A Design and Short-term Outcome Evaluation of the Commerce Faculty's First Year Experience Mentoring Programme

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COMPULSORY DECLARATION:

This work has not been previously submitted in whole, or in part, for the award of any degree. It is my own work. Each significant contribution to, and quotation in, this dissertation from the work, or works of other people has been attributed, cited and referenced.

Signature: Signed by candidate Date: 10/03/2017

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Executive Summary

This dissertation reports on a design and outcome evaluation of the Commerce First Year Experience (FYEM) programme. The FYEM programme is implemented by the Centre of Higher Education Department at the University of Cape Town. The FYEM programme is an academic and social supportive cooperation between universities faculties, departments, mentors and facilities for first year Commerce students. The collective efforts intend to: i) provide the first year students with a sense of belonging, ii) help students to adapt to university, and iii) offer academic and emotional to the students.

A three repeated measure was used for this study. The measures were conducted in May, June and July. The first set of evaluation questions were based on the design of the programme: i) should mentoring be compulsory for first year students? ii) what is the effective duration for tertiary mentoring, iii) what is the most effective way of assigning mentors to mentees? and iv) what is the most effective medium for mentoring relationships? The second set of questions was based on the intended short-term outcomes of the programme: v) did the mentoring programme improve the psychosocial and academic attributes of students at observation time one to observation time two? vi) were these effects sustainable, meaning did the students continue to improve even after the end of the programme between observation time two and observation time three? and vii) was a difference between mentored and non-mentored students over time?

The theory design results illustrated that selecting appropriate mentors requires setting up criteria based on certain characteristics. The duration of mentoring should be one year to allow the full transition of first-year students to the university. Another result showed that mentoring should be compulsory for the first year students provided that there is an opt-out option. Mentors and mentees should be given the opportunity to select their preferred individuals to work with and not be randomly assigned. Additionally, the most effective medium for mentoring was group sessions instead of one on one.

The short-term outcome results for the mentoring programme were statistically insignificant due to the small sample size. There was, however, a small improvement in the means of the psychosocial and academic outcomes. After three months of the programme, there were no significant differences between the mentored and non-mentored students. The sample size may have contributed to the lack of effect as well as lack of qualitative data.

In conclusion, it is evident that FYEM programme results were statistically insignificant. However, positive increases were observed for the mentored students' sense of belonging, peer interaction, academic adjustment and engagement. The limitations of this study must be addressed so that more reliable and valid data can be gathered. The results from the design evaluation component can be used to improve the programmes' implementation in 2017.

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Introduction

Mentoring

Mentoring as defined by Campbell and Campbell (2005) is a relationship in which a more experienced individual of an organisation forms a relationship with a less experienced new individual to the organisation. The more experienced member gives information, support and guidance to enhance the less experienced member's probability of success at the organisation and further on (Colvin & Ashman, 2010). This dissertation focuses on peer mentoring specifically. Since there is no one accepted a definition of peer mentoring, three similar definitions of mentoring have been included here as they each bring in a slightly different component of what peer mentoring entails.

Murray (2001, as cited in Campbell & Campbell, 2005) defines peer mentoring as a situation whereby there is a one on one relationship in which a less experienced person and an experienced person engage in a learning process. On the other hand, Colvin and Ashman (2010) state that higher education peer mentoring directly focuses on the way an experienced student helps a new student to improve at an academic, social and personal level (Campbell & Campbell, 2005; Colvin & Ashman, 2010; Murray, 2001). The third definition is by Morgan and Collier (2006) who define mentoring as a complex, dyadic relationship whereby a mentor engages with the less experienced mentee or protégé by furthering their personal and professional development either in a business, school or family context. This is done through the provision of information, supportive, assistance, and guidance. This relationship based on observation, demonstration, conferencing and joint preparations (Karcher, 2005).

These definitions highlight that: a) mentoring takes place between an experienced and less experienced peer, b) through the relationship support and care is provided, c) the mentee develops skills and competencies, and d) the intervention enables the mentee to be successful academically and socially. Peer mentoring programmes have increased significantly and are largely accepted as worthwhile support and guidance interventions for at risk students at tertiary institutions.

Peer mentoring in tertiary education contexts

Whitetaker (2008) found that when students enrol at university, they are faced with new challenges and experiences compared to their high school learning. These challenges involve the experience of residing alone in a new environment, duration management, different

difficulties with teaching styles and homesickness (Fox & Stevenson, 2006). These difficulties can influence how good students adapt to their new tertiary education environment.

In addition, several factors also affect students' success such as failure to adjust to arising ways of academic and social life, the absence of self-motivation and well-structured goals (Fox & Stevenson, 2006). According to Whittaker (2008) many students have ongoing difficulties with the transition into college or university and these can result in students dropping out of tertiary education institutions. Mentoring as an intervention is one way that a university can try and assist students in combating these mentioned difficulties (Fox & Stevenson, 2006; Whitetaker, 2008). Peer mentoring aims to address the academic and psychosocial adjustment of students. These interventions focus on increasing the academic function of students with the objective that students will graduate from university (Budge, 2014; Fox & Stevenson, 2006; Whitetaker, 2008). Some peer mentoring interventions focus on academic content while others focus on the psychosocial aspect (DuBois & Karcher, 2005; Morgan & Collier, 2006).

The academic content entails senior mentors giving suggestions to the new students on ways to approach their studies and life at university. It is common for feelings of homesickness to occur during the first semester and thus students tend to experience a feeling of isolation (Morgan & Collier, 2006; Murray, 2001). Many cases have demonstrated that being mentored is linked with a strong bond between a senior mentor and a new university student and it is characterised by lower at risk acts such as violence, sexual activities, and drug abuse on campus (DuBois & Karcher, 2005; Murray, 2001). The psychosocial contribution of mentoring for students entails students' sense of belonging and peer group relationship (Fox & Stevenson, 2006). The students form close relationships with mentors, classmates and peer mentees on campus. This bond relationship leads to a student feeling integrated into university life (Fox & Stevenson, 2006).

This chapter will: i) discuss the underlying theory of mentoring as well as mentoring principles; ii) present the evaluand of the research; iii) present evaluation research and findings on mentoring and mentoring interventions; iv) critique the plausibility of the evaluand's programme theory; and v) present the evaluation questions that guided the evaluation research.

Underlying theories of mentoring

Social Learning Theory (SLT) underpins peer mentoring and is directly linked to how

peer mentoring programmes work. There are three constructs that underpin Social Learning Theory; namely: observation, imitation and role modelling. SLT proposes that people learn new ways of behaving through seeing or observing the behaviours of others (Badura, 1977 as cited in Thornton & Clutton-Brock, 2011). According to this theory, social learning can fulfil a role in shaping peoples' characteristics. This implies that more experienced members of a society (university) show the younger members how to behave. This then enhances the peoples' skills and shapes actions of groups, resulting to differed local cultures (Thornton & Clutton-Brock, 2011). Students learn by seeing the action or behaviour of others. For example, how the senior students study, utilise resources, and how they handle academic and social pressure can be learnt by a first year students.

SLT implies that when someone acts in a positive way towards their studies then the society (university) tends to view this individual as a role model (Thornton & Clutton-Brock, 2011). These role models are then able to act as mentors who can shape the behaviour of new students. In agreement to the above Warwick and Aggleton (2004) found that mentors act as positive role models for the new students. The new students want to be equally as successful academically as their mentors. This is achieved when a mentor assists a mentee in acquiring and maintaining skills and knowledge and leading by example (Thornton, & Clutton-Brook, 2011). The selected mentors' behaviours are then emulated by the new students (Thornton & Clutton-Brook, 2011; Warwick & Aggleton, 2004). The new students learn ways of behaving at the university from their respective mentors in terms of surviving, studying, making friends, communication and networking (DuBois & Karcher, 2002). During peer mentoring sessions mentees will directly observe their mentors and adopt their way of adjusting to university academically and psychologically (Riesman, 2004).

Overall, literature supports the plausibility of role modelling in mentoring programmes as an effective behaviour change mechanism (Thornton & Clutton-Brook, 2011; Warwick & Aggleton, 2004). Warwick and Aggleton (2004) found that senior peer mentors were appreciated and welcomed by their peers and were seen as credible sources for delivering information to them. In addition, peer mentors who were similar to peers with regards to values were found to be successful role models.

SLT relies on three key assumptions. Firstly, the information that the peer mentor shares with the mentee would increase their understanding of university life. Secondly, knowledge about university survival strategies will push mentees to take rational decisions for them to survive at the university. Thirdly, the students are able to make their own choices regarding

behaviour at university. Figure 1 gives a simplified depiction of the theory of change underpinning this approach.

