibility and build rapport. As these colours may signify heat, cold, a metallic finish and so on beyond a local readership, this diagram is likely to be understood globally. This metafunctional and modal orchestration and alignment enhance modality in academic, scientific and professional domains. The diagram may have a technical provenance but its simplicity, descriptive labels, colour combinations and 'friendly' font renders it accessible to a wider audience.

Jenny and Hussein do not use captions nor do they number their figures – conventionalised practices in both academic and professional writing. These titles and numbers usually correlate with a list of illustrations in report writing. The absence of such a list may detract from an overall professional impression insofar as readers would have to page through the document to locate images and could not, at a glance, identify their order and sequence. In the instance above, the explanatory writing is placed above the diagram as a lead-in paragraph. It provides an extended ‘label’ of the diagram. Whereas the diagram depicts a single unit, the writing generalises still further by using the plural (“solar gatherers’ and “heat pumps”). In other words, the description is not necessarily ‘true’ for this particular heat pump (or building) but heat pumps in general.

The naturalistic photographs on subsequent pages are all unlabelled although their textual incorporation and use of headings for 4.3.1 to 4.3.3 and 5.2 make understanding their role easier. (Please view the original series of photographs in appendices from page 247⁵.) Another iconographical feature which aids comprehension is the use of arrows. The red arrows with white borders are superimposed over the photographs of the residence itself as well as the cooling features displayed on the first three photographs. The photograph of the residence was selected as their sample image. The addition of the large arrow centred in the middle of the image is the only change but a significant one. These vectors flag attention and act as visual ‘headings’ in the way they point to the sliding shutters in 4.3.1, awnings in 4.3.2 and sunken windows and balconies in 4.3.3. The naturalistic representation of the building and its features in the photographs adds a sense of realism. Size also plays both informative and relational roles: the building photograph is the largest image and undoubtedly the major image of the report. As a key illustration selected early on and endorsed by the class through discussion, it was recast in no less than three additional genres: the written report, the final PowerPoint presentation and the accompanying hand-out. This hand-out was presented to the audience as a record of the slides used and the photograph in question appears in it three times: on the title page as well as in slides five and eight. As the main image of the written report, its salience is clear in terms of primacy (first order) and proportion (SB: 5/247). Its semiotic work in different genres as well as sections of the report underscores its varied and distributed representational and communicative roles. The next two images, showing close-ups of specific features on the building, are smaller and resemble sub-headings (at a lower level of abstraction). This part-whole construction works to depict the whole building at wide angle as well as close-ups of specific parts, the awning and the sunken windows and

⁵ I have not included the photographs here as there are a number in both reports where they may be viewed in context. As one of these, the photograph of Graça Machel residence, has been analysed in detail in chapter six (pages 133-136), only a few general comments will be made here.

balconies. The combination of the factual and referential text, the realistic accuracy of the images, the textual composition and order coupled with the emotive use of colour, shading and arrows aims to highlight the content and illuminate the main focus of the report findings.

The final image, the 'Gherkin' building (SB: 7/248) taken off the internet with source acknowledged in the text, is placed last. This is fitting as it provides an illustration of additional and highly sophisticated and expensive cooling attributes. Although these may seem non-feasible for UCT and one may argue that its inclusion seems irrelevant, the team posited in their presentation and report that these features contribute to reader understanding of what is possible and desirable in new buildings.

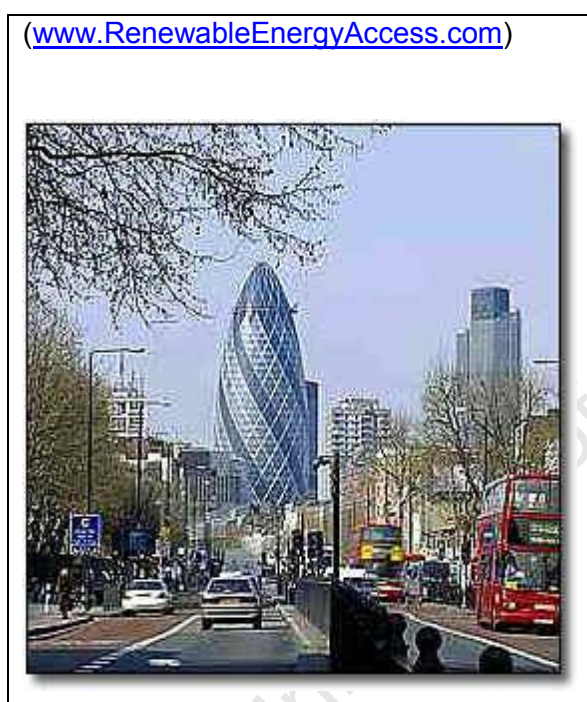


Figure 23: Image of 'Gherkin' building in SB report

The image helps to construct an urban discourse which may elevate the report beyond a long-held mentality that African concerns are rural and that Africa itself is a 'backwater'.

Skyscrapers, transport systems, bustling crowds are in the foreground with roads as vectors leading to and fro. The Gherkin building has acquired iconic status internationally and aligning the local with the global may 'uplift' the status of the former and instantiate a global discourse alongside an urban one. Its central presence framed by trees on either side reinforces an environmental discourse. None of these discursive strands are mutually exclusive or compete with one another. Its inclusion in the report also serves to confirm that environmental issues are universal concerns and that both developed and developing nations need to partner to find

innovative solutions. The sophistication of the image may also elevate the writers in terms of their professional identity. While acknowledging the expense, Jenny and Hussein urge the university to “create a sustainable building policy document for all future buildings at UCT.” By using international benchmarks, they issue a challenge to UCT to aim high in terms of environmental standards.

Lindiwe and Vusi’s report is longer and more detailed than Jenny and Hussein’s. It includes graphics such as tables and column charts as well as photographs to provide some of this detail. They follow the academic convention of labelling all illustrations as well as labelling tables and figures separately. These details are captured in their list of illustrations which confirms their familiarity with these practices. Their first image (R: 11/235) has been taken from a GCI document and displays a copyright trio of photographs depicting a typical recycling station.

The photographs aim to explain and demonstrate how the bin lids work with two close-ups (closed and open) followed by a high-angled shot of the colour-coded bin lids with their variable openings. The lead-in paragraph is included to provide the context for the figure. The GCI seems to have used Anna Shevel’s images and/or text dated 13.2.8.... The cropped image has rendered an incomplete date but it seems decades old. The final design choice was confirmed in 2008 in GCI documentation and on their website. The use of these images and text reflects the intertextuality of this practice as this report section is not “the product of one person’s design/reading, but rather...the multimodal outcome of interaction with many voices and modes over time” (Jewitt 2002: 191). The many voices and re-articulation of discourses echoes Bernstein’s recontextualising principle (Bernstein 1990; Chouliaraki and Fairclough 1999) and Iedema’s (2003: 41) concept of resemiotization or “how meaning making shifts from context to context, from practice to practice or from one stage of practice to the next.”

Kress (2010) uses many nuanced terms of translation, transduction and transformation in his quest to explore ‘moving meaning’ in multiple ways within and across different discourses, genres, modes, semiotic domains and contexts. One can also view Lindiwe and Vusi’s appropriation of this image as an example of transformed practice (NLG 2000). Their pedagogic intention following weeks of situated practice, instruction and critical reflection is to confirm the GCI’s “final design”, irrespective of its earlier provenance. They reshape the image/word discussion within their examination of “student initiatives” (R: 11/235) and place this image series within a wider discussion of current and future initiatives at UCT.

Images of a typical recycling station are shown below. 'Bid lid' designs by the UCT Green Campus initiative for the retrofitting of existing refuse bins at UCT for recycling purposes. (Source, Green Campus Initiative, Sandra Botha, final design 15 April 2008)

Figure 1: A typical recycling station

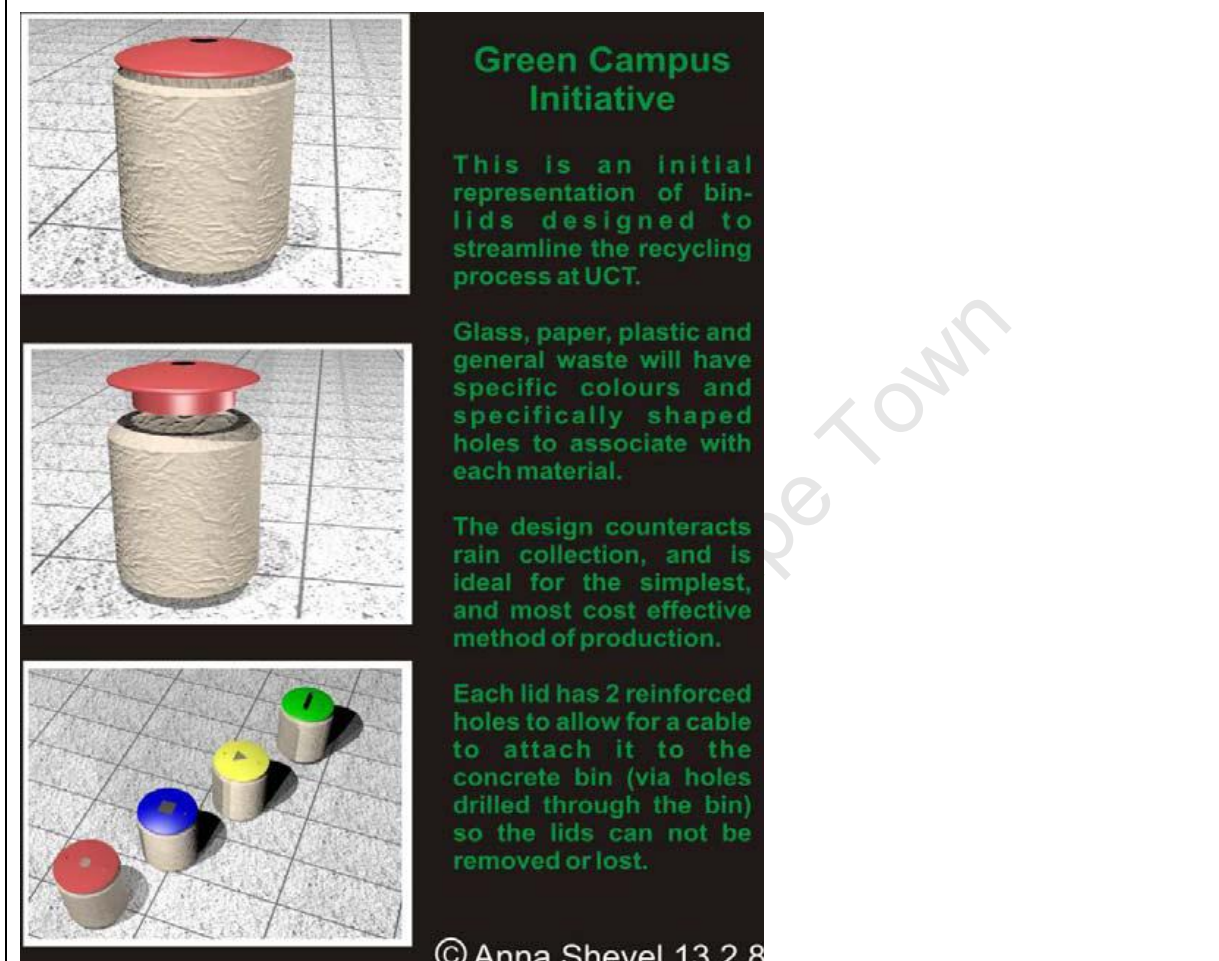


Figure 24: Display of multi-coloured bins in recycling report

Lindiwe and Vusi's interest prompted them to select this intact image and to place it in a particular section of their findings. Although they chose positioning and location, they were not responsible for the overall design or internal layout of image and writing. The three photographs on the left (the given) with the written text on the right (the new) tends to privilege image over the written mode in terms of reading path (Kress and van Leeuwen 1996). This layout assumes a more prominent positioning of image which heightens visual salience. The naturalistic setting and varied camera angles reinforce the procedural display of how the bins work. The message to look and then read is further strengthened by layout. The figure resembles two columns with the reader first 'reading' down column one (three images) and then column two (written text). Despite the dramatic green text on a black background, the

lighter yet colourful images draw the gaze first and tend to carry more of the modal load. Lindiwe and Vusi do not add any additional labels save the lead-in 'paragraph' made up of a full sentence and a title/phrase. Although grammatically awkward, the reader is adequately introduced to their first figure which is numbered and titled. Although this figure has been transposed from another setting, it is the first image in the report and as such carries particular salience.

The next six photographs "show the sorting and compacting process for dry waste" (figures 3 and 4) as well as the classification of dry waste into cardboard, tins/cans, and two separate types of plastic (figures 5 to 8). These images (R: 14-16) can be viewed within the report context in the appendices from page 237. This series of expository shots, interspersed with explanatory written text, takes the reader through the process visually which, according to Houp and Pearsall (1977), is a common approach in technical and scientific writing. It is equally common in genres such as cook books. A 'step by step' chronological account uses visual technical description to represent the work-based action rather than words. Besides the narrative framework, category classification and comparison and contrast are used. Four photographs classify the types of dry waste and compare the two different plastics (sheets versus caps). Each photograph is also dated (22/01/2008) confirming that they were taken on the same day at the Material Recycling Facility (MRF). These photographs are not as integrated within the written text (or as subordinate to it) as other images such as the table or column graph (R: 12-13/236). The modal load carried by these photographs is greater than the writing, with the authors allowing the narrative to be carried pictorially rather than lexically. The images are foregrounded while the verbal captions and few explanatory sentences are in the background and serve only to connect steps in the process or classify types of waste. The set of naturalistic photographs, representing the actual colours of the equipment, venues and waste types, coheres textually to display the ideational experience of actions and events at the facility and the interpersonal relations portrayed.

Unlike the cumulative bar graph analysed in chapter six, Lindiwe and Vusi have reconfigured their earlier sample into two visuals for the final report: a table and column chart to compare and contrast wet and dry waste figures and display a trend in waste collection. In the Multiliteracies sense (NLG 2000), the use of a table and graph are examples of transformed practice as is the shift from cumulative column chart, presented earlier, to a single, two-dimensional graph with accurate axes markers. These changes came about after in-class draft product discussion and negotiation. Based on explicit instruction and peer feedback about the confusing nature of cumulative graphics, they co-constructed meaning afresh to more clearly frame and convey their message and to create a new 'account' (Kress 2010). They designed

the table and column chart themselves in contrast to the photographs which were sourced from one of the environmental experts.

Conventionalised practice recommends that tables are labelled above as readers tend to read ‘down’ starting with column headings. Figures such as graphs are labelled below, the consensus being that readers ‘read’ from the axes up and across (Houp and Pearsall, 1977; Grant and Borchers [2002], 2008). Lindiwe and Vusi do not distinguish between the two and label both images above. As their centred, large and bold caption is situated within the frame of the graph and above the columns, it is likely that the reader’s gaze will be drawn to this first. According to Kress (2003), the regularities of the visual mode differ to linguistic grammar and spacing and proximity work together to contribute to meaning-making. The images, reproduced below, followed in sequence with the table and graphic positioned on pages 12 and 13 (page 236) of their report respectively.

Table 1: Collection of waste, April to June 2009

2009	Wet Waste		Dry Waste		Cost in Rands
	Volumes in tons	Number of Bins	Volumes in tons	Number of Bins	
April	41.25	1650	33.92	2261	47117.42
May	47.43	1897	56.16	3744	47117.42
June	30.35	1214	42.36	2824	47117.42

Figure 25: Tabular display of wet and dry waste from recycling report

The ‘inbuilt redundancy’ of including both a table and a graph, works to differentiate and foreground particular meanings as each semiotic resource functions differently to represent and communicate the data. Kress (2003) posits that the ensemble of modes within a table or graph are brought together to realise different meanings just as the ensemble of two different images, the table and graph, are brought together to distribute meanings across each articulation. These images differentiate, yet reinforce meaning. A formal word table may generally be considered more informative and referential than a pie, bar or line graph in terms

of modal specialisation and load. The logic of the written mode is more prominent in a table where its grid like appearance helps to categorise and compare items using words, letters and numbers. Writing is more subsidiary in the graph where, according to Kress (2003), the ‘logic of image’ dominates and words are partially transformed into shapes in space. Lindiwe and Vusi explain this purposive overlap in the written text as follows (R: 13/236). “The graph below represents the same information as what is in the above table but shows dry waste as a percentage of total waste collected, rather than as absolute numbers as seen in the table.” Despite grammatical errors and clumsy style, they seek to demonstrate how professional know-how and identity manifests differently in different semiotic choices. Unlike the table, the graph relies on visual display. According to Kress (2003: 115), “the affordance of the logic of time governs writing, and the affordance of the logic of space governs the image”.

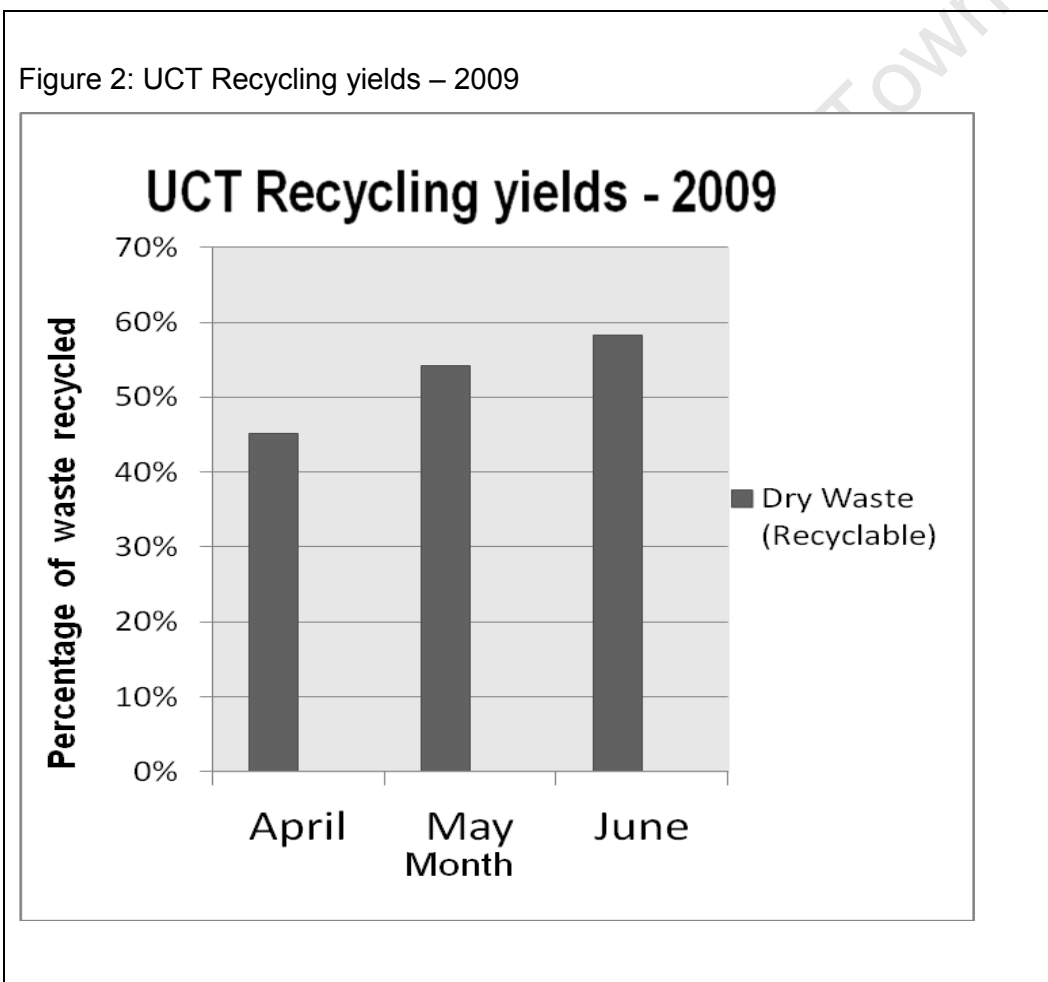


Figure 26: Graphic display of dry waste from recycling report

The table produces “absolute numbers” to factually report situated and temporal information. The measurable and verifiable data enhances the validity and reliability of the research. The graph is more selective and uses percentages to display the upward trend of growth of dry

waste collection. As clear as the graph appears, one may conclude that the partiality of this graphic data (only the 'good' dry waste is displayed) may be problematic. The percentages are also out of 70% rather than a 100% distorting the height of the columns. This bias towards the positive aspect of the findings changes the semiotic work of the graph by changing the social relations and context. The upward sweep of a column is far more visually appealing than the cognitive tabular display. Also, unlike the earlier cumulative chart and the table, the absence of the 'wet' column above or alongside does not allow for quick and easy visual comparison. The verbal comparison exists in the table but the downward trend of the wet juxtaposed with the upward trend of the dry is described verbally rather than visually. This, together with the bias mentioned above, may detract from professional modality if the data is regarded as 'incomplete'. One could argue that the accurate construction of knowledge in the table combined with the affective impression created by the graph provides a coherent textual verbal/visual assemblage. By using an objective approach and privileging the graph as subject ("The graph below represents....), Lindiwe and Vusi seek the authorial distance to nullify any bias. These visual and verbal strategies may enhance reader confidence and trust in the figures and the trend although only three months of data are represented.

Lindiwe and Vusi use a different colour scheme in the report to the original blue and red sample graphic analysed in chapter six. In the table, yellow is used for wet, non-recyclable waste and green for the recyclable waste, the latter resonating with a 'green' discourse. The two central columns designated 'Wet Waste' and 'Dry Waste' (in bold) are in turn subdivided into 'Volumes in tons' and 'Number of Bins'. Book casing these columns are two peripheral columns. On the left the column heading, '2009' uses a larger font than any other heading, foregrounding the year of data capture. Similarly to their earlier draft, only figures for April to June are given. On the right-hand side, waste separation 'Cost in Rands' is recorded. Both these columns are uncoloured, instantiating a more neutral impression of temporal financial statistics.

The colour in the column chart reverts to dark blue (see page 236) which at a glance may have the reader thinking that different information is being displayed to the table. There is no sense of 'dry waste' continuity in terms of the green on the previous page. Comparisons are not clear at face value. There is no graphic comparison to WITS either. Whereas a similar column chart for WITS was presented orally (see PowerPoint hand-out on page 229), this graph is not included in the written report. As section 4 of the report (R:18/239) is very 'essayistic', as mentioned, with few headings and other readability aids, this comparative graphic may have enhanced this section of the findings considerably. It is possible, given the number of images used in prior sections, that Lindiwe and Vusi made a calculated decision to

privilege UCT verbally and visually, and not WITS. The multimodal 'richness' of the former leaves the reader in no doubt that UCT is the major focus of their report, as are heating and cooling in Jenny and Hussein's report.

8.5 Final Comments

As with scenario pedagogy which privileges certain situated events and activities in class, so too have certain issues been foregrounded at the cost of others within the ambit of report writing. In an attempt to answer my research questions, I have, like chapter seven, singled out certain key moments, verbal excerpts and images as instances of emerging professional communication practice and identity while glossing over others.

Although these students all have commerce backgrounds, their differing special fields such as accounting, marketing and information systems bind them loosely as an affinity group to use Gee's term (2003; 2008) rather than a fully-fledged community of practice as defined by Lave and Wenger (1991). During the semester, they shared a safe, assisted space or development zone in the Vygotskian sense in which to explore their earlier draft products and negotiate changes over time (Vygotsky 1978; Tharpe and Gallimore 1988; Gallimore and Tharpe 2002). Their dialogical co-construction of knowledge based on critical feedback and embodied reflection provided them with opportunities in and out of class to build their confidence and expertise in order to design, deliver, disseminate and distribute their final oral and written reports. The medium of delivery and even the site of display may vary depending on screen or page. Multiple dissemination media have become conventionalised practice as students (and professionals) submit documents digitally and print out hard copies to be professionally bound and delivered. Whether this is another take on 'inbuilt redundancy' is moot but it confirms a growing multimedia practice which seeks to flag and sustain the attention of the target audience in a busy workplace.

Chapter Nine: Implications of study for developing professional communication practices and identity in higher education and beyond

9.1 Overview

Transforming the country's educational landscape continues to be a primary public and private sector concern. The legacy of Apartheid coupled with bitterly contested educational policies in post-apartheid South Africa has put a vast strain on curricular and transformational development. Responsibilities to distribute resources, improve access, privilege voices so long silenced and encourage shared and negotiated meaning making rests with all educationalists, not just government officialdom.