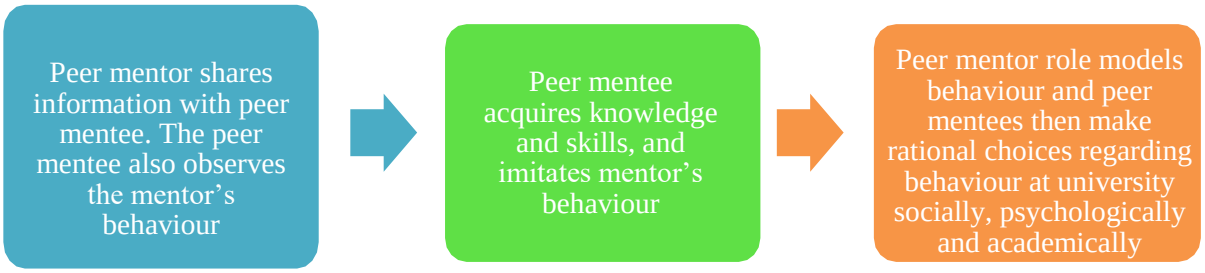


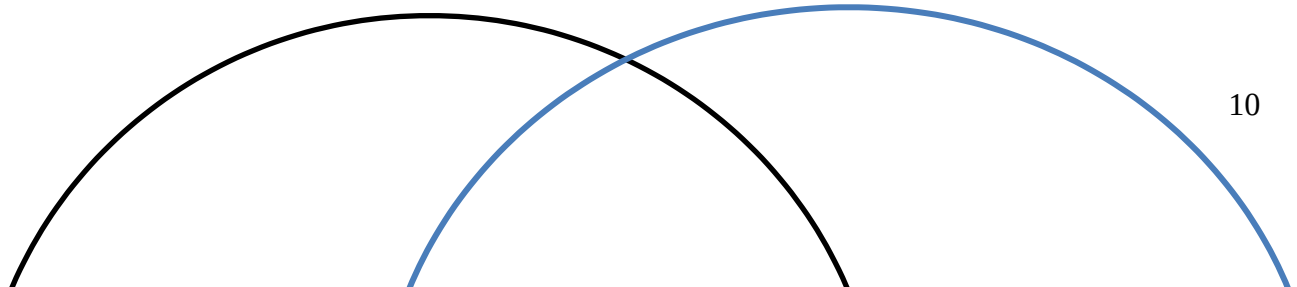
Figure 1. Social Learning Theory as it relates to Peer Mentoring.

The second theory related to peer mentoring is the Helper Therapy Principle Approach (Zimmerman & Parker, 2011). This theory helps with understanding how the peer mentoring relationship assists students (both mentee and mentor) to adjust and eventually succeed academically (Zimmerman & Parker, 2011). The Helper Therapy Principle Approach postulates that the peer mentoring process is beneficial for both mentees and mentors.

The mentor renders their skills, knowledge and experience to the new students through interaction (DuBois & Karcher, 2002). Through this relationship, trust is developed between the mentor and the new student. Thus the new students open up to their respective mentors about challenges they are facing concerning their academic and psychosocial life (Riesman, 2004). The mentor is a useful resource because they share effective ways to overcome these challenges. This can include advice, the mentor sharing their own experience, suggesting study techniques, and referral to available resources on campus (DuBois & Karcher, 2002; Riesman, 2004) all of which enable to the student to adjust better.

While peer mentoring has the goal of helping at-risk students, the relationship also has positive outcomes for the mentors (Zimmerman & Parker, 2011). According to the Helper Theory Principle Approach, the helper (mentor) also develops skills during their interactions with their mentees and they become open minded to continue helping in their communities with issues of crime, academic failure and teenage pregnancy (Du Bois & Karcher, 2005).

The approach, therefore, highlights the relationship between mentor and mentee is mutually beneficial and collegial. Figure 2 represents the Helper Therapy Principle Approach.



MENTOR	MUTUAL BENEFIT	MENTEE
Guides and motivates	Bond formed	Discuss problems and fears
Share information	Mentor develops mentorship skills	Share own experience
Network building		Seek guidance
Constructive feedback	Sharing of knowledge	Seek Support

Figure 2. A Diagram Depicting the Reciprocal Benefits from a Mentoring Relationship.

As shown above, the mentor provides necessary guidance and motivation to the mentee. The mentor also shares useful information about studies and support services available at the university. As a result, a bond is formed and the two share knowledge. In addition, the mentor also develops mentorship skills. Through the mentorship relationship, mentees and mentors receive dual support, and troubleshoot and solve the problem together, illustrating the helper theory principle approach. A mentoring programme at University of Cape Town (UCT) is the evaluand of this research. The next section gives an overview of the programme.

Programme Description

The Centre of Higher Education Department (CHED) at the University of Cape Town (UCT) implemented an intervention known as the First Year Experience (FYE) Programme for the Faculty of Commerce in 2014. The programme is an academic and social supportive co-operation between the University's faculties, departments and facilities for first year Commerce students. The collective efforts intend to: a) provide first years with a sense of belonging, b) help them to adapt to the University, c) enable them to develop skills that they will need throughout their time at the University, and d) offer academic and emotional support. Through various programme activities, the FYE programme aims to enhance the well-being of the first years and in so doing decrease high dropout rates and academic failure.

One of the interventions that form part of the FYE Programme is the Commerce Faculty's FYE Mentoring (FYEM) Programme. This sub-component offering of the FYE Programme is the evaluand for this research.

The FYEM Programme pairs a first-year student (mentee) with a more senior Commerce student (mentor). Each mentor is allocated between two to five mentees. The mentors then arrange weekly mentorship meetings which take place in a group setting. While the mentor is the facilitator of the session and provides advice and information to their mentees, having the mentoring in groups allows the mentees to form peer relationships with other students who they can also draw on for support and advice.

The overall desired outcome of the FYEM programme is to ensure that the mentees are provided with the necessary guidance and assistance to enable them to adjust socially to their new tertiary education environment. It is hoped that through the mentoring relationships new students will feel integrated at UCT and they will be knowledgeable about the resources available to them. This sense of integration and the increase in knowledge has a longer-term impact goal of enhanced academic performance and graduation.

The FYEM Programme runs formally from February to May (13 weeks over the first semester). It should be noted, however, that informal mentoring relationships may continue amongst the mentors and mentees if they wish to remain in contact for the remainder of the year. For those students who continue to struggle in the first semester, the informal continuation of mentoring is encouraged by the programme's manager.

During mentoring sessions, a host of topics can be discussed, but the mentors are

provided with a topic guideline for each week of the first semester. The suggested topics include acclimatisation to university, coping with stress, support services centres, test and exam preparation and social networking. This list of topics is provided to help mentors to deal with issues facing first year students. It is important to consider that the topics discussed are dependent on mentees needs. This implies that topics might differ from mentor to mentor based on the needs of their mentees.

For each mentoring session, the mentor will have an attendance register to track the students' participation in the FYEM Programme, as part of this form, the mentor also records what was discussed during the session.

The FYEM Programme is compulsory for Education Development Unit (EDU) students. EDU students are those who have been identified as needing additional support due to being previously disadvantaged or for having low matric scores. EDU students will graduate with the same degree as mainstream students but have an additional year added to the duration of their degree. The extra year allows these students to attend specialised classes and make use of a host of academic support services during their first year that prepares them adequately for the remaining years of their degree. Mainstream students who are interested in being part of the FYEM Programme are informed about the programme during their orientation week and are required to sign up for the programme. In 2016 there were just over 300 mentees and 136 mentors.

Client's Programme Theory

According to the UCT Annual Report (2014) in 2014 only 25.2% of the total enrolled UCT students successfully completed a degree or diploma at the university.

In 2012 the Council on Higher Education South Africa published a report article stating that 50% of South African students drop out of university before completing their studies (CHE, 2013). The underlying assumptions of the FYEM Programme respond to this need. It addresses the need for effective mentoring in the university. Student drop out has been linked to a number of external factors including feelings of homesickness and isolation which occurs during the course of the first semester (Murray, 2001). Other factors include due to family pressure, lack of peer support, natural incidences such as the death of a loved one and suicidal cases.

All of which result in students leaving the university (Morgan & Collier, 2006). Through establishing the mentoring relationship, the FYEM Programme aim to increase the institutional knowledge of the mentees and enhance their social and academic adjustment. Through the programme design and implementation, it hopes to bring about social engagement and peer relationships, academic engagement, confidence and sense of belonging and increased knowledge. It is proposed that this adjustment will bring about additional positive outcomes as seen in the client's programme theory in Figure 3.

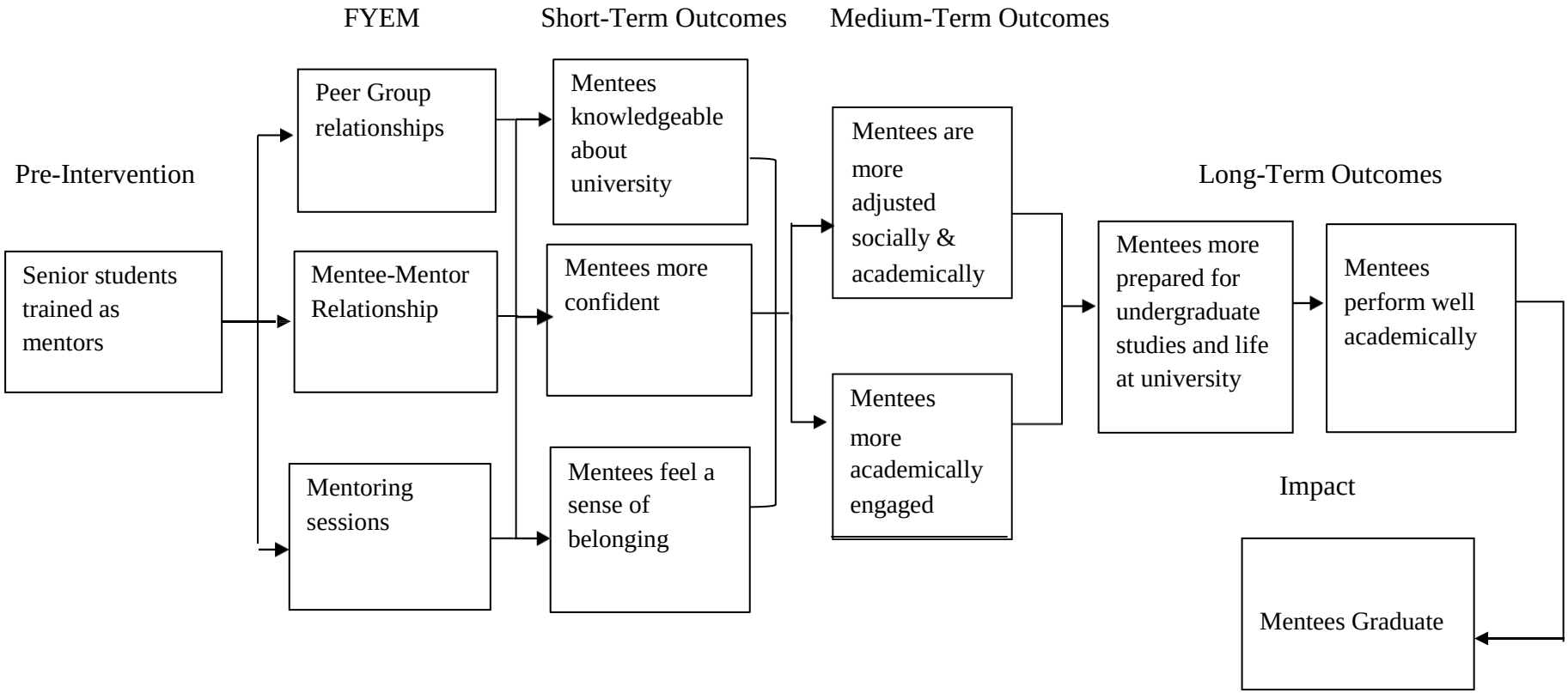


Figure 3. The Programme Theory of the Commerce Faculty's First Year Experience Mentoring Programme.

Before critiquing the plausibility of the theory the next section will present two of the most common known mentoring programmes as well as research and evaluation findings on mentoring programmes.

Two Globally Recognised Programme

Big Brother Big Sister Mentoring Programme

Big Brother Big Sister (BBBS) is one of the largest and popular programmes providing one on one and group mentoring in the United States of America (Foster, 2001). It provides a school-based mentoring programme to high schools. It works by matching and pairing senior volunteers with young people (mentees) who need friendship and support. The young people come from single headed households where the environment is not conducive for them to develop academically, morally, mentally and/or physically (Leach & Zepke, 2010). The BBBS programme is successful because it uses a matching technique where mentors are paired with young youth who come from similar backgrounds. The mentored young person easily relate to their volunteer mentor (Leach, 2010).

The young person and volunteer mentor meet once a week for a year. In the duration of this relationship, they attain supervision from professional mentoring personnel (Leach, 2010). The mentoring takes place during the day or lunchtime in the form of one on one or group medium (DuBois & Karcher, 2005). In the BBBS programme the mentors' action plays a pivotal role in forming close relationships with mentees. Through this relationship the mentee forms emotional attachment that allows them to open up and share and through that they can discuss problems and problem solve together (DuBois & Karcher, 2005). It is hoped that the volunteering mentors will have mentees who showed emotional engagement (DuBois & Karcher, 2005). BBBS believes that the mentoring bond would lead to increased academic performance of mentored youth. Secondly, that absenteeism of mentees from school will decrease. The main outcome that BBBS targets is that defiant behaviours such teenage pregnancy, alcohol abuse and violence are lowered (Foster, 2001).

Cross-Age Peer Mentoring Programme (CAPMP)

Cross-Age Peer Mentoring Programme (CAPMP) is a mentoring programme in which students in high school and university provide one on one mentoring to lower class standard school and university students (DuBois & Karcher, 2005). CAPMP targets students in schools characterised by increased rate of school dropout that perpetuates to their chance of school failure. The students classified as at risk are at greater risk of exclusion are provided with a

senior student mentor in an eight-week structured mentoring programme (DuBois & Karcher, 2005). The mentoring occurs after school and on weekends at the mentored students' school for the whole year. Within the component of this programme, there is the provision of eight weeks of structured peer mentoring by a mentor (DuBois & Karcher, 2005).

In this peer programme at risk first-year high school students are mentored and paired with senior mentors while all other first-year students in the programme are mentored in groups on a weekly basis (DuBois & Karcher, 2005). The mentees and mentors meet in groups of five or six to share information on the following subjects or topics: goal setting, peer influence, university connectedness and other related outcomes (DuBois & Karcher, 2005). The main aim of this programme is to increase the connection amongst the educators, mentees and other students. Additionally, the programme aims to increase students' academic outcomes through a supportive relationship with a mature peer mentor and learning school engagement and social skills (DuBois & Karcher, 2005).

Evaluation Findings of the BBBS and Cross-Age Peer Mentoring Programmes

Academic and Social Adjustment

Researchers found that mentored young people in the BBBS programme who were classified as being at risk either academically, behavioural or socially benefited from being in the programme. When paired with senior mentors who cared about the youth in their communities' mentees showed increased openness and willingness to partake in the programme (DuBois & Karcher, 2005; Zepke & Leach, 2010). This led to good relationships between mentors and mentees and ultimately made the programme successful.

It was discovered that there was a significance difference between the young people who received a mentor in comparison to the ones who didn't. Mentees called Little's who were paired with secondary school mentors called Bigs had increased academic performance relative to the non-mentored peers in a single measure (Foster, 2001). In addition, a decreased number of violent and absenteeism cases were reported in the school environment for the participants of the BBBS programme (Foster, 2001).

In one of the impact evaluation studies of BBBS more than 1100 youth aged 10-17 were studied over a period of two years (Zepke & Leach, 2010). The participants either belonged to a mentor or were assigned to a control group (Zepke & Leach, 2010). It was concluded that caring relationships between volunteer mentors and young people produced many positives. These included improved academic engagement, social adjustment, and

decreased behavioural issues i.e. drug abuse and violence. When researchers compared youth in BBBS with mentors to those in the control group, they found that youth in the BBBS programme were 60% less probable to be absent at school and to fail, and 25% less probable to use drugs and engage in violence (Zepke & Leach, 2010).

The CAPMP results showed that the programme had the greatest impact on high-risk students. These mentored students became confident about their studies, utilised available support sources at school i.e. the library, reported decreased drug usage, and had improved academic and social adjustment. According to the self-report data (surveys) obtained from the participants in the CAPMP the senior mentors played a vital role in the programme's effectiveness. The mentees attributed the outcomes achieved as a direct result to their mentors (DuBois & Karcher, 2005). Tremblay and Susan (2003) found that the Michigan university first-year students involved in the CAPMP where they received tips and cognitive training from mentors demonstrated increased engagement with their course content. At the end of the semester, mentees managed to do better in their tests and assignments compared to students not assigned senior mentors (Trembley & Susan, 2003). It is, however, not clear if the peer mentoring directly contributed to the academic results, as the researchers did not account for extraneous variables and whether these may have impacted on the students' academic outcome (DuBois & Karcher, 2005; Tremblay & Susan, 2003).

The above two successful and well-known peer mentoring programmes are school based. When these programmes were implemented appropriately positive outcomes were achieved. These outcomes included academic and psychosocial aspects. There are other studies that have been conducted at various universities on peer mentoring, these will be discussed in the next section.

Other Studies conducted on various university mentoring programmes

First evaluation study by Andrew and Clark (2011) showing a link between mentoring and academic engagement

The Paul Hamlyn programme is a peer mentoring that aims to acclimatise students into tertiary education through mentoring (Andrew & Clark, 2011). In this programme, mentors help students to know university life through supportive and safe peer relations. The programme's rationale is that during the early days of university life it is critical to positively shape the experience of first years in order for them to cope at university (Andrew & Clark, 2011). This is because their anxiety levels are high and they have a willingness to learn. Peer

mentoring gives that environment where students are able to find a balance between previous secondary life and university life (Andrew & Clark, 2011). The programme engaged students in four ways including i). provision of continuous social support, ii). academic support and peer mentoring, iii). transition iv). contributions of peer mentoring for mentors. Mentoring in this programme is focused on social, academic and professional areas (Andrew & Clark, 2011).