This study arose from my interest in higher education development and, in particular, how students negotiate and transform their professional communication practices and identity in relation with and to other participants within the academic community and beyond. In this dissertation I have argued that scenario pedagogy enhances professional communication development by more readily providing work-relevant communication expertise and practice. This study has shown that by enhancing confidence and facilitating student participation, throughput and 'graduateness', it has the potential to play a transformative role and contribute to social redress in Higher Education (HE). Using a cross section of methods, I have set out to identify the characteristics of scenario pedagogy and the array of semiotic resources most apt for productive practice and negotiated meaning making.

The focus of this dissertation has not been on assessment, neither the 'what' nor the 'how', but rather on the joint pedagogical processes most apt to achieve negotiated meaning making so that students enter the world of work with an academic qualification as well as certain communication practices that befit a future professional. The analytical gaze has shifted from the discrete processes of teaching and learning to embodied, multimodal meaning making. How meaning and knowledge systems are co-constructed through negotiated participation is fundamental if they are to belong to the participants and not be "merely temporarily borrowed" (Steyn, P. 1999: 89). I suggest that owning the process and the product more readily allows all participants – students and teachers – to configure and reconfigure meaning, to posit, argue and defend a position or be persuaded to change course. Transformed practice presupposes renewal, giving a 'new account' (Kress 2010) because no two situations, contexts or groups of participants are ever the same, nor deserving of identical 'pre-ordained' treatment.

This study foregrounds a multimodal analysis of student processes and products as gauged through the pedagogical framework of negotiated design. Although only a few student teams

are privileged in the analysis, the focus on social semiosis combined with a multiliteracies lens, offers a qualitative view of emerging professional communication practices and identity over time, rather than a snapshot impression recorded at one time.

On the surface, my final research question, as encapsulated in the chapter heading above, seems to shift focus from student development and classroom practices to HE development and impact beyond the classroom, in this instance, the workplace. This also seems to suggest a linear progression. In this dissertation, I argue that the two are connected and form an iterative trajectory not only personally, for the student or team in question, but institutionally and societally. By bringing the workplace into the classroom and vice versa and validating student selections and interpretations, all voices and viewpoints are foregrounded and contested. By combining multimodal and multiliteracies pedagogical frameworks with scenario pedagogy, and foregrounding collaboration, dialogue and negotiation, I strive to show that personal job-readiness and higher education 'wellbeing' are both possible when students embrace autonomy in partnership and, with others, become the architects of their own meaning-making. The analysis of my data shows that a supported and collaborative approach provides opportunities for students, particularly senior students, to explore their professional communication practices and identity with greater confidence and less resistance and apathy.

9.2 Emerging professional communication practices

The major aim of this embedded professional communication course is to allow students to coherently explore their verbal and visual reporting facilities and to provide an enquiry-based approach from 'off the page' draft to final 'on the page' products and processes. The site of the study is examined in chapter four with the aim of determining the characteristics of scenario pedagogy, both positive and negative, in order to minimise obstacles in implementation. In chapters five and six, draft products are analysed with the view to see how students negotiate changes to their work in their trajectory toward final reporting production and dissemination, the analytical subjects of chapters seven and eight. As each of these products and processes, from mind map and topic outline to presentation and report, constitute particular discursive and generic practices, students are exposed to and design a variety of representational resources that they feel are most apt for purpose, audience and context.

The mind map, as material product and temporal process, constitutes the first leg of the journey: the scenario overviews. Although these mind maps do not provide precise directional maps of headings in a particular order, they do provide an orientation of sorts. Despite generic and modal boundaries being less fixed and settled today than previously, given the fluidity of

communicative practices in a technological age, the business report genre and format have persisted and are still recognisable, even at the early mind-mapping stage, despite the evidence of discursive disjunctures and clashes in the work. In a sense, these mini overviews act as report preliminaries, representing a table of contents, executive summary and introduction in one. In a few crucial sentences, presenters attempt to set the scene (subject, objectives, scope and so on) and provide their respective scenario contexts. The classification of data or types of impact, the narrative of past/current/future alternatives or comparison of local and international practices aims to form the backbone of future report findings. Terms such as Conclusions and Recommendations also point to the report genre and confirm early engagement with the concept of format and sections. The oral presentations of mind maps are shown to enhance comprehension and clear up misunderstandings, allowing the audience to more clearly surmise the shape of the evaluative investigation reports to follow. These emerging systems of knowledge are based on earlier explicit and implicit instruction, both in and out the class, ranging from formal computer mediated lecture-discussions by facilitator and external experts to less formal classroom exercises, group work and student inputs.

The next classroom deliverable, the topic outline with sample visual, also represents a draft stage: the second leg of the journey. Although based on the mind map, the appearance of the topic outline has been shown to differ considerably to the mind map. Whereas a mind map can be considered an image with far greater visual salience, a topic outline is first and foremost, a written text, comprising words and numbers. The mind map foregrounds layout (first), writing (second), the topic outline foregrounds writing (first), layout (second). This difference in emphasis affords different thinking possibilities and ways of knowing. The mind map allows for a free-flow, associative, brainstorming perspective which may appeal more to an affective stance in designers and interpreters. The topic outline, on the other hand, with its vertically arranged, linear and ordered layout encourages a more cognitive stance. Both are important elements of design which allow participants to slow down and separate perspectives before merging them towards mindful and embodied thinking and professional outcomes (Grant 2005b).

Presenting a sample image also affords participants, presenters and audience, the opportunity early on to think and reflect visually and maintain a multimodal stance throughout. Students in the sciences and numerate subjects are often more at ease with visual representations such as tables, charts and diagrams than writing (Tufte 2001; Lemke 2002). Encouraging a multimodal stance recognises this representational shift and valorises new thinking in an increasingly technological society (Medhurst 2009, 2010). This co-construction of verbal and

visual meaning making provides epistemological evidence of emerging discursive and generic business practices that are more apt for a digital age (Jewitt 2009; Kress 2010).

The third and fourth legs of the journey involve the final professional presentations of the oral and written reports. These practices shift the gaze from internal classroom review to external client appraisal and with it, the notion of professional identity becomes more manifest. The crossover from draft to client product epitomises the crossover from academic classroom to professional workplace and the presence of 'real' clients reinforces these norms. During the final presentation, consultants often take the opportunity to engage with students informally and view their work (as they might do at a meeting or seminar) before the start of the presentations. Although students may have engaged with these very same consultants during the semester both face to face and/or digitally, this professional communication 'event' can be regarded as the culmination of their project and resembles a professional project 'handover' to a client.

The iterative process approach and team work before students are required to produce their final products strives to provide the necessary practical and experiential support to put theory into practice. Theory and practice are not separated but explored in and out of the classroom explicitly and implicitly when appropriate. Scenario pedagogy "teaches the practical and not just the conceptual", a common student refrain which reiterates the importance of theory *and* practice. The research shows that an open-ended problem-solving framework such as scenario pedagogy allows students to develop academic knowledge and practices based on informed reasoning, analysis and experience. In reflecting on the social world contingent on professional products and processes, students develop metalanguage needed to negotiate between different contexts effectively, an aspect of active and reflective meaning making. The focus on the intellectual, cognitive construction of knowledge coupled with the experiential, practical side of execution and implementation allows student to explore and experiment, using multiple semiotic resources, to weigh up possibilities and consequences and make decisions based on their negotiated deliberations.

9.3 Emerging professional identity

If identity is fashioned by cultural traditions, customs and practices, then developing a professional communication identity within a predominantly Western commerce domain encourages participants to re-fashion their personal traditions and practices to fit a generally accepted business persona. I have argued that students progressively author and shape their own identities and are simultaneously shaped by them as well as by outside pressures. Although young people may reflect the values and norms of their elders – in some

communities more than others – imperatives which privilege and reward certain types of academic and professional behaviour may crowd out earlier cultural values.

Students, in particular from previously disadvantaged backgrounds, are pressured at university to take on new academic and professional identities that they are assured will help them succeed more in their chosen or new careers (Kapp and Bangeni 2009, Bangeni and Kapp 2009; Preece 2009). Thus many students stray far from their roots in search of the power and cultural capital they believe will make them more upwardly mobile in a globalised economy. Questions that may confront them on this journey are whether they feel 'in' or 'out', part of or estranged from this 'new' business community. Although not a fully-fledged community of practice in the professional sense (Lave and Wenger 1991), this student affinity group, as Gee (2004) may have defined them, is nevertheless bound by the pressures to create products that fit the Westernised norms of professional communication and sign up to a sanctioned corporate identity and worldview (Van Riel and Fombrun 2007, Kaul and Gupta 2007). The exploration of an enquiry-based scenario which aims to interrogate this world view and the 'business as usual' way of doing things has shown that students are given more leeway to contribute to shifting and hybrid paradigms in global business practices and develop more holistic and nuanced courses of action going forward.

We have seen how scenario pedagogy attempts to privilege peer voices, negotiated positions and multimodality so that students become co-responsible with their audiences for modal selection, meaning-making and inevitable contestation. As shown in their reflections and questionnaires, being permitted to question the status quo and to ultimately decide what to select and what to omit is regarded as "energising" as "[s]tudents get to know more as they read by themselves and also to decide what areas one is most interested in." Barseghian's claim (2011:1) that "[i]n today's dynamic classrooms, the teaching and learning process is becoming more nuanced, more seamless, and it flows back and forth from students to teachers" pinpoints the shift to a participant-centred pedagogy, a pedagogy that is collaborative, interest-driven, theme-based and blended, combining digital and traditional learning modes and media. Wieman, cited in Berrett (2011) claims that many educators have assumed "that telling people things without asking them to actively process them results in learning" but that students should be made to "grapple with the material and receive authentic and explicit practice in thinking like an expert." Asking students to explain concepts and to teach one another allows their professional identities to emerge as they own and access their growing expertise. The study has shown that students get to know more about their scenario

subject than either the facilitator or their peers. Besides having to 'educate' their audience, this growing knowledge also gives them a sense of importance and occasion as task team investigators. Comments include: "Everyone is learning something – even the teachers."

9.4 Towards a sustainable university

Despite choosing an institutional scenario involving the university as the pedagogical site (and the site of this study), I have argued that there is transformative value in embedding meaning-making within a *local* framework, particularly as the scenario theme, sustainable business practices, is a highly topical *global* concern. The link to the university, of which students are a part, allows them to take responsibility for contributing to its institutional mission. Students come to view themselves – the person and the institution - as 'us' and 'our', an integral and integrated partnership rather than a separate 'I', 'it' or 'their'. By focusing on personal and team-based instrumentality and accountability, students are encouraged to develop an empowered 'can do' attitude as well as a sense of corporate citizenship.

Besides reflecting on improved professional communication practices, students also reflect on learning about environmental and sustainability issues and how their growing belief in self as active participants allows them to "play [their] part". "[I]t boosts our morale knowing that we are working on something real...of which we can provide some added value..." The link to questions of global sustainability not only upholds the aims of the Talloires Declaration of which UCT has been a signatory for many years, but allows every person to feel part of the solution as a change agent rather than part of the problem as a culprit or victim. Students claim that the "insight into UCT's projects" provides them with "an appreciation of how things happen on our campus". "[D]oing work for the university in particular...further research we would be able to see the benefits of our work on a place that we spend many days at throughout the year." The sense of belonging, inclusivity, ownership and responsibility is wrapped up in student talk of "our campus". If pedagogical approach and curricular relevance are closely aligned and recognised as such – not only by staff but also by students – then greater institutional and societal 'generalisability' seems possible as students reflect on longer-term and more broadly-based know-how and meaning making.

9.5 Collegial collaboration and reciprocity

It is possible to draw tentative conclusions on the transformative value of involving a number of academic and non-academic staff members across a variety of faculties as well as external consultants. The initiative has raised awareness among different constituencies within the university community with an effect on motivation and promoting greater integration and collegiality among all participants. These parties have become increasingly willing to

contribute their knowledge and give their time. Interview and written responses from consultants have pointed to a number of key themes. An external consultant wrote: “Through the research the students undertake, sometimes comprising interviews and surveys, they not only increase their own understanding of these issues, but very importantly, raise awareness and understanding amongst the UCT community...to education and communication around sustainability.” She ended her response with: “[This] should be a priority of any higher education institution that seeks to prepare their students for the future challenges around environmental degradation...From the feedback I have obtained from the students, I am convinced that [they] do develop their knowledge and commitment to environmental sustainability... The focus of student research topics on the context surrounding them is a powerful means of education and change towards a more sustainable campus and society...” Other consultants confirmed their appreciation of growing student professionalism and expertise and how they will “take heed” of some of “their lessons” and “rework” their own ideas.