Andrew and Clark's (2011) research sampled participants in the programme from six higher education institutions. The six universities were based in Europe, North America, South America and Asia. From the evaluation, Andrew and Clark (2011) found that peer mentoring was an effective platform for experienced senior students to transfer generic academic support and guidance to first-year students. The second outcome achieved was that mentors also benefited from being part of the Paul Hamlyn Programme because they were able to develop the mentoring skills for the workplace (Andrew & Clark, 2011).

Second evaluation study by Fox and Stevenson (2006) showing a link between mentoring, academic performance and sense of belonging

The Peer Mentoring Project (PMP) at the University of Dundee was implemented out at the Accounting and Business Finance Department. The programme was targeted at students who were failing and underperforming academically (Fox & Stevenson, 2006). The programme's rationale was that through peer mentoring these students could improve their academic record (Fox & Stevenson, 2006). The programme theory assumes that first-year students who make use of advice rendered as part of the PMP will perform better academically (Fox & Stevenson, 2006).

The peer mentoring was made up of 3rd years students (senior mentors) who mentored 1st year students (mentees). After having received results from first year students those who are deemed to be failing or underperforming in the latter part of the year are then assigned a mentor in order to improve their academic performance (Fox & Stevenson, 2006). The role of mentors in this context is to provide a supportive role and transferring their own knowledge, skills and experiences about courses to the struggling students (Fox & Stevenson, 2006). Mentors provide information about the approaches they used during their coursework and examinations when they were in the first year to their mentees. The mentoring took place in a formalised environment session.

Fox and Stevenson (2006) evaluated the programme through focus group interviews. The focus groups were used to attain data from mentees' and mentors' reflections about the

success of the programme. According to the results in 2001/02 and 2002/03, it was perceived that a significance difference was evident between mentored students in the PMP compared to non-PMP participants (Fox & Stevenson, 2006). The mentees' academic performance improved slightly when they absorbed and practised mentors' advice. The mentors and mentees shared that their optimism increased and their sense of belonging because of their PMP participation (Fox & Stevenson, 2006). The first years who made use of the advice given could achieve academic competence. Furthermore, students' sense of belonging and confidence was ignited as they studied harder. While the results of the evaluation show the PMP programme to be successful they need to be read with caution because the results are subjective based on the perception of the mentors and the mentees.

Evaluation studies showing a link between sense of belonging and confidence

The studies by three researchers all found a link between sense of belonging and confidence amongst mentored students (Gardner, 2006; Goodenow, 1993; Osterman, 2000). According to the three researchers a sense of belonging at university shows the level whereby students feel personally accepted, respected and supported by others in the university (Gardner, 2006; Goodenow, 1993; Osterman, 2007). The results found that mentored students develop a sense of belonging which then leads to an increased academic confidence. The results found that students are able to interact in both lectures and discussion sessions (Gardner, 2006). These students found it easier to manage intense workloads as a result of being mentored. A possible reason for this finding is because students have been provided with tips on dealing with immense academic pressure from their respective mentors (Goodenow, 1993; Osterman, 2007; Gardner, 2006). In addition, students that participated in the mentoring programme were able to debate with their colleagues. For example if a mentee disagreed with something, they voiced their opinions. Thus the confidence of students was intensified in peer relationships. The confidence of students leads to them being integrated better at the university. They formed social and academic networks with their fellow students.

Furthermore, through peer mentoring students felt respected, and personally accepted by others in the university context. As a result, this lead to positive experiences such as joy and happiness amongst students and their engagement with academics (Gardner, 2006). The

happiness of the want for belongingness resulted in behavioural, emotional mental and physical wellbeing (Gardner, 2006).

Research findings highlight that students who mostly experience a sense of belonging at universities and colleges report high levels of enjoyment, interest, happiness, and more confident in participating in learning duties (Furrer & Skinner, 2003). This makes the students not to feel isolated and decreases dropout rates and academic failure. While those who feel isolated experience boredom, frustration and anguish in times of academic activities and that impacts academic outcomes (Furrer & Skinner, 2003). Thus we can conclude that mentoring will have an impact on academic outcomes of mentees.

Evaluation studies showing the link between mentoring and increased knowledge

A study by Osterman (2007) found that several studies on peer mentoring at universities leads to mentees increased knowledge (Osterman, 2007). The students in their first and second year of study were assigned mentors at each of the three universities in the United Kingdom. The mentor was assigned to two mentees. This mentoring relationship took place within the Taxonomy Department within the Accounting Faculty (Osterman, 2007).

The research found that mentors shared specific knowledge and experiences which contributed to mentees learning and skill development (Fox & Stevenson, 2006 as cited in Osterman, 2007). The mentors discussed the organisational resources available on campus with mentees (Osterman, 2007). For example, mentors would tell mentees were to go for support and how to cope with stress. The mentors are knowledgeable about campus life, thus they are able to provide tips from their own personal experiences to mentees (Osterman, 2007). This increased knowledge resulted in mentees adjusting psychosocially and academically at university.

The mentees are then able to relate to the mentors through this process, and the mentees are more knowledgeable (Osterman, 2007). These students are more likely to work extra hard and challenge themselves on projects that require application and integration. As a result of being more knowledgeable students are more engaged (Osterman, 2006). Through having increased knowledge students connect socially with fellow student mentee, mentors and lecturers, gain familiarity with the university setting and have knowledge of library services (Fox & Stevenson, 2006; Osterman, 2007). All of this contributes to the student's increased engagement. Mentored students in a university with high academic demand are more likely to work hard and challenge themselves on projects that require problem solving and application

(Fox & Stevenson, 2006).

Mentoring leads to increased graduation

Findings support the argument that peer mentoring increases the likelihood of students' graduation (Gardner, 2006; Fox & Stevenson, 2006; Campbell & Campbell, 2005). Many universities and colleges have shown this evidence (Gardner, 2006). According to Fox and Stevenson (2006) students who have been mentored since the beginning of their first year in university tend to develop confidence as time goes on. They work extra hard as their desire to study is stimulated by their mentors. The mentors share their experiences of their first year and how they survived exams, assignments and tasks (Campbell & Campbell, 2005). Increased graduation rates have been observed in peer mentoring programmes where at-risk students received mentoring continuously up until they reach 3rd year (Fox & Stevenson, 2006; Gardner, 2006). The mentored students tend to develop resilience and persistence towards their academic journey at university which leads to their graduation at the end (Fox & Stevenson, 2006).

Summary results

The articles reviewed have found that peer mentoring enables first year's students to be more academically engaged, to have good peer relationships. The sharing of knowledge between mentor and mentee means there is increased understanding of available services and support that can be provided to mentees. Through the building of this relationship, the mentee has an increased sense of belonging in the university environment. This results in their academic performance increasing which ultimately leads to the likelihood of graduation.

The various studies conducted at universities show that through peer mentoring first year students were able to acclimatise to university life. Peer mentoring thus helps first year students to do well academically and psychosocially. Having reviewed this literature and finding that these outcomes including academic adjustment, increased knowledge, psychosocial adjustment and sense of belonging, are attainable through peer mentoring, the FYEM programme’s theory is deemed plausible.

The next section highlights the evaluation questions for this research.

Design evaluation questions

According to social science literature and research, a design evaluation explains how

an intervention's activities and design contribute to the desired results (Rossi, Freeman, & Lipsey, 2004). The design evaluation helps to identify practices, timing, and responsibilities for completing a desired programme outcome. It also assists to allocate and invest resources accordingly (Rossi et al., 2004). In the past years, the FYEM programme has been internally evaluated by the programme manager, this time it was decided that it would be valuable to obtain new insights from an external evaluator. It is believed that the evaluator would help in improving the design of the mentoring programme for the upcoming year (2017). The questions were formulated with the client and followed specifically the information needs of the client in terms of the design for 2017.

The design evaluation questions for this evaluation were:

1. What is the most appropriate mentor selection criterion?
    1.1 Should mentors be screened and selected based on specific criterion, or should volunteering be the sole selection criteria?

2. What is the most effective duration of tertiary education mentoring programmes?
    2.1 How long should be a programme run for? Is four months sufficient?

3. How effective is compulsory mentoring compared to a non-compulsory one?
    3.1 Should mentoring be compulsory for first-year students or would an OPT-OUT method be more appropriate?

4. What is the most effective method to assign mentors to mentees?
    4.1 Should students choose their mentors or should they be randomly assigned?

5. What is the most effective medium for a mentoring relationship?
    5.1 Should mentoring take place one-on-one or in groups? And if the latter, what is the ideal ratio?

Short-term outcome evaluation questions

An outcome evaluation can be described as a process aimed at assessing the programme's effectiveness in producing change (Rossi et al., 2004). The programme manager needed to understand whether the FYEM programme is achieving its intended short term outcomes.

Short term outcome evaluation is interested with the causal impact of the programme which mostly involves measuring whether the programme achieved its goals (Rossi et al.,

2004). Donaldson (2007) argues that an outcome evaluation is critical to conduct because it highlights if the programme is effective in meeting its intended objectives. The outcome evaluation questions guiding this evaluation were:

6. Has the programme helped the students (mentees)?
    - 6.1 Do the mentees have improved academic adjustment due to the FYEMP?
    - 6.2 Do the mentees have increased academic engagement?
    - 6.3 Do the mentees have an improved overall satisfaction with the university?
    - 6.4 Do the mentees demonstrate improved peer-group interactions?
    - 6.5 Do the mentees' have an improved sense of community?
    - 6.6 Do the mentees have increased academic confidence?

7. Are the above mentioned short-term outcomes sustainable?

Method

The following section on method is classified into two parts: the method applied for the design evaluation (Section 1), the method applied for the short-term outcomes evaluation of the FYEM programme (Section 2).

Design Evaluation Method

Research Design

An assessment of plausibility of the programme's theory was conducted using an exploratory research design. The evaluator carried out an extensive literature review, analysing findings from social science literature and research to answer the design and theory evaluation questions.

Literature Review

In order to gain good academic research articles, the electronic system databases: Google Scholar and EBSCO and host were utilised. The search process involved the application of key words such as, mentoring, peer mentoring, faculty mentoring programme, tertiary institution mentoring, mentoring interventions, evaluation, and effective mentoring programmes at tertiary institutions. Provided various definitions and reviews on the subject of mentoring, it's vital to consider the boundaries of the review. In the context of this review, the phrase, mentoring, referred to the relationship whereby a more experienced senior student (mentor) helped to guide a less experienced first year student (mentee) (Campbell & Campbell, 2005). This definition was consistently applied and in conjunction with other definitions in the studies familiar in this paper. The evaluation research articles and studies chosen for this research were not older than eighteen years.

The social science literature found was then investigated to assess the programme's design questions against contemporary best practice in the field (Donaldson, 2007; Rossi et al., 2004). This led the researcher to summarise the findings from similar programmes and draw conclusions about the programme design principles and guidelines that are perceived most effective in peer mentoring programmes. These results and recommendations are outlined in the next chapter.

Short-Term Outcomes Method

Research Design

A positivist paradigm was utilised because it allowed the evaluator to be objectively involved in the data collection and analysis. The design was also quantitative supporting the use of the positivist paradigm. A quasi-experimental, non-equivalent group, with three repeated measures was chosen for the FYEM programme. The quasi-experimental design was adopted because there was no pre-test because the programme's target audience are first-year students. Given that the evaluator was testing university related variables-first year students would not have had a baseline of this knowledge, experience and attitudes. Thus it was assumed that they did not have the intended outcomes of the programme before attending mentoring sessions. There was a comparison group of first year students who were part of the FYE programme but did not form part of the FYEM programme. In order to answer the short term outcomes questions a questionnaire was administered to FYE first year students and mentored students three times during the year. This was to compare the psychosocial behaviours of mentored students and FYE students who were not part of the mentoring programme.

Sampling and Participants

The participants in the FYEM Programme were students from the Commerce Faculty at UCT. The EDU Commerce students automatically form the part of the mentoring programme. While the first year Commerce students did not. The demographics of the sample (n = 37), made up of FYEM students (experimental group; n=13) and FYE non-mentored (control group; n = 23) students were reported as follows. The average age of 1st year students in the sample was 18. Thirteen students were completing BCom financial accounting degrees which the remainder (n=24) were registered for actuarial science. The sample was racially diverse with African (50%), Coloured (14%), Indian (11%), White (24%) and other (1%) population groups represented. Gender was approximately equally distributed among the sample with 45% males and 55% females.

Due to the design the responses of the students had to be matched for each repeated measure. This, however, lead to attrition (highlighted in more depth in the next chapter). Table 1 shows the number of students who completed the matched repeated measures. The first measure (O1) occurred in May 2016 and post-test (O2) occurred at the end of June 2016 and the post post-test (O3) was administered at end of July 2016.

Table 1

Number of students in the sample at each of the test time points

Observation and Measure	Number of Respondents
O1 and O2	37
O2 and 03	5
O1, O2 and O3	14

Data Collection Measures

To collect data on the expected outcomes of the FYEM Programme a questionnaire was developed (see Appendix A). The questionnaire had a total of 80 questions. It comprised of the following subscales:

Student Engagement: This particular subscale consists of the 17-item Utrecht Student Engagement scale (UWES) developed by Schaufeli, Gonzalez Roma, and Bakker (2002). The UWES has 3 subscales namely: vigour (VI; items 1-6), dedication (DE items 7-11), and absorption (AB: 12-17). The participants responded to the questionnaire on a 5-point Likert ranging from strongly disagree to strongly agree. Wild, Flisher, Bhana, and Lombard's (2005) found the UWES to have good internal consistency and sufficient reliability. The Cronbach alpha's for the 3 subscales were DE= 0.84, VI=0.78, and AB=0.73 (Schaufeli, et al. 2002). In order to contextualise the sub-scales to the study, items which specified ‘job' or ‘work' were changed to ‘study'. For example, (DE) "I am proud of my studies" (VI) "I can continue studying for very long periods at a time", (AB) "When I am studying, I forget everything else around me".

Peer Group Interaction: measuring interaction was chosen from Academic and Social Integration scale (Pascarella & Terenzini, 1980). The scale is deemed reliable because of its Cronbach alpha=0.84 (Pascarella & Terenzini, 1980). Some of the sample items are "The student friendships I have developed at this university have been personally satisfying" and a reverse coded item "Most students at this university have values and attitudes different from my own".

Sense of Community: A 40-item Sense of Community Scale was developed by Doolittle and MacDonald (1978). The scale was later shortened to the Brief Sense of Community Scale

(BSCS) (Peterson, McMillan, & Speer, 2007). The purpose of the scale is to investigate the attitudes and behaviours in communities (university). The scale measures sense of community by asking questions in three areas: fulfilment, influence, and emotional connection (Peterson, McMillan & Speer; Nowell & Boyd, 2010). The scale has a high internal consistency (Cronbach's Alpha=0.92) (Peterson et al., 2007). Participants who have a high score on BSCS are perceived to have a high sense of community. An example item from the scale is: "I feel like a member of this university". Students needed to rate their level of agreement with the items on a 5-point Likert scale.

Academic Confidence Scale: Sander and Sander (2003) 24-item scale was used to measure the academic confidence of participants. The response options ranged from 1-5 (not at confident to very confident). The scale has high internal reliability, with a reported Cronbach Alpha of 0.88 (Sander & Sanders, 2003). An example of an item is: how confident are you to: "Understand the material outlined and discussed with you by lecturers".

Overall Satisfaction with University: Sedlacek, Helm, and Prieto (1997) established the Cultural Attitude and Climate Questionnaire to assess overall satisfaction of students with the university. A sub-set of this scale, overall satisfaction, was used to measure overall satisfaction with the university. This scale has high internal consistency, with a Cronbach Alpha of 0.78 (Mohr & Sedlacek, 2000). A 5-point Likert scale response was utilised.

Academic Adjustment: The Academic Adjustment Scale developed by Baker and Siryk (1989) was utilised. There are 24 items for the academic adjustment scale. The items were chosen based on their relatedness to the research. The scale has a high internal consistency (Cronbach Alpha=0.88) (Hurtado, Spuler & Carter, 1996).

Procedure

In order conduct the short-term outcome evaluation the researcher firstly identified the various subscales based on the expected outcomes of the programme. A questionnaire was then developed and sent to the FYEM programme manager for approval. A consensus was reached thereof. A proposal for this evaluation study was approved by the University of Cape Town's Commerce Faculty's Ethics in Research Committee. Once approval was sought permission to use UCT students was obtained from the Executive Director of Student Affairs. Following all approvals, the questionnaire was hosted on Qualtrics and sent out three times during the year April, May and July. An announcement was placed on the Vula site for the Commerce first year experiences programme. The announcement had a link to the online Qualtrics survey that

students could click and then access. The research was incentivised so each student who completed the three surveys stood in line to win a Cavendish voucher. Due to the fact that the students were required to fill in three sets of the questionnaire at three different times the evaluator asked for student numbers to pair O1, O2 and O3. After the first announcement for each time that it was placed on Vula the evaluator sent a week later but the questionnaire remained live for two weeks. Once the questionnaires were closed then the evaluator collated the data into a data file using the software package called Statistical Package for the Social Sciences (SPSS).