The analysis of classroom moments and participant reflections has raised a number of important educational and strategic issues. Firstly, by being involved in a real investigation, students learn both explicitly and implicitly how to conduct a research project and select various research methodologies. Secondly, their work on sustainability has produced an unforeseen but positive consequence in that existing panelists have volunteered new contacts and, without being asked, solicited their help on our behalf. This continues to broaden the panel of experts from both inside and outside the university community and raises the profile of the course and scenario pedagogy. Thirdly, the ‘experts’ have acknowledged pedagogical reciprocity and how meaning-making is negotiated collaboratively. This reinforces the point about a dialogical co-construction of knowledge. By congratulating students on their “engaged” attitudes and “impressive” findings, they boost student confidence still further, creating a meaningful experience to take forward into the workplace as a contribution to life-long learning. Finally, by focusing on higher education responsibilities for sustainable futures, consultants reinforce the need to select scenarios that are perceived as “valuable” and “useful” beyond the classroom. As communication work is so often perceived as ‘soft’ and of minor consideration, embedding the course in a “worthwhile” context enhances the salience and status of both the subject matter and the scenario context.

The study has shown that scenario pedagogy not only seeks to contribute to commerce education in this particular course but to HE in general by using multilayered scenarios that have relevance across the community and society as a whole, irrespective of discipline. Commercial interests have been shown to be of no more importance (and sometimes less so)

than environmental issues with longer-term thinking taking precedence over money-making 'quick fixes'. In the old dispensation, student voices were often ignored (as were those of many of its citizens). By promoting multiple and conflicting voices, scenario pedagogy demonstrably can enhance and disturb in equal measure. The fact that multiple tasks, just-in-time instruction, [un]availability of sources and reliance on others may create tensions and disjunctures as students grapple with "keeping many balls in the air" confirms the "difficulties" students may experience on their journey. Some students liken the "unpredictability" of scenario pedagogy to the often "realistic uncertainty" of the workplace. I have argued that, as emergent professionals, being "pushed out of their comfort zones" may create anxiety (in some more than in others) but that these challenges and constraints, if constructively managed, may provide a valuable "test of work-readiness". This is particularly evident in chapter seven. The analysis in this and other chapters has also demonstrated that this constructive management is supplied by all participants, not the facilitator alone.

9.6 Dialogue across difference

In this thesis I have demonstrated that scenario pedagogy has the potential to accelerate intercultural synergy because of its emphasis on role play, joint-venture teamwork and support. A negotiated pedagogy such as this aims to narrow the gap between the demands of HE and the lack of preparedness of many disadvantaged EAL users. In order to minimise individual weaknesses and feelings of intimidation, scenario pedagogy encourages individuals and teams to explore semiotic options and articulate their meaning making more effectively and interactively using multiple (re)resources. The interplay of various methods and media is also recognised as advantageous in minimising weaknesses in the research, writing and presenting abilities of individual (generally EAL) students. "We all help each other", a sentiment which infused their commentary, speaks to the fact that, despite their "differing work ethics [and] grasp of the subject matter" they need to exercise "restraint and try to understand another's point of view, really listening even if one hold a different view."

There are broader intercultural benefits of promoting improved communication awareness and practices through an enquiry-oriented approach. Annually, students are involved in "dialogue across difference, seeking out commonalities, experimenting with identities, tracing borders and moving in and out of discourse communities" as they explore their technical and social practices in and out of the classroom (Lankshear, Gee, Knobel, and Searle 1997: 157). The dialogical approach "involves us all in thinking and interacting with people of all types" both in and out of the classroom. This awareness of choice and audience diversity allows teams some leeway to question corporate norms, settled or "recognizable *practices*" (Kress 2010:

113, his italics) and the “relative permanency” (Chouliaraki and Fairclough 1999: 21-22) of these practices, no matter how slightly.

A number of international exchange students have commented over the years on how the course enables them to get to know other local students, to “share experiences” and to realise that they are all “fellow students”. This local/global negotiation of meaning expands what it means to foster education as students from near and far take newfound knowledge and changed attitudes back to their respective communities as fellow beings and environmental inhabitants. This co-created affinity space is seen to contribute to enhanced intercultural rapport, socialisation and ‘know-how’ in a scaffolded manner (Gee 2005; Varela 1999, Vygotsky 1978).

9.7 Contribution to the workplace and society

The results of the research indicate that holistic and collaborative meaning making is possible despite growing diversity in tertiary education. The shift in HE globally is away from the isolated goals of ‘the system’ to the integrated needs of the learner-as-participant, specifically, and the requirements of society, in general. Although there is no ‘blueprint’ for either a multicultural curriculum or pedagogy in higher education (Sharma 2004:106), the research has shown that scenario pedagogy seeks to reinforce the goals of HE by assisting in producing graduates with the attributes and practices of critical and analytical problem-solving, effective communication, working in diverse teams, self-management and organisation, information processing and use of technology within a real-life context. If the context goes beyond the discrete subject silos of a commerce degree by looking at overarching issues of global business sustainability, all the better in terms of curricular relevance.

According to Timpson and Dunbar (2003) for the first time in human history, human beings have a say in determining the well-being of the earth and all of its inhabitants. Even if student teams only tackle particular focus areas, they claim to feel empowered overall. If HE pedagogy and curricula can contribute to “a new social paradigm, a new way of life, where human beings and their business ventures go back to being in tune with both their community and their environment”, then change and transformation is possible (Nodoba, Hendry, Grant, Kalil and Monson 2011: 7). Nodoba *et al.* continue: “Due to a skills crisis in South Africa, postgraduate students in commerce may soon find themselves in senior management positions making critical decisions related to the environmental and social impact of their business. If they understand the language of sustainable business, grapple with critical issues and espouse a commitment to building their business in a sustainable manner, real strides are possible in future generations.”

One of the aims of the post-Apartheid white paper on education (1997) was to encourage more customized, career-focussed qualifications which improve “the responsiveness ...to social and economic needs including labour market trends...” Successive government white papers and policy documents continue this refrain and do so with more urgency amidst critical HE reports on stagnating educational ‘progress’ and through-put rates (Bloch 2009; National Benchmark Tests Project 2009; HE Monitor 2007). Although this particular scenario intervention only involves senior students, there is no reason why this type of negotiated pedagogy cannot be practised with younger learners. Any approach which attempts to empower young people before they reach the workplace and to inculcate a mindset not afraid of challenges, diversity and responsibility, could contribute to Varela’s (1999) ‘ethical know-how’, entrepreneurial flair and independent thinking whether a university education is part of the equation or not. In terms of HE, it seems much more likely, given this aim and hoped-for outcome, that the university will be able to fulfill its promise of ‘graduateness’, as espoused by Dr Ramphela (1996/7) all those years ago.

9.8 Significance of study and avenues for further research

This study is significant in a number of ways. Firstly, it has given rise to a framework of negotiated design which foregrounds ‘practice’ and ‘design’ rather than ‘skills’ and ‘competence’. Moving away from a deficit view of education to a meaning-making framework which foregrounds developmental potential encourages a pedagogical shift. This shift privileges choice among a wide array of semiotic resources; it also positions students to think about modal ensemble and orchestration that is apt for purpose, audience and context. There is nuance in choice as students use opportunities to grapple and resolve disjunctures and realise their potential. This framework of negotiated design may therefore prove useful to researchers working in the field of multimodal pedagogy. Secondly, by combining a metafunctional and multiliteracies lens with social semiosis for product and process analysis and embedding this further in contextually relevant ways, some of the earlier criticism directed at decontextualised multimodal research may be minimised. There is nothing new in having a dual or multiple theoretical and methodological focus as evidenced by Medhurst’s recent study (2009, 2010) in students’ online multiliteracy practices. A multiple approach is undoubtedly apt for studies in multimodality and social semiosis. The contribution of this study hinges on the focus on negotiated meaning making within an over-arching embedded real-time scenario. Thirdly, the study also confirms a cluster of sought-after characteristics which further contributes to fine-tuning course design and implementing scenario pedagogy appropriately for best results. The course design components have curricular implications which are always relevant in HE development.

Avenues for further research are many and relate to scenario pedagogy and curriculum development. As academics and practitioners, our role in helping to shape young minds is small and of short duration. As these commerce or computer science students do not major in communication studies *per se*, trying to develop 'staying power' in their minds is a worthy pursuit. The avenues of further research listed here are a means to further contribute to this goal. They include:

- extending scenario pedagogy to undergraduate professional communication courses for comparative purposes;
- embedding scenario pedagogy within other courses as an integral teaching and learning approach, rather than 'standalone' courses, to create more buy-in and visibility across various domains;
- focusing more on curricula, the 'what' of teaching as well as the 'how' (pedagogy) to ensure seamless alignment and on-going relevance in a changing society;
- evaluating assessment practices and whether grades improve overall (anecdotal evidence has suggested that they do but no real quantitative/longitudinal evidence has been collated and analysed);
- undertaking collaborative research with other universities (local and international) using global scenarios of mutual interest; and
- injecting more digital scope which may go hand in hand with the above to extend the reach and penetration of scenario pedagogy.

9.9 Final thoughts

Although our teaching practice has been enhanced and energised by scenario pedagogy, it is not a simple solution or 'catch-all' pedagogy, perfect for every circumstance. It is work- and time-intensive before and during the course and requires an 'on demand' ability from facilitators who need the experience and confidence to work to plan (or not), depending on student needs and pace. Likewise, students are required to take a great deal of responsibility in ensuring their own progress and 'success'. However, with growing implementation and facilitation experience, interesting and relevant scenarios and an enthusiastic panel of internal and external participants, real progress can be made to provide students with opportunities to broaden their professional horizons in class. The aim of all HE research is to improve the quality of teaching and learning and all contributions in this regard allow the educational body of knowledge to thrive.

In the wake of the financial crisis – or perhaps that should be 'midst' as it seems ongoing – higher education has a significant role to play in the development of a new social paradigm of

awareness, individual and collective care and emerging professional communication and identity. It is a mutual responsibility and neither the public nor private sector can or should attempt to 'go it alone'. The foundation of globalisation should be global sustainability where both first and third world interests are sacrosanct in partnership; 'the common good' should be the cornerstone of developing professional practices and know-how. The age-old African tradition of *Ubuntu*, mentioned in chapter four, which embraces ethical, relational and communal commitment and accountability, includes much of what is required in an expanded definition of effective professional communication. Welding forward-looking policy as well as age-old wisdom may prove a winning combination on the African continent.

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APPENDICES

1a and b: Formative and Summative questionnaires

Spaces for answers have been cut to shorten each questionnaire.

2: Example of Terms of Reference letter outlining sustainability scenario

These letters matched the topics that teams selected such as recycling, water management, pesticide control, transport management, hazardous waste management and so on. (See 2008 topic choices in Table 2 on page 62.)

3: Hand-out example of PowerPoint slides for Recycling

4a and b: Example reports: Recycling and Sustainable Building Practices: Student signatures, names and numbers have been removed.

University of Cape Town

APPENDIX 1 a: FORMATIVE QUESTIONNAIRE

Professional Communication Course Questionnaire

Hello there

I would be very grateful if you would share your thoughts, feelings, opinions and beliefs with me and grant me permission to use the information you provide in a research project on professional communication development and curriculum design in higher education. Your data will be treated confidentially. Please tick:

Demographic information:

Name:..... Age:.....
Gender:..... Nationality:.....
First (Home) language:..... Other languages:.....
Matriculation/Equivalency (when and where obtained):.....

What were the greater (dis)advantages of your schooling communicatively speaking?

Domicile (type: home, private digs, residence and location):.....
Degree(s)/diploma studied and where obtained:.....

Professional communication information:

How would you define professional communication and what would constitute an effective professional communicator?.....
Do you think a course in professional communication is worthwhile/relevant at university? Why?.....
In terms of your career plan, will professional communication development play a minor/major role? Why?.....
If worthwhile at university/in the workplace, what are the benefits to you in terms of your professional identity in your job?.....
What kind of communication practices do you think you'll be involved in/commonly used? Please provide examples below.
Written:.....
Oral:.....
Individual:.....
Team:.....
Besides common usage, what particular professional communication practices are the most important at university/in your particular field/in your career? Why?.....

What are your personal strengths in communication?.....
What are your personal weaknesses/difficulties in communication?.....