The documents to use UCT students in the research were completed. Thereafter the Department of Student Affairs and the Executive Director gave permission. The other process involved creating a questionnaire online using Qualtrics. The first measure was done in Mid-April. In order to do this, an announcement was placed on Commerce FYE Vula site with the link to the survey. This participation was voluntary and that participant stood a chance to win a price. The questionnaire stayed open for two weeks. A second questionnaire was opened Mid-May and the same procedure was applied.

The last questionnaire occurred in Mid-July which was after vacation. The same procedure in terms of announcements and time frame were applied.

Data Analysis

All Commerce first years were invited to respond to the survey. Once the responses were collated they were sorted into the experimental group (those who were on the FYEM Programme) and the control group (students who did not receive mentoring). Results from both groups were then analysed and compared to assess if there are significant differences in the outcomes. The third post-test conducted in July was compared with the two repeated measures undertaken in April and May to check if the outcomes were sustainable. The analysis of data utilised descriptive statistic including the mean and standard deviation together with inferential statistics in the form of paired sample t-tests and ANOVA to investigate the difference in the FYEM programme outcome.

Results

The results chapter is presented in two parts. The first part presents the results of the design evaluation conducted, the second presents the results of the short-term evaluation.

Design Evaluation Results

1. What is the most appropriate mentor selection criterion?

Hopkins-Thompsons (2000) state that the selection and screening process for mentors and mentees is a critical beginning stage in mentoring. A typical mentor should be highly knowledgeable and skilled in listening, analysing, conveying messages, negotiating and giving feedback (Gray & Smith, 2000; Hopkins-Thompson, 2000). It is also strongly highlighted that they need to believe in the personal and professional development of their mentees (Kaye & Jacobsen, 1995). In considering those who serve in such responsibilities is not merely an exercise in choosing who has spent a long time at the university. Instead, rigorous attention should be concentrated on those who possess the skills to perform the duty (Mclean, 2004; Ragins, 1997). In order to do this successfully, there is a need for a clearly stated list of criteria for selection.

There are certain characteristics that make a good mentor. According to Gray and Smith (2000) mentees state that a good mentor is someone who is approachable, enthusiastic, loving and friendly. Furthermore, a good mentor is described as a good role model because they are organised, self-confident, professional and caring, knowledgeable about courses, have realistic expectations of mentees and are able to provide students with rigorous feedback. Terrion and Leornard (2007) explain that certain characteristics are significant in a sense that potential mentors must have them to be considered competent for the mentoring duty. They are as follows:

i) Mentors' ability to commit to time: It is recommended that hard work must be applied to assist peer mentor candidates in assessing their seriousness to commit to time. Mentoring programmes that precisely depend on university student mentors are more successful when mentors are requested to show how they anticipate fitting the mentoring hours into their schedule (Pitney & Ehlers, 2004).

ii) Mentors' academic achievement: it is recommended that student peer mentors have attained a standard of academic success that gives them credibility among the students they will be mentoring and coaching. Being seen as credible gives students a belief that the mentor is capable and will assist many students to cope academically through sharing useful tips and

techniques. Further research is needed to assess the outcomes to the peer mentoring when a mentor is a student who failed early in their academic journey but learnt to prevail. In such a case the potential mentor may have enough experience to become an effective mentor. This is because the mentor can share insights on how to survive at university when faced with academic pressure or failure (Allen & Eby, 2002). The mentees may learn how to develop resilience and confidence.

iii) No need for prior mentoring experience: Results show that peer mentors in the university do not need formal experience. This is often the case, with majority of mentors demonstrating that besides tutoring experience, they didn't have mentoring experience (Ragins, 1997). Rawana (2013) did find, however, that mentees who had experienced a positive mentoring relationship previously are more probable to engage as mentors in future.

iv) Matched programmes of study: Mclean (2004) states that mentees' satisfaction with the peer mentoring relationship is affected if they share the same study programme as their respective mentors. Mclean (2004) discovered that the university medical students mentored by a mature student in the same study programme had greater satisfaction with the relationship than those with a mentor in a variant programme. According to Ragins and Cotton (1999) mentors with the same experience and learning type render good advice to mentees. Similarly, other studies have highlighted that mentees are probable to follow mentors with similar desired academic goals and career paths (Pitney & Ehlers, 2004).

v) Empathy: Allen and Eby (2002) found that students who were highly empathetic were in a good position to foster the trust that is critical to the psychosocial spectrum of mentoring. Empathy is depicted by mentees as one of the highest characteristic that a mentor must possess.

vi) Personality: Rawana (2015) states that one of the obstacles in mentoring programmes is a personality mismatch between the mentor and mentee. Therefore, it is important that the duo has shared values, and that their personalities are congruent because it this enabled the mentee to relate better to their mentor.

vii) Qualities of Mentors: Similarly, to what was already stated above Rawana (2015) identified a number of characteristics that mentors must have. They comprise of approachability, good listening skills (including non-verbal cues, being able to listen to things that are not said), responsibility, being a positive role model to their mentees and acting as an ambassador for the college or university (Mclean, 2004; Rawana, 2015).

viii) Integrity: Rawana (2015) depicts that mentors must be perceived by lecturers and peers as individuals of unquestionable personal and professional integrity, whom are able to form relationships based on trust and respect. Furthermore, it is vital that the relationship is respected by all participants at university, as ethically confidential.

xi) Facilitative Attributes: This element comes with optimism and the ability to share ideas. Individuals who volunteer in their respective communities, at schools, church and charity homes tend to have an increased interest in facilitating mentoring sessions (Ragins & Cotton, 1999). The mentors who have been youth activists and leaders have lots of experience with informal or formal facilitation process and this makes good peer mentors in the university context.

The literature suggests that in order to be effective mentors need to have certain characteristics and qualities. This points the notion that selection of mentors is important. People can volunteer to become a peer mentor, but then a selection process should be undertaken to ensure that the mentors possess the required qualities, namely: a willingness to commit to time, academic achievement, empathy, integrity, good listening skills, approachability, and facilitation attributes. The literature also suggests that mentors should be in the same programmes of study as the mentees with whom they may be paired. Taking all of this into account will increase the likelihood of a successful mentoring relationship.

2. What is the most effective duration of tertiary education mentoring programmes?

The previous section highlighted that mentor selection relates to mentorship effectiveness. It is important to note, however, that such a relationship can be moderated by mentorship length (duration). According to Duck's Filter Theory of Friendship, the length of the mentorship can influence the relationship between similar attributes and mentoring outcomes for mentees (Turban, Dougherty, & Lee, 2002). Based on this theoretical framework, the more the mentor and mentee exchange information over time, the more likely that individuals with similar characteristics will remain as friends (Turban et al., 2002). As time goes by, individuals of the relationship discover more about one another and characteristics

like group climax and clicks become more pervasive (DuBois & Silverthon, 2005; Turban et al, 2002).

In a meta-analysis by Karcher (2005) research concluded that mentees experience extra benefits with a longer term mentorship relationship (Grossman, 2002; Karcher, 2005). This was found in the Big Brother Big Sister Programme in South Africa where the impacts on youth (mentees) outcomes were increasingly higher when the relationships persevered for a longer duration (Grossman, 2002).

Another reason highlighting the importance of an endured relationship is because the mentoring relationship undergoes a four tier hierarchy (Jekielek, Moore, Scapura, & Hair, 2002). Tier 1 is educating (sharing inside information), Tier 2 includes personal and psychosocial support (mostly through listening and responding), and Tier 3 gives organisational intervention (rendering mentee protection and public support). The last and highest level is creating professional advancement. In order for the mentoring relationship to be effective, mentor and mentee should progress through all 4 levels and this requires time (Jekielek et al., 2002). There is consensus, however, that the length of particular phases or levels in the mentoring relationship depend on the individuals involved (Karcher, 2005). Succession through each phase detects the occurrence of the next phase, but all mentoring consists of a beginning and an end, which varies based on the individuals' and functions involved (Terrion & Leonard, 2007).

Similarly, research had found that mentorship that continued for more than twelve months resulted in significant elevations in self-concept, viewed social acceptance, viewed academic competence, family relationship quality and college value (Karcher, 2005). Therefore, it is argued that short-lived relationships have serious impacts on youth, and thus the true effects of peer mentoring grow as the relationship continues (Karcher, 2005; Grossman, 2002). In agreement, Jekielek et al, (2002) point out those students in longer lasting peer mentoring interactions tend to display better outcomes. The analysis of the Cross Peer Mentoring Programme found that mentored youth in relationships that lasted for more than twelve months experienced more optimism engaging with their schoolwork, were less absent at school, had higher academic grades, and were less risky to use alcohol and drugs.

On the contrary, mentoring relationships that terminated in less than three months demonstrated declines in certain areas of functioning including self-esteem and peer relationships (Karcher, 2005). Grossman (2002) explains that mentors and mentees who

eliminated or terminated the mentoring relationship within three months experienced declines in their self-worth and academic competence. Furthermore, students in one on one mentoring relationships whose relationships endured for three to six months showed no significant progress in social, academic, or substance abuse outcomes.

In addition, students in mentoring relationships lasting less than three months experienced less confidence engaging their schoolwork and had a decreased self-worth even though they acquired higher grades (Jekeliek et al, 2002).

These findings highlight the added value for longer lasting mentoring programmes. It is recommended that in cases where mentoring programmes are designed to be short term and have destined termination dates, youth be prepared for the relationship ending (Karcher, 2005; Turban et al, 2000). A peer mentoring programme targeting strong peer relationship must last until the relationship starts to show (Grossman, 2002). A mentoring programme desired at helping students survive the first year in a programme should be one year (Grossman, 2002).

Since the Commerce FYEM Programme is for first year student's a year duration would be more appropriate as opposed to the short version that is currently in place. The literature supports this argument because the short-term mentoring programmes are not working well in terms of helping the first year students to be psychosocially established. Whereas mentees in the long term mentoring programmes demonstrate increased academic, social and psychological wellbeing.

3. How appropriate is compulsory (formal) mentoring?

The majority of first-year students experience various challenges including academic, psychosocial, emotional and mental (Storrs, 2008). As a result, colleges and universities have developed compulsory mentoring programmes for first-year students (Wells & Grabert, 2004), but is this effective? Wells & Grabert (2004) found that mentoring was effective in providing psychological and emotional support, assistance for setting up objectives and resulted in increased knowledge and academic performance. Their peer mentoring programme, however, gave students an option to opt-out as the year proceeded. Which meant that students who were doing well academically, psychologically and emotionally could request to leave the mentoring programme (Wells & Grabert, 2004). Students who were having challenges, however, remained until the end of the one-year mentoring programme. According to Wells and Grabert (2004) students did not perceive compulsory first year mentoring as forced but rather as an opportunity to be helped in the transition into their first year. Similarly, Young & Fry (2008)

suggest that an opt-out option should be rendered at the end of the first semester. As the first year students get familiar with the university environment they develop a sense of dependence, and are thus more likely to opt out the programme (Young & Fry, 2008).

On the contrary, Storrs (2008) argues that formal mentoring should be compulsory for all first year students for the entire mentoring programme. Students need continuous support at all levels. It was discovered that students who were doing well academically experienced other issues emotionally e.g. the death of a loved one. Most of these individuals did not seek out help from the faculty's offerings because they had opted out of the mentoring programme (Storrs, 2008).

Allen and Eby (2002) found that with informal mentoring relationships, the mentors and mentees engaged based on their own will, whereas making the mentoring programme compulsory resulted in formally forced relationships. This compulsory relationship involved mentees being reluctantly recruited and coercively forced into the relationship and process. Ragins and Cotton (1999) found that being pressured to be mentored by a mentor compared to being mentored out of free will can result in a decreased intrinsic motivation. According to Gray and Smith (2002) formal-compulsory mentoring relationships that are dynamic and enable frequent conversations have resulted in improved psychosocial mentoring and quality of relationship.

The literature seems to support compulsory mentoring programmes as they are effective for first year students in terms of their emotional, academic and psychological transition into university. The research also, however, states that this formal relationship should be flexible and students should be given an option to opt-out of the programme after.

4. What is the most effective method to assign mentees or mentors?

In order for the mentoring relationship to prevail a good match between mentor-mentee is necessary. This brings into question whether mentors and mentees should be assigned to each other or whether they should engage in self-selection for the mentoring relationship. Research shows that mentors and mentees who have been assigned to each other to be less effective than self-selection. According to Kaye and Jacobsen (1995) mentors who are assigned mentees randomly tend to develop short-term relationships.

These short-term relationships could be due to the students not feeling connected to their mentors because of different personality types, programme of study and background

(Kaye & Jacobsen, 1995). Thus unassigned mentoring relationships in universities are more probable to be effective compared to assigned mentorships (Ragins, 1997). Mullen (1994) found that mentees tend to be attracted to mentors whom they see as interpersonally competent. Similarly, it is said that mentors are also attached to mentees whom they see as suitably competent.

Mullen (1994 as cited in Turban et al., 2000) found that mentors were more probable to seek data from their mentees if they perceived them suitable. In a study by Mullen (1994) it was discovered that perceived mentee competence was positively linked to mentors helping the mentee in both psychosocial and academic purposes due to the mentor viewing the mentee as a lower risk.

In support, Pitney and Ehlers (2004) argue that mentees in unassigned mentoring relationships showed higher levels of student engagement, academic confidence and improved peer social interaction than mentees assigned mentoring relationships. (Pitney & Ehlers, 2004). Similarly, Turban et al (2000) findings show that mentee-initiated relationships involved more integrated mentoring purposes. This is because mentees select mentors based on the similarity-attraction framework (Kaye & Jacobsen, 1995).

According to Turban et al (2000) the similarity-attraction framework explains that individuals are attracted to and possess greater effect for those viewed to be like themselves (Byrne, 1971; Lincohn & Miller, 1979; as cited in Turban et al, 2000). This similarity has been shown to be a strong predictor of initial assessments of mentorship quality and values about the long-term ability of a relationship (Turban et al, 2000).

Literature supports the notion that the most effective way method to assign the mentor to mentee is through self-selection. This means giving mentees an option to select mentors whom they deem to possesses the skills, knowledge, characteristics and programme of study similar to themselves. It is, however, argued that whether assigned or self-selected, mentors and mentees should have some flexibility to allow changing mentor/mentee if the pairing is not functioning (Ragins, 1997).

5. What is the appropriate medium for mentoring programme?

Mentoring can occur one-on-one or in a group setting. Many researchers argue that group mentoring provides benefits to mentees beyond those rendered in the one-on-one mentoring approaches (Kram & Isabella, 1985; Kaye & Jacobsen, 1995).

According to researchers, group mentoring gives a safe and secure platform for mentees who are uncomfortable meeting one-on-one with a more senior student (mentor) (Kaye & Jacobsen, 1995). It eradicates barriers relating to personal bond. It provides for multiple viewpoints, exchanges of ideas and assessments of problems from more than one source.

Furthermore, Kram and Isabella (1985) found that through group mentoring positive peer relationships are formed which are more likely to continue beyond the formal mentoring programme. The implications of positive peer relationships include academic networking, access to information and an increased sense of belonging (Kram & Isabella, 1985).

In agreement, Carvin (2004) detected seven advantages of group mentoring approach: i) flexibility, ii), interdependence, iii) broader vision of organisation (university), iv) shared knowledge, v) widened external environment, vi) developed team effort and skills, vii) personal development.

Kaye and Jacobsen (1995) even recommend putting four to six less experienced mentees with a mentor to tackle subjects and analyse circumstances to result in personal and academic improvement (Kaye & Jacobsen, 1995). Crostwaite (2007) hypothesised that group mentoring might strengthen technical knowledge, team engagement and time management skills in first year chemical engineering students. The respective groups consisted of 4-6 mentees assigned to a mentor. The results of the survey study highlighted increased knowledge sharing and optimism amongst first years. The data analysis demonstrated that the mentees had a significant higher peer attachment trust score at post-test than pre-test (Crostwaite, 2007).

On the contrary, Carvin (2004) states that few evaluations for one-on-one mentoring have been reported. One-on-one mentoring is effective when dealing with behavioural issues, especially with students from impoverished households and dysfunctional families. This is where the counselling intervenes. The other disadvantage with this approach is that it reaches a small scale of students in need. Hence it is not the favoured approach for mentoring at universities and colleges (Crostwaite, 2007; Kaye & Jacobsen, 1995). Overall, the effective mentoring medium is group mentoring.

The literature demonstrates that students feel more open to sharing in a group than a one-on-one approach. There are many positive outcomes linked to group mentoring including shared information, strong peer relationships, academic achievement and a sense of belonging. With a large number of first years in the Commerce Faculty, it is recommended that group mentoring be applied. This next section aims to assess the attainment of short term evaluation

outcomes including: i) has the programme helped students? And ii) did the students continue to improve?

Short Term Outcome Evaluation Results

The reliability and validity of the questionnaire was not analysed as part of the research. The reason for this decision was due to an insufficient number of respondents in relation to the number of items in the scales used.

It is important to note that the number of paired data sets were very low. Results from O1 were compared to O2 in order to assess improvements in psychosocial behaviours of the students, however, only 33 students completed both the O1 and O2 measure. The O2 measure was compared to the O3 measure in order to assess sustainability, however only five students completed both the O2 and O3 measure. Lastly the results from O1 and O2 and O3 were compared. Fourteen students completed all three measures. Due to these numbers being so low technically speaking the evaluator shouldn't be conducting t-tests and ANOVA's because the amount of power is too little. These results are unreliable given the low sample size and thus they must be interpreted with caution. However, given that this is a client report as well as a Master's research project it is important that the evaluator show his understanding of the processes that would be used in the real-world.

6. Has the programme helped students?

In order to assess whether the programme helped the students, a paired sample t-test was applied. The cumulative means of various psychosocial attributes from the first measure (May 2016) was compared to the cumulative means of the same variables at the post-test (June 2016) to establish whether there was a significant difference. It was hypothesised that the five variables would be significantly higher between Time 1 (first measure) and Time 2 (post-test).