How do you think you can improve your practices and minimise/eliminate weaknesses?.....
What is your favourite learning style and what kind of teaching/learning environment do you prefer? Why?.....

Assessment information:

Writing assignments, tests, examinations is still the most commonly used (and respected) method of student assessment
What are the strengths/benefits of this?.....
What are the weaknesses/drawbacks of this?.....
Beside the lecturer/tutor, who else could be involved in assessment? Substantiate.....
Assessment of knowledge and skills is usually done and tested at the end of a module or course i.e. final examinations.
Strengths/benefits?.....
Weaknesses/drawbacks?.....
What alternatives are there in terms of *timing* and *methods* of testing? Substantiate.....
"Book" knowledge (hard copy/online sources) is the most commonly used source of 'expert' material in terms of learning and education.
Strengths/benefits?.....
Weaknesses/drawbacks?.....
What alternatives exist that could be included as sources of knowledge and expertise? Substantiate.
Besides this course, when was your last written assignment (e.g. essay, report) and was it individual or group?.....
What do you think was the aim of this assignment and was it achieved? Substantiate.....
When was your last oral assignment done (e.g. presentation) and was it individual or group?.....
What do you think was the aim of this assignment and was it achieved? Substantiate.....
What other assignments were/are common in your field (e.g. conducting field work, preparing set of instructions, creating software programme, other?).....
Give aim and substantiate whether achieved.....

Beside writing and speaking, what other communication modes (types), channels and media could be used to develop and assess communication practices? Substantiate.

Are alternative sources of learning/teaching and assessment becoming more common/needing to become more common? Why?

How could/would you practically incorporate alternatives into curriculum design to enhance university teaching and assessment?

What role (if any) could/would this play in terms of job readiness as a professional in a global economy?

Any other comments?

Thank you for your time! Much appreciated

All the best

Head, Professional Communication Unit

APPENDIX 1B: SUMMATIVE QUESTIONNAIRE

PCU Scenario Questionnaire

We would be very grateful if you could take the time to fill in this questionnaire which will help us with our research into teaching and learning and to structure future courses. Confidentiality is assured. Please tick permission for use of data.

Please substantiate where required as this will provide us with reasons for your answers and selections. Thank you and happy writing!

Gender: Home/First language:

Other languages: Age:

Place of birth: Home town/province/country:

Number of years in Tertiary Education: Previous work experience?

A scenario approach was used as the teaching / learning method. The aim of Scenario Pedagogy is to use real events as a context for teaching communication practices (e.g. Sustainability policies and practices). Please comment on:

The concept as a whole:

Benefits / advantages:

Drawbacks / obstacles:

Please read the following evaluative statements and place SA (Strongly agree), A (Agree), U (unsure), D (disagree) or SD (Strongly disagree) in the box. Please add a comment if you wish to express an opinion and/or substantiate your choice:

1. Students need to complete assignments to show their lecturers what they have learnt.

2. Contextualised teaching-learning assignments may mimic work-based practices more closely than 'standalone' exercises, tests or exams.

3. Effective writing / presenting are key aspects of professional communication practices.

4. Technical and business writing and presenting are activities which can be practised and improved.

5. This type of communicative expertise is a talent you are born with – you either have it or not.

6. The Scenario approach is more useful in teams regarding workload and shared responsibility.

7. A process-based mindmap and 'outlining' approach to planning is helpful in getting started because it aims to avoid 'writer's block'.

8. Working individually on scenario focus areas allows for more control and less reliance on others.

9. This learning approach increases individual accountability because attendance, participation and completed hand-ins are expected by facilitator and fellow participants.

10. Choosing a 'narrowed down' focus area allows for better data capture, analysis and assignment preparation.

1. Experiencing different roles and activities (e.g. outlining, writing, editing, rehearsing, presenting, etc) allows for wider communication practices and improved 'quality control'.

12. Draft assignments (mindmapping, outlining, 'dry runs' etc) are unnecessary and don't add value.

13. Process 'tasks' are more motivating as one can get help/feedback before final hand-in/presentation.

14. Working through a staged process with interim inputs and feedback (from peers, staff and external sources) enhances planning skills in a controlled/supported environment.

15. This type of teaching demands greater time and effort to set up as it involves a lot of preparation and collaboration.

APPENDIX 2: EXAMPLE OF TERMS OF REFERENCE LETTER



Professional Communication Unit
School of Management Studies
 University of Cape Town • Private Bag • Rondebosch 7701
 Telephone: +27 21 650-3409
 Fax No.: +27 21 689-7570
 Email: claudia.kalli@uct.ac.za
 Tel: (021) 6503410

26 July 2008

Investigative Project Team 1
 Sustainability Programme
 University of Cape Town

Dear Task Team Members

IMPACT OF OPERATIONAL PLAN FOR SUSTAINABILITY AT UCT

Increasingly students, consumers and citizens are becoming more demanding that the institutions that they are associated with display good environmental practices. As a signatory to the T alloires Declaration in 1990 and 2002, the University of Cape Town agreed inter alia to set an example of environmental responsibility. Given the different lenses through which sustainability has been viewed, the first step was to explore methodological ways through which issues of sustainability can be brought together. Operational and other considerations have been scoped towards identification of key role-players, leadership responsibilities, implementation and management. Finally a policy framework has been created: A Sustainability Programme for UCT, and early plans instituted.

For this reason, and because of the great expense involved, your team has been asked to investigate and evaluate the situation. In particular, could you please:

- Investigate UCT's past practices and policies relating to managing the campus environment sustainably, in particular those relating to **energy consumption and electricity utilization**.
- Determine existing conditions and their impact in relation to **energy management**.
- Discuss possible alternatives such as have been implemented at other universities, and their costs.
- Critically evaluate the significance of recent sustainability practices in relation to past activities and present needs. Discuss the feasibility of implementing the alternatives investigated.
- Make recommendations for improved efficacy in implementation of current practices and new ones.

You are required to present your findings in the format of a full report. As your audience for this document will consist of a cross-section of managers as well as administrative and academic staff, who may only have a cursory knowledge of these issues, please explain all technical concepts where necessary. A full and serious understanding is crucial. You will also be given the opportunity to address members of this audience at a meeting. It is recommended that you use graphic/visual material to illustrate your findings. (See your course notes for precise instructions.) As the PCU has been asked to oversee this exercise, please contact us if you have any queries.

Yours sincerely

Claudia Kalli and Terri Grant
 Course Convenors

16. This type of learning demands greater time and effort as it involves a lot of exploring, sifting as well as reliance on self and others.
17. A scenario approach may enhance research skills as it deals with primary and secondary sources in the data gathering process.
18. The workshop leader is not an expert on the topic areas under discussion and, in effect, is being informed about them during the process (i.e. the teaching / learning lines are blurred).
19. Although some learning/ teaching materials and tips are provided, participants also need to gather and create their own visual and verbal materials to 'illustrate' the process and final products.
20. A division of marks (process and final product) aims to improve overall score.
21. A UCT-based project gives students an insight into their institution which may foster a sense of 'ownership' of / belonging to the institution.
22. Having 'expert' input from various outside people and as audience members adds to the experience and sense of occasion.
23. Having outsiders is intimidating and affects ones presentation ability adversely.

Any other comments?.....

Thank you

Terri Grant and Claudia Kalli

UCT Sustainability Plan



RECYCLING
to reduce UCT's
carbon footprint

Green Campus Initiative

- Student driven initiative started in early in 2009
- 4 category system for separation at source – tin, plastic, paper & other
- Research project underway to measure success rate of separation (conducted by students)

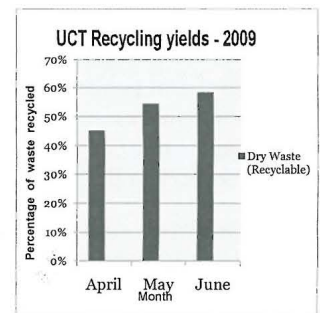


Overview

- Current initiatives at UCT
- WITS University's initiative
- Conclusions
- Recommendations
 - Main findings/questions!
 - How to measure impact of recycling initiatives?
 - How to monitor their progress?

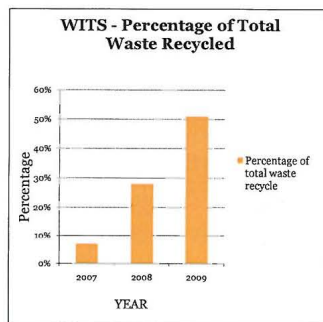
UCT Waste Management

- Outsourced to Wasteman – average R47000 per month
- Saving possible if higher % of collected waste is sold for recycling
- 2 category system for separation at source (Wet waste & Dry waste)
- No data on % waste actually recycled from dry waste



University of the Witwatersrand

- 10 categories of recyclable materials
- Improvements due to awareness campaigns
- The future – bring pre-sorted recyclable waste from home?



Conclusions

- Impact of successful separation at source
 - Reduced operational costs
 - Increased proportion of material recycled
 - Reduced carbon footprint
- No Collection of detailed data
 - How much is actually recycled after sorting?
- No basis for comparison between universities

Recommendations

- Separating at source should remain focus
- Collect and publish data on
 - actual waste recycled (volume and proportion)
 - success rate of waste separation
 - Feedback to UCT and students
- Formulate common key performance indications
 - Monitor progress
 - Compare across universities

QUESTIONS ???

Green Planet Consulting
1 Dryer Road
Claremont
7700

05 October 2009

Ms Claudia Kalil
Professional Communication Unit Project Convenor
Professional Communication Unit
School of Management Studies
University of Cape Town

Dear Ms Kalil

Impact of Operational Plan for Sustainability at University Of Cape Town – Recycling

We enclose our completed report which evaluates the significance of the current recycling initiatives at the University of Cape Town (UCT) in relation to past initiatives. The report compares UCT's initiatives to the current recycling practices of the University of the Witwatersrand (WITS). Finally, the report makes recommendations on implementing the current recycling initiatives.

In our investigation, we were able to gain insights into the university's recycling initiatives with respect to solid waste. We also obtain information on the operation at WITS and looked at factors that have contributed to their success. There was a lack of comparable data for the two universities as each had a different system for categorizing types of recyclable materials and UCT has a limited data set. This is an obstacle to any attempts to measure or monitor UCT's progress with respect to the recycling initiatives currently implemented. The recommendations are based on these insights.

In the research, we were assisted by Mr Duke Metcalf of the University of Cape Town's Property and Services Department. He shared his extensive knowledge of the university's past and present recycling policies and practices. We also obtained useful facts and figures about the recycling operation of WITS from the March/April edition of the Environment Management Journal. This assisted in the comparison made between the two universities.

The contents of the report demonstrate the need for University of Cape Town to record extensive data on their recycling initiatives to enable monitoring of progress and comparison to other universities. I trust that the university's administration (represented by the P&S) will respond to this need as there is great scope to provide valuable feedback to all who have an interest in a more sustainable University of Cape Town.

Please contact us if you have any question or need more information.

Yours sincerely

Signature

Signature

Student Name & Surname

Student Name & Surname

Encl. (Report)

THE OPERATIONAL PLAN FOR SUSTAINABILITY AT THE UNIVERSITY OF CAPE TOWN: THE IMPACT OF RECYCLING

Prepared for: Ms. Claudia Kalil

Professional Communication Unit Project Convenor
Professional Communication Unit
School of Management Studies
University of Cape Town

Prepared by:

Green Planet Consulting

SUBMISSION DATE: 5 October 2009

TERMS OF REFERENCE

This report was requested by Ms. Claudia Kalil, Professional Communication Unit Project Convenor, University of Cape Town, on 31 July 2009.

Ms. Kalil requested the report to investigate and evaluate the impact of the operational plan for sustainability at UCT, with a particular focus on recycling.

Her specific instructions were to:

- Investigate UCT's past practices and policies relating to managing the campus environment sustainably, in particular those relating to recycling;
- Determine existing conditions and their impact in relation to recycling;
- Discuss possible alternatives such as have been implemented at other universities, and their costs;
- Critically evaluate the significance of recent sustainability practices in relation to past activities and present needs. Discuss the feasibility of implementing the alternatives investigated;
- Make recommendations for improved efficacy in implementation of current practices and new ones; and
- Submit the report by 5 October 2009

Good

EXECUTIVE SUMMARY

This report describes an investigation and evaluation of the impact of the operational plan for sustainability at the University of Cape Town (UCT) with a focus on the university's recycling initiatives. It evaluates the significance of the current recycling initiatives at the university in relation to past initiatives. The report also compares UCT's initiatives to the current recycling practices of the University of the Witwatersrand (WITS).

Recycling Initiatives

The keys findings of the report are that there are two recycling initiatives currently underway at UCT, the student-driven Green Campus Initiative and the UCT Sustainability Plan's implemented recycling efforts administered through the university's Property and Services department (P&S).

Green Campus Initiative

The main aim of this initiative is to separate waste at the point of generation, also known as separating at source. This is done by having different waste disposal bins for tin/metal, plastic, paper and other general waste.

Wasteman Services (Wasteman)

P&S contracted Wasteman to provide waste management services (collection, removal and recycling) to the university. Their system of separation consists of two categories: wet waste and dry waste. The wet waste goes to landfill. The dry waste is transported to Wasteman's Material Recycling Facility (MRF) where it is sorted and subsequently sold to specialist recycling companies.

WITS

WITS categorizes its waste material into ten categories. In 2008, the university produced 582 tonnes of waste. For that year 160 tonnes were recycled, representing 28% of the total tonnage of waste. The recovery rate for recyclable material increased 51% in February 2009. This effort was supported with various awareness campaigns.

Conclusions

The following conclusions have been drawn from the findings:

Incorrect sorting of waste, increases the operational costs of recycling

*Good
neutral
Summary
of
findings
Just
adding
an
illustration
would
have
been
good*

Lack of detailed data on the rate of separation and recycling means that progress cannot be monitored ✓

Lack of commonalities between the available data restricts comparability between universities ✓

Having an on-site MRF lends itself to better access to information ✓ *Clear*

Recommendations

You could have lead in so you had for more summary of conclusion

Separating of waste at source should remain central to recycling efforts.

Wasteman should record and provide feedback of the amount of dry waste that actually ends up recycled.

P&S and GCI should publish the success rate of waste separation at source on a monthly basis.

P&S and GCI should publish the percentage of total waste actually recycled on a monthly basis.

UCT, together with other South African universities, should establish common key performance indicators for recycling initiatives.

UCT should establish its own benchmark and targets with respect to the percentage of waste recycled

UCT should compare its performance to the key indicators to monitor performance compared to other South African universities and the long term, international universities. *good.*

*A balanced, coherent,
systematic & readable
summary. Nice work.*

LIST OF ILLUSTRATIONS

*Place after
Table of Contents*

Tables

1. Collection of waste, April to June 2009 ✓

Figures

1. A typical recycling station ✓
2. UCT Recycling yields – 2009
3. Dry waste prior to sorting
4. Sorting along conveyor belt
5. Cardboard
6. Tin/Cans
7. Plastic 1
8. Plastic 2

*You need
page
number
for
these*

TABLE OF CONTENTS

Terms of reference	2
Executive Summary	3
List of illustrations	5
1. Introduction	7
2. Method of Investigation	9
3. Recycling at the University of Cape Town	10
3.1 UCT's Past Practices	10
3.2 Current Initiatives	10
3.2.1 Student Initiatives	10
3.2.2 Institutional Initiatives	11
4. The University of the Witwatersrand	18
5. Conclusions	20
6. Recommendations	22
7. Bibliography	23

233

1. INTRODUCTION

1.1 Subject

This report describes an investigation and evaluation of the impact of the operational plan for sustainability at UCT with the focus on the university's recycling initiatives.

1.2 Background to investigation

In 1990, UCT became a signatory to the Talloires Declaration and renewed this commitment in 2002. By doing so, the university committed to following responsible and sustainable environmental practices. In order to co-ordinate the various initiatives underway at the university, a sustainability programme was drafted. The programme is a framework aimed at reducing UCT's carbon footprint through:

- Energy savings
- Reducing carbon emissions
- Recycling
- Water conservation

For the purposes of this report, emphasis will be made on reducing the university's carbon footprint through recycling.

Need scoping down to recycling from the big picture.

1.3 Problems to be investigated

Various recycling initiatives are currently underway at the university. One such initiative is operated by the students and the other, by the university's administration acting through the Property and Services department (P&S). At an operational level there is a need to identify the key role-players and well as the leadership, implementation and management responsibilities. For this reason, it is necessary to investigate and evaluate the situational context of the current recycling initiatives.

Good focus

1.4 The objectives of the report are to:

- Investigate UCT's past practices and policies relating to managing the campus environment sustainably, in particular those relating to recycling;
- Determine existing conditions and their impact in relation to recycling;
- Discuss possible alternatives such as have been implemented at other universities, and their costs;

Adjust language for the report - the investigation is over

- Critically evaluate the significance of recent sustainability practices in relation to past activities and present needs. Discuss the feasibility of implementing the alternatives investigated;
- Make recommendations for improved efficacy in implementation of current practices and new ones.

1.5 Procedure used to gather information

The information on which this report is based was gathered by means of:

- An interview with Mr. Duke Metcalf of P&S
- A report by Martin Hall and Noeleen Murray, 'A Sustainability Programme for the University of Cape Town'
- A report by Handler, Rich, Hlatshwayo, Zola and Rippon, 'Solid Waste Management: Developing a Waste Minimisation Programme for the University of Cape Town'
- An article by Carol Knoll, 'Waste Management and recycling at Wits University', March/April 2009 edition of the Environmental Management Journal.

1.6 Scope and limitations

The investigation was restricted to the recycling initiative of solid waste. Organic, biological and hazardous waste are outside the scope of the report. The costs applicable to the recycling initiative of other universities could not be obtained. Hence, there were limitations in comparing UCT's initiatives to that of Wits on the basis of costs.

1.7 Plan of development

The reports starts by giving details of the procedure used together information. The finding of the report give a brief history of the UCT's past practices relating to managing waste dispersal and recycling initiatives. This is followed by the findings made on the current recycling initiatives. The report then describes the details and facts related to recycling at Wits.

The conclusion of the reports point out, the impact of sorting waste at it source and the importance of collecting data for the university's recycling initiatives. Finally, the recommendations outline steps that be taken by the administration of UCT to implement the measurement and monitoring of the progress of its recycling initiatives.

*Excellent
Coherent & focused*

2. METHOD OF INVESTIGATION

2.1 Interview with Mr Duke Metcalf

An interview was conducted with Mr Duke Metcalf on 26 August 2009. He was asked about the past and present policies and practices of UCT with respect to recycling. He was also asked for statistical data collected for such initiatives.

2.2 Solid Waste Management: Developing a Waste Minimisation Programme for the University of Cape Town.

This was a waste management review undertaken in 2003 by a team of second year MPhil (Environmental Management) student from the Department of Environmental Geography Science. The purpose of the review was to develop a waste minimisation programme for University of Cape Town.

2.3 A Sustainability Programme for the University of Cape Town report

2.4 Waste Management & Recycling at Wits University, article

3. RECYCLING AT THE UNIVERSITY OF CAPE TOWN

*Good / actually, -
diver funds*

3.1 UCT's Past Practices

Concerns over solid waste disposal were noted at the University of Cape Town (UCT) as far back as the 1970s. At the time, the issue was around the control of litter rather than recycling. Various initiatives were launched. One such initiative was 'Keep South African Tidy'. Bins were positioned around the campus so that students would dispose of glass in one bin and paper in a separate bin. The initiative failed due to the lack of student co-operation in separating the glass from the paper when they disposed of the waste.

you could have used some more effective bins

In the 1990s, the university became the first in the country to introduce a recycling program on its campus. However, the increasing operational costs made the initiative unsustainable and collapsed. Thereafter, recycling efforts were suspended and solid waste was collected and transported off-site to be disposed of in landfill.

In 2002, Don't Waste Services (DWS) was contracted to remove solid waste from UCT campuses at a cost of R38 000 per month. This charge was reduced by a minimum amount of R5000 per month which was the proceeds from the sale of recyclable material. At that time, one third of the university's waste was recycled and the rest went to landfill.

235

3.2 Current initiatives

3.2.1 Student initiatives

The Green Campus Initiative (GCI) is a student-driven initiative at the university. The main aim of this initiative is to separate waste at the point of generation. Recycling stations are located along high 'student traffic' routes on all campuses. Each recycling station is made up of four bins, in order to separate waste into tin/metal, plastic, paper and other general waste. The bins have different colour lids and are clearly labelled to indicate which category of recyclable material should be disposed of in that particular bin.

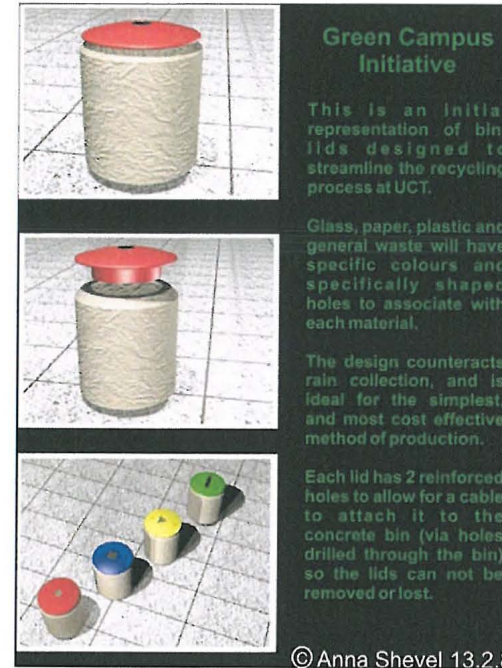
set and level heading etc in from margin to and readability

Images of a typical recycling station are shown below. 'Bin Lid' designs by the UCT Green Campus Initiative for the retrofitting of existing refuse bins at UCT for recycling purposes. (Source, Green Campus Initiative, Sandra Botha, final design 15 April 2008)

Good integration of illustration

Place at bottom of illustration - Only tables are headed above.

Figure 1: A typical recycling station



Good impact with illustration.

This four-category system of separation at source was implemented in early 2009 and has been augmented by a similar system of separation at some of the university residences. The residences used a two-category separation system for dry (or recyclable) and wet (non-recyclable, organic) waste. These two categories are the same system used by Wasteman, the service provider contracted for the university's waste management services.

3.2.2 Institutional initiatives

UCT became a signatory to the Talloires Declaration in 1990 and renewed this commitment in 2002. By doing so, the university committed to following responsible and sustainable environmental practices. In order to co-ordinate the various initiatives underway at the university, a sustainability programme was drafted. The programme is a framework aimed at reducing UCT's carbon footprint through:

- Energy savings

*avoid ophan
Leadings or
bullets*

- Reducing carbon emissions
- Recycling
- Water conservation

For the purposes of this report, emphasis will be made on reducing reducing the university's carbon footprint through recycling. Within the university, the Property and Services department (P&S) is the responsibility for the management and implementation of the sustainability programme. As such, they are responsible for waste management across all campuses and residences. All costs related to waste management services are borne by this department.

The tender and selection process for the outsourcing of UCT's waste management services is also in their area of responsibility. In late 2008, P&S contracted Wasteman Services (Wasteman) to provide waste management services (collection, removal and recycling) to the university. Wasteman came on-site in April 2009. They collect solid waste from the UCT campus, twice daily. Their system of separation consists of two categories: wet waste and dry waste. The wet waste is goes to landfill. The dry waste is transported to Wasteman's Material Recycling Facility (MRF) in Airport Industria.

The volume of waste collected by Wasteman from UCT's campuses is collected and aggregated on a monthly basis. The numbers give detail of the amount of wet waste that was collected compared to dry waste. The costs are calculated in accordance with a sliding scale with a minimum fixed component and well as maximum price of R47 000 per month.

The table below illustrates statistics generated by Wasteman for the three months starting April to June 2009. The last column is the cost charged by Wasteman for each month.

Table 1: Collection of waste, April to June 2009

2009	Wet Waste		Dry Waste		Cost in Rands
	Volumes in tons	Number of Bins	Volumes in tons	Number of Bins	
April	41.25	1650	33.92	2261	47117.42
May	47.43	1897	56.16	3744	47117.42
June	30.35	1214	42.36	2824	47117.42

Use sub-heading

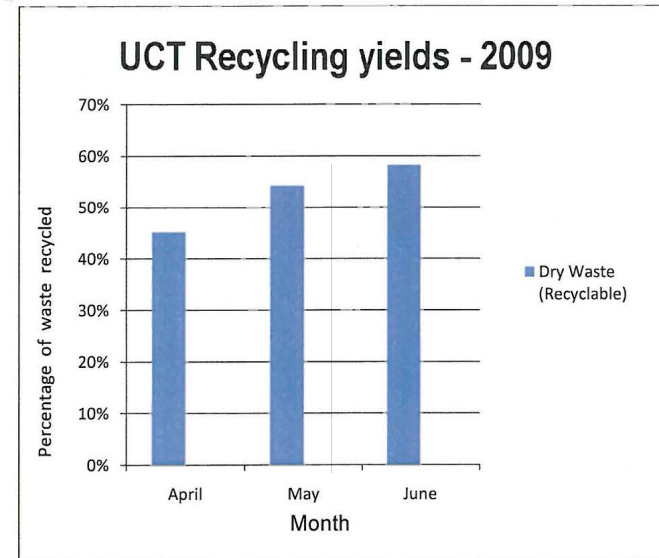
236

already stated in intro. why repeat here?

Good explanation of table to aid comprehension

The table shows that for May and June 2009, more dry waste was collected than wet waste. Dry waste is the waste category that has potential to be recycled. The graph below represents the same information as what is in the above table but shows dry waste as a percentage of total waste collected, rather than as absolute numbers as seen in the table.

Figure 2: UCT Recycling yields - 2009



The graph shows an increase in the proportion of dry waste collected every month. No further information is available for the periods prior or following this three month period. Currently, there is no information collected with respect to how much of the dry waste is actually recovered and sold for recycling.

The photos below show the sorting and compacting process for dry waste as it happens at the MRF. All photos are courtesy of Mr. Duke Metcalf, Properties and Services, UCT. Figure 3 is a photo of the dry waste taken on-site at the MRF before it is sorted.

Good idea

Sub-head

Good to acknowledge sources.

Figure 3: Dry waste prior to sorting



The waste is then loaded onto a conveyor belt and manually sorted by the staff as shown in Figure 4 below. ✓

Figure 4: Sorting along conveyor belt



The waste is sorted in order separate it into cardboard (Figure 5), paper, glass, cans (Figure 6), plastic 1 (Figure 7) and plastic (Figure 8). ✓

Figure 5: Cardboard



Figure 6: Tin/Cans



Figure 7: Plastic 1



Figure 8: Plastic 2



After the waste has been appropriately sorted, it is compacted and sold to specialist recycling companies (such as 'Collect a Can') for recycling. Any remaining non-recyclable waste is transported to landfill.

Sub-heading

The success of the current and any future recycling efforts depends, to a great extent, on the efficient separation of the waste at its source. In order to measure student compliance to sorting waste at the point of generation, two final year Chemical engineering students are undertaking further studies as part of a research project. The project is currently underway (as at September 2009) and is expected to be completed in November 2009. The title of the report is 'Evaluation of the effectiveness of source separation of resources from waste on the UCT campus'. The research project supervisor is Professor. Harro Von Blotnitzz (E-mail correspondence courtesy of Mr Duke Metcalf, Property and Services).

The scope of the project extends to the separation system on upper campus as well in one of the university's residences. The approach taken by the project is to sample the success rate of separating the waste on a weekly basis and determine the mean. Thereafter, numerous awareness campaigns will be launched and the response observed for purposes of further evaluation. The study endeavours to provide answers to such questions:

What are the obstacles to successfully separating waste at its source?

What are the quantifiable benefits of spending money to implement a two-bin separation system in each flat in the residences, rather than locating the bins outside the flats?

The findings from the study will form the basis of further proposals on recycling issues to be implemented at the university in future. A South African university that has recently been featured in the Environmental Management Journal for its recycling initiative is the University of the Witwatersrand (WITS). This next section of the report explains their initiatives as reported by Carol Knoll in the Environmental Management Journal.

Continue directly with next section of findings here.

interesting findings you have!

Proposed to use as a question

new paragraph

4. THE UNIVERSITY OF THE WITWATERSRAND (WITS)

For the first time in February 2009, the University of Witwatersrand recycled more waste than it sent to landfill. The company currently contracted for the university's waste management services is Veolia Environmental Services. They were contracted in March 2007 at which time 7% of waste was recycled. The facilities manager of the university, Mr. Andries Norval credits the increased recovery rate to the dedication of staff, students as well as proficiency of Veolia. These figures summarize the activities for the main campus including several offsite campuses.

In 2008, the university produced 582 tonnes of waste. For that year 160 tonnes were recycled, representing 28% of the total tonnage of waste. Veolia ascribes the increased recovery rate for recyclable material, from 7% to 51% in February 2009 to the separation of the waste at the point where it is generated. This effort was supported with various awareness campaigns.

The amount of recyclable material collected in 2008 from the whole campus but excluding the WITS Medical School is shown in the table below.

Material	Kgs
Scrap metal and tins	9000
eWaste (computers, ink cartridges, microwaves, etc.)	3000
Cardboard	63000
White office paper	17000
Glass bottles	53000
High density plastic	1300
Low density plastic	5700
Cooldrink bottles	6700
Polystyrene	690
Cooking oil	580

From the table, it can be seen that WITS categorizes its waste material into ten categories.

The WITS waste collection system makes use of wheeled bins that are easily loaded onto the truck so that the contents of the bins are tipped into the truck for transporting to their MRF for sorting. The MRF at WITS was custom-built on-campus and is used specifically for recycling initiatives. There were originally 300 wheeled bins on campus in 2007 and this has increased to 500 bins in 2009. Two trucks are used to transport the waste to the MRF throughout the day. At the MRF, the waste is loaded onto a

conveyor belt for sorting. The sorting process is done manually by workers who pick out and separate the waste according to the categories in which it is later sold. After sorting, the material is baled and compacted for sale.

The School of Education has commissioned a survey (as the request of students) to find out the perceptions and requirements of the entire university populace of staff and students. The survey is conducted by means of a questionnaire. The questions of this questionnaire aim to provide feedback that will inform future recycling initiatives on the campus. One of the questions asked is whether respondents would like to bring their pre-sorted recyclable waste from home to dispose of on campus. Norval notes that students have initiated some of the initiatives that have been implemented. He concludes that the improvement of sorting at source may be as a result of the awareness campaigns, education drives and the emerging a generation of students who have been taught about recycling at school.

A very impressive set of findings Unathi & Godfrey. The research is excellent and the data is set out concisely, neutrally, coherently & highly readably, particularly where apt with illustrations of various sorts. Just a few more sub-headings would help great work.

5. CONCLUSIONS

5.1 Incorrect sorting of waste, increases the operational costs of recycling

The failure or unwillingness of students to correctly sort waste at the point where they disposed of has resulted in the abandonment of earlier recycling initiatives started on campus. Waste that is inappropriately separated at source allows for a greater proportion of the materials to be recycled. The sorting of waste that has not been separated, increases the operational costs related to recycling because more people have to manually sort the waste before it is sold on for recycling.

5.2 Lack of detailed data on the rate of separation and recycling means that progress cannot be monitored

The trend of increased collection of dry waste is an encouraging development because it means that UCT is recovering proportionally more waste that has recycling potential. The result of this is a higher rate of recycling of waste. This has the impact of reducing UCT's carbon footprint over time. This potential is recognized but cannot be quantified as yet because information with respect to the amount of dry waste actually recycled is not available.

Having such information would enable the appropriate measurement and monitoring of the proportion of actual material recycled. This in turn will provide valuable feedback of the financial costs and benefits of current recycling activities. Making such information available to students would make them have a sense of the impact of their efforts to separate litter at disposal. This will give them a positive and tangible sense of the contribution they are making in directly reducing the carbon footprint of UCT as a collective.

It is not possible to assess whether or not UCT recycles more waste than it sends to landfill because there is no data collected in this regard. This makes comparison difficult, be it comparison with other universities or month on month comparisons for UCT itself. This data is necessary to facilitate useful comparison and monitoring of progress.

5.3 Lack of commonalities between the available data restricts comparability between universities

The comparison of data, relating to recycling effort, between WITS and UCT is very challenging because the two universities use different categories to classify recyclable materials.

5.4 Having an on-site MRF lends itself to better access to information

The waste collection and sorting processes for WITS and UCT are similar. A big difference in the approach adopted by the two universities is the outsourcing element. WITS custom built its own MRF and is therefore better positioned to control its own recycling activities. Having an on-site MRF also facilitates awareness of recycling activities for the student population. This is also why they have readily available statistics with respect to the amount of waste recycled compared to what was sent to landfill.

Well developed discussion ; effective heading

6. RECOMMENDATIONS

Separating of waste at source should remain central to recycling efforts.

Wasteman should record and provide feedback of the amount of dry waste that actually ends up recycled.

P&S and GCI should publish the success rate of waste separation at source on a monthly basis.

P&S and GCI should publish the percentage of total waste actually recycled on a monthly basis.

UCT, together with other South African universities, should establish common key performance indicators for recycling initiatives.

UCT should establish its own benchmark and targets with respect to the percentage of waste recycled

UCT should compare its performance to the key indicators to monitor performance compared to other South African universities and the long term, international universities.

good parallel structures

7. BIBLIOGRAPHY

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Martin Hall and Noeleen Murray, 'A Sustainability Programme for the University of Cape Town', March 2008

Handler, Rich, Hlatshwayo, Zola and Rippon, 'Solid Waste Management: Developing a Waster Minimisation Programme for the University of Cape Town', June 2003

Knoll, Carol, 'Waste Management and recycling at Wits University', Environmental Management Journal, March/April 2009 edition



UCT Sustainable Building Report

Graca Machel Residence Hall

Prepared By:

Student Name & Surname (Student No.)
Student Name & Surname (Student No.)



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Upper Campus, UCT

Rondebosch, 7700

Nicola@greenuct.ac.za

UCT Property and Services

University of Cape Town

5 October 2009

use name - this is so impersonal.

Dear Sir/ Madam

Sustainable building policy at UCT focusing on Graca Machel Residence Hall

good focus here

I enclose my completed report on the sustainable building policy at UCT with particular focus on heating and cooling at Graca Machel Residence Hall.

In our investigation we discovered that UCT's current sustainable building practices show great improvement from the older buildings where no sustainable measures were used. Graca Machel was the latest building that was completed at UCT. We have outlined in our report the numerous designs that the architects included to make the building more sustainable with regards to heating and cooling.

We also researched various methods to include in future buildings at UCT to ensure future reduction in the energy load from heating and cooling systems. Alternative measures were included for older buildings where alterations were not feasible.

No sustainability policy document is currently available which outlines designs and requirements for future buildings at UCT. This report recommends that such a document be put together using the information in the report.

you could add a chapter to manual to help in your investigation

Please contact me if you have any queries or need future assistance.

Yours Sincerely

Signature

Signature

Student Name & Surname

Student Name & Surname

UCT Green Initiative members



TERMS OF REFERENCE

This report was requested by Ms Claudia Kalil, director of the Property Services Unit of the University of Cape Town, on the 31st of July 2009.

Ms Kalil requested the report to ensure that the Sustainability policies for buildings at UCT is adequate and in line with global standards.

Her specific instructions were to:

1. Investigate UCT's general past practices and policies relating to sustainability managing buildings on campus; and in particular those relating to a building of our choice.
2. Determine existing conditions in this building, its carbon footprint, and their impact in relation to environmental management.
3. Discuss possible 'Green' alternatives such as have e.g. been implemented at other universities, and their costs.
4. Critically evaluate the significance of recent sustainability practices in relation to past activities and present needs including the greater UCT sustainability practices in relation to past activities and present needs including the greater UCT sustainability plan. Discuss the feasibility of implementing the alternatives investigated.
5. Make recommendations for improved efficacy in implementation of current practices and new ones in reducing the carbon footprint.

Good attempt in to detail

EXECUTIVE SUMMARY

This report presents the current situation at the University of Cape Town on sustainable building practices. Specifically, heating and cooling practices have been examined. Older buildings are discussed generally, while the Graca Machel female residence on the lower campus is looked at in detail with regard to their policies on sustainable heating and cooling.

Sustainable building practices are a relatively new development at the University of Cape Town. Evidence of this is seen through the large number of older buildings which are heavily reliant on expensive electrical energy. The heating and cooling systems of these buildings are almost always electrically controlled through the use of air conditioners, geysers and heaters.

However, newer buildings such as Graca Machel have employed a sustainability plan with regards to heating and cooling. The "Gherkin" building in London is then used as a benchmark for sustainable heating and cooling practices.

The following recommendations are made by this report:

- Install solar panels in all old buildings to reduce reliance on electrical power
- Use methods such as opening windows as alternative to artificial ventilation
- Create a sustainable building policy document for all future buildings at UCT

Preferably can for a systematic summary of the original which consists of key facts/figures, conclusion & recs in detail/detailed. Most of this summary is a description of what you have done in the original without the actual content being summarised. You do summarise your recommendations well. Include: headings, graphics/illustration (one key one).

TABLE OF CONTENTS

	<i>Page</i>
Terms of reference	I
Executive Summary	II
1. Introduction	1
2. Method of investigation	
2.1. Analysis of articles on the internet	2
2.2. Interview with John Criteon	2
2.3. Interview with Bernard de Witt	2
3. Background information on sustainability regarding heating and cooling at UCT	2
4. Sustainability policies at Graca Machel current in place	
4.1. Background information on Graca Machel residence	3
4.2. Sustainable heating plans	
4.2.1. Heat pumps	3
4.2.2. Solar gatherers	4
4.2.3. Problems encountered with the current system	4
4.3. Sustainable cooling plans	
4.3.1. Sliding shutters	5
4.3.2. Awnings	5
4.3.3. Sunken windows and balconies	6
5. Other available methods used globally in large building construction	
5.1. Basic methods implemented to reduce the building's carbon footprint	6
5.2. London's 'Gherkin' buildings as a perfect example of sustainable building	6
6. Conclusions	
6.1. Lack of policy document outlining sustainable building criteria for UCT	8
6.2. Older buildings not sustainable	8
6.3. Big improvement in designs with new buildings	8
6.4. Not all methods feasible for UCT's Sustainability Policy	8

Just

7. Recommendations	
7.1. Install solar panels in all old buildings to reduce reliance on electrical power	8
7.2. Use methods such as opening windows as alternative to artificial ventilation	9
7.3. Create a sustainable building policy document for all future buildings at UCT	9

✓

1. Introduction

1.1 Subject

describes an investigation into
This report investigates the sustainability policies involving heating and cooling of buildings at the University of Cape Town, with a particular focus on the Graca Machel Residence Hall. ✓

1.2 The objectives of this report

1.2 Background -
The objectives of this report are to describe the current policies regarding heating and cooling at the Graca Machel residence hall. It will also outline other policies that have been used at large residential and office buildings that can possibly be implemented at Graca Machel or other future buildings at UCT and the feasibility if these options. The final objective will be to draw conclusions on the findings and to make appropriate recommendations. ✓

1.3 Scope and limitations

The investigation was mainly restricted to Graca Machel Residence Hall. Specific costs of the various methods were not included as these were not freely available. The sustainability policies investigated were limited to heating and cooling methods as they are the major contributors to a building's energy consumption and therefore its carbon footprint.

1.5 Plan of Development

2. Method of investigation

2.1. Analysis of articles on the internet

Articles were researched on the internet in order to determine the background information on Graca Machel as well to ascertain the current trends and innovations in sustainable heating and cooling plans of modern buildings. The website of the architects Kruger Roos Urban Design Architects was also visited and information on the construction was obtained.

2.2. Interview with John Criteon

John Criteon is the executive director of properties and services at UCT. Mr. Criteon's vast experience gained in the field of sustainable buildings during his tenure as Head of Administration at the University of KwaZulu Natal and his work in the townships of KwaZulu Natal has made him an expert in the field of sustainable building. Mr. Criteon was able to provide information on the current sustainable heating designs in place at Graca Machel. A telephonic interview was the method of communication used with Mr. Criteon.

2.3. Interview with

Bernard de Witt is an environmental impact consultant and assessor. His company EnviroAfrica is based in Somerset West in Cape Town. Mr. de Witt provided information on the various sustainability techniques that he had identified in Graca Machel.

3. Background information on sustainability regarding heating and cooling at UCT

UCT's current sustainability plan involves 4 main aspects: energy savings, reducing carbon emissions, recycling and water conservation. The UCT Sustainability report includes a finding by John Critien that the highest load levels at UCT are caused by outdated heating and cooling infrastructure. He also states that the process of retrofitting of facilities has begun but is a costly exercise (Hall, M & Murray, N. 2008).

Sustainable building has some close ties to energy savings as there are building designs available to reduce a building's energy consumption. These green designs have become more innovative and effective in recent years. A very good example of this is the 'Gherkin' building in London, which will be discussed later in this report. The old buildings at UCT were not built with sustainability in mind.

You could make your major heading bigger to distinguish them from other more - to generally improve on readability. ✓

Separate
issues
out
and
use
sub-
heating

They have small windows in general, with most of the lecture halls having no windows at all. This results in the buildings having to rely heavily on air-conditioning and heaters to control the temperatures in these buildings. Changing these features would be very costly and would also alter the appearance of these old buildings that form an important aesthetic part of UCT's heritage. The newer buildings such as Kramer and Graca Machel (which this report will focus on) have adopted newer trends with larger windows included in the designs to create natural light and heat into these buildings.

We found no evidence of a sustainability policy document outlining sustainable building criteria that need to be met for any future buildings at UCT. A general sustainability report is available including time lines for certain projects, but they do not mention building practices.

4. Sustainability policies at Graca Machel current in place

4.1. Background information on Graca Machel

The building of Graca Machel residence on the lower campus of UCT was completed in 2007. UCT commissioned Kruger Roos Urban Architecture Design to design the residence and surrounding area. The building was intended to transform the landscape of the lower campus area by creating a "Great Street" joining middle and lower campus.

Graca Machel is a three storey residence with 384 rooms housing female students. The residence is divided into two quadrants each with its own courtyard. Additional features include a dining hall, two TV rooms, washing rooms and a coffee shop.

Construction was due to be complete in time for the 2007 academic year however delays resulted in failure to meet this deadline. Some students were moved into Graca Machel prior to full completion while others were relocated to other residences. The building was fully completed by March 2007.

4.2. Sustainable heating plans

4.2.1. Heat pumps

Heat pumps are often used in hotels as they have been found to reduce energy usage and are more efficient than standard geysers. Heat pumps heat water on demand unlike

standard geysers which use energy constantly regardless of demand. The heat pumps are fitted with timers controlling when they begin and end heating water. Peak usage times at Graca have been found to be mornings and evenings.

4.2.2. Solar gatherers

Solar gatherers collect water which is heated using solar energy to a warm temperature. This water is then transferred to the heat pumps. This allows for less energy usage by the heat pumps as the water heated by the heat pumps is already significantly heated.

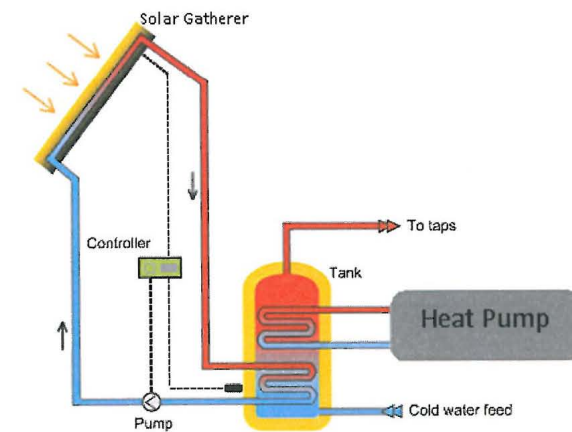


Figure 1. Title

4.2.3. Problems encountered with the current system

Initially there were a few problems with the system as there was no experience with heat pumps. The peak usage requirements were largely unknown and the technology to implement the switching on and off heat pumps was not (purchased) by UCT.

4.3. Sustainable cooling plans

4.3.1. Sliding shutters

The north side of the building is fitted with a sliding shutter depicted figure 000 below. This allow for sunlight to be deflected from hitting the building directly. The ability to slide the shutter allows for direct sunlight to be blocked heating the building at various times during the day and year.



Figure 2. Time

4.3.2. Awnings

Awnings are present throughout the building. Awnings deflect direct sunlight and provide shade in the surrounding areas preventing the building from heating up during summer.



Fig 3...

✓
small
highlighting
with
arrow.

4.3.3. Sunken windows and balconies

Graca Machel has been built with sunken windows. Windows are not on the same surface as the exterior concrete structure but are sunk in. This deeper window allows less direct sunlight into the rooms and aids the cooling of the rooms. Certain rooms also have balconies and this also prevents direct sunlight for entering the building.

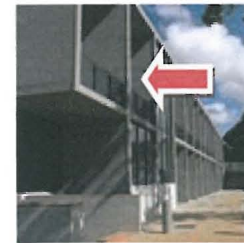


Fig 4

5. Other available methods used globally in large building construction

5.1. Basic methods implemented to reduce the building's carbon footprint

There are some basic ways to make your building more environmentally friendly. The use of ceilings with insulation (not asbestos) will insulate the building against extreme heat and cold. Big windows that are left open as wide as they can during hot periods will increase natural ventilation in the building, which is a much healthier alternative to air-conditioning. Window shutters and awnings will also help to keep the building cool during warm periods. Solar panels are perfect for heating geysers for warm water, instead of using electricity, and will help to reduce the building's carbon footprint. New buildings with big windows facing north will catch more winter sun, warming up the house during the day. In addition to this using concrete floors in these rooms will allow the floors to absorb heat during the day and slowly release it at night. (Naidoo, B. 2009)

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Adjust
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style...

This is the sort of evaluative
statement that you use
↓ conclusion use
neutral headings in
findings

5.2. London's 'Gherkin' buildings as a perfect example of sustainable building

The best example of innovative sustainability practices is a building in London commonly known as the Gherkin. The building, formally known as 30 St. Mary Axe, has a unique

again - use sub-sections & headings + separate out key point

248

aerodynamic shape that maximises the amount of natural lighting and ventilation. Fresh air is drawn up through the spiralling light-wells to naturally ventilate the office interiors and minimise the reliance on artificial cooling and heating. The wells pull warm air out of the building during the summer and warm the building in the winter using solar power. The shape and geometry of the building resembles forms that recur in nature, like the pinecone this building has a natural spiral and opens and closes in response to changes in the weather. The exterior cladding of the building consists of glass panels that are double-glazed on the outside and single-glazed on the inside with a central ventilated cavity on the inside containing solar-control blinds. The cavities act as buffers to reduce the need for additional heating and cooling.

(www.RenewableEnergyAccess.com)



Bigger with some labels.

U

Overall the organisation is fine and you generally use a good concise fact-focused neutral style. lovely illustrations although they need numbering

6. Conclusions

6.1. Lack of policy document outlining sustainable building criteria for UCT

No policy document was found during or research into the matter. A policy document focusing on sustainable building practices at UCT is essential to ensure that future buildings meet Global Green standards.

6.2. Older buildings not sustainable

The older buildings, on Upper Campus especially were not built with sustainability in mind. It is however not feasible to make any structural changes to them, as this will be too costly and it will alter their aesthetic value which forms a part of UCT's heritage.

6.3. Big improvement in designs with new buildings

The design of Graca Machel shows great improvement in term of sustainable buildings. Kruger Roos architects have included numerous methods in their designs to reduce the need for artificial heating and cooling and thereby greatly decreasing the energy consumption of the building.

6.4. Not all methods feasible for UCT's Sustainability Policy

Innovative designs, such as the pine cone design used in London's 'Gherkin' building, require costly materials and need highly skilled workers which also add to high costs. Complicated designs such as these are therefore not feasible to implement at UCT. However simpler designs such as the shutters and awnings used at Graca Machel, as well as double glazing of windows and solar panels, are feasible to include in UCT's policy.

new page

7. Recommendations

7.1. Install solar panels in all old buildings to reduce reliance on electrical power

Solar panels should be installed on the roofs of all the old buildings to reduce their reliance on electricity for their artificial heating and cooling systems.

So there is actually something to be done with old buildings.

Write this here although you do make an effort to do evaluative - the right approach.

No conclusions on heat pump usage etc?

7.2. Use methods such as opening windows as alternative to artificial ventilation ✓

you could discuss these options

Alternative methods such as opening all windows to allow air to move through the buildings ^{should be used to} can assist the reduction of reliance on artificial ventilation.

7.3. Create a sustainable building policy document for all future buildings at UCT ✓

A sustainable building policy document should be created that ensures that all new buildings include green designs that reduce the reliance on artificial heating and cooling. ✓

Good headings & imperative style here.

Scenario Pedagogy

a negotiated, multimodal approach to developing professional communication practices in higher education.



Terri Grant