The results of the five paired sample t-tests are shown in Table 2. As depicted, in Table 2 the cumulative means for the brief sense of community and overall satisfaction decreased from first-test to post-test, whereas the cumulative means for engagement and academic adjustment increased. These differences were, however, not significant.

Table 2

Cumulative means for the five paired sample t-tests (O1 vs O2)

	Mean	**S.D**	**t (10)**	**p**
Brief Sense of Community One	3.76	0.43	1.09	0.30
Brief Sense of Community Two	3.43	0.90		
Peer Interaction One	3.29	0.44	-1.09	0.049*
Peer Interaction Two	3.43	0.90		
Engagement One	3.21	0.78	0.97	0.36
Engagement Two	3.42	0.48		
Academic Adjustment One	3.56	0.53	-1.62	0.87
Academic Adjustment Two	3.60	0.74		
Overall Satisfaction One	4.05	0.47	0.54	0.60
Overall Satisfaction Two	3.98	0.68		

Note. * Statistically Significant at $p<0.05$.

The paired samples t-test for peer interaction was the only significant result at p=0.049. The t-test revealed that students' Peer Interaction at Time 2 (M=3.43, SD=0.90) was significantly higher (t10= -1.09, p= 0.05) to their Peer Interaction at Time 1 (M= 3.29, SD =0.44). Thus the hypothesis could not be accepted for all five variables and the null was retained, expect for peer interaction where a significant difference was observed.

7. Did the students continue to improve?

In order to assess whether the results of the programme were sustainable, in other words whether the students' psychosocial attributes continued to improve a paired samples t-testwas conducted. The post-test (June 2016) cumulative means of various psychosocial attributes was compared to the post-post-test (July 2016) cumulative means of the same variables to establish whether there was a significant difference. It was hypothesised that the five variables would be significantly higher between (post-test) and (post-post-test). The results of the five paired sample t-tests are shown in Table 3.

Table 3

Cumulative means for the five paired sample t-tests (O2 vs O3)

	Mean	S.D	t (3)	p
Brief Sense of Community Three	3.78	0.62	3.43	0.41
Brief sense of Community Two	4.19	0.65		
Peer Interaction Three	3.75	0.59	-1.57	0.22
Peer Interaction Two	4.00	0.30		
Engagement Three	3.40	0.73	-0.99	0.39
Engagement Two	3.60	0.63		
Academic Adjustment Three	3.66	0.82	0.78	0.49
Academic Adjustment Two	4.04	0.56		
Overall Satisfaction Three	4.05	0.99	1.13	0.34
Overall Satisfaction Two	4.30	0.60		

As depicted, the cumulative means for all five variables including brief sense of community, peer interaction, engagement, academic adjustment and overall satisfaction and overall satisfaction increased from post-test to post-post-test. These differences were, however, not significant. Thus the hypothesis could not be accepted and the null was retained.

Comparing all observations using ANOVA

An ANOVA was conducted with the three observations as the independent variable and the various psychosocial behaviours and the mentored vs non-mentored groups as the dependent variables. It was hypothesised that the differences observed between Time 1, to Time 2, to Time 3 would be significantly higher for the mentored students compared to the non-mentored students.

The results indicated that in the sample mentored students brief sense of community increased from time 1 (M = 3.64, SD = 0.49, n=7), to time 2 (M = 3.59, SD = 0.55, n = 7), to time 3 (M = 3.73, SD = 0.66, n = 7) as shown in Table 4. Levene's test indicated that the variances of the scores are equal in the three observations ($F_{(2)} = 4.09$, $p = 0.47$). It is thus appropriate to conduct an ANOVA.

Table 4

Means across all three observations for the mentored students

Attribute	N	Time 1M (SD)	Time 2M(SD)	Time 3M(SD)
Brief sense of Community	7	3.64 (0.49)	3.59 (0.55)	3.73 (0.66)
Peer Group Interaction	7	3.36 (0.49)	3.48 (0.37)	3.74 (0.45)
Engagement	7	3.33 (0.83)	3.42 (0.59)	3.49 (0.65)
Academic Adjustment	7	3.73 (0.36)	3.70 (0.78)	3.67 (0.58)
Overall Satisfaction	7	3.94 (0.55)	3.80 (0.78)	3.91 (0.64)

The ANOVA results show that mentored students brief sense of community did not differ significantly across the three observations ($F_{(2)}$=4.09, p= 0.47). The hypothesis was therefore rejected. The means of mentored sample students peer group interaction and engagement also increased from Time 1 to Time 2 to Time 3 as shown in Table 4. Levene's test are equal in all three observations for engagement ($F_{(2)}$= 3.53, p= 0.66). The peer group interaction did not differ significantly across three observations ($F_{(2)}$= 2.85, p=0.10). The means for mentored students' academic adjustment decreased from Time 1 to Time 2 to Time 3 as presented in Table 4 while the overall satisfaction decreased at first and then eventually increased again. The Levene's test are equal across the three observations for academic adjustment ($F_{(2)}$=3.55, p=0.65) and overall satisfaction ($F_{(2)}$=4.70, p=0.34) respectively. These differences were, however, not significant. Thus the hypothesis could not be accepted.

Table 5

Means across all three observations for non-mentored students

Attribute	N	Time 1M (SD)	Time 2 M(SD)	Time 3M(SD)
Brief sense of Community	7	3.80 (0.53)	3.67 (0.67)	3.71 (0.84)
Peer Group Interaction	7	3.12 (0.81)	3.67 (0.76)	3.60 (0.57)
Engagement	7	2.91 (0.28)	3.07 (0.43)	3.18 (0.49)
Academic Adjustment	7	3.54 (0.38)	3.55 (0.71)	3.53 (0.44)
Overall Satisfaction	7	3.69 (0.81)	3.83 (0.84)	3.69 (0.88)

The means for brief sense of community for non-mentored students decreased from Time 1 to Time 2 to Time 3. Levene's test were equal across the three observations ($F_{(1.97)}$=24.03, p=0.86). Peer group interaction, academic adjustment and overall satisfaction increased from Time 1 to Time 2 and then decreased from Time 2 to Time 3. Levene's test for the three psychosocial variables were equal across the three observations academic adjustment ($F_{(1.97)}$=24.51, p=0.11), overall satisfaction ($F_{(1.97)}$=23.84, p=0.80), and peer group interaction ($F_{(1.97)}$= 17.95, p=0.61). On the other hand, engagement increased from Time 1 to Time 2 to Time 3. Levene's test were equal in three observations ($F_{(1.97)}$=18.93, p=0.98). These differences were, however, not significant. Thus the hypothesis could not be accepted.

Summary of Chapter

This chapter presented the results of the design and short term outcome evaluation. The design evaluation explained that a mentoring programme comprised of certain characteristics will lead to desired outcomes. These involved the appropriate selection of mentors based on certain criterion; duration; compulsory mentoring; method for assigning mentors to mentees and appropriate medium for mentoring. The short term outcome evaluation results were statistically insignificant, however, the mentored students' means across Time 1 to Time 2 to Time 3 showed that the mentoring programme helped students.

Discussion and Recommendation

The discussion chapter is structured according to the two types of evaluations conducted. A brief summary of the theory design evaluation is depicted followed by a discussion of these results. Hereafter the short-term outcomes evaluation will be discussed. Lastly, the recommendations will be presented as well.

Design Evaluation

The literature review found that that the following were important programme design principles for peer education programmes: a) mentors must be selected based on specific criterion that increase the likelihood of their success in the role, b) for a programme which aims to transition students into their first year at a university, a full year is recommended as the duration, c) mixed opinions exist of whether to make peer mentoring compulsory or not, however, compulsory mentoring with an opt-out option is deemed appropriate, d) in order to establish good relationships mentors and mentees should be allowed to choose an individual who matches their values, and lastly e) group mentoring seems to held more positive benefits compared to one-on-one sessions.

Mentor Selection

The literature review highlighted the importance of selecting the correct individuals to serve as mentors, not only will these individuals be acting as role models but they need to have the necessary qualities and characteristics for the responsibility (Hopkins-Thompson, 2000). Selecting the correct mentors will ultimately determine the success or failure of a programme. Mentees need to develop trust and respect for their mentors and the mentoring relationship and this is enhanced when the correct individual is selected for the role (Allen & Eby, 2002). The selected mentor with the appropriate attributes also increases the likelihood of a good relationship between the mentee and the mentor thus resulting in beneficial outcomes including long lasting mentoring relationships, sense of attachment, confidence, and increased self-esteem (Hopkin-Thompson, 2002).

Currently, in the FYEM programme, senior students volunteer to become mentors. Any students who volunteer are accepted into this role. Based on the results, it is suggested that adjustments be made to the selection procedure for FYEM mentors. The programme manager should use the information presented in the results chapter to develop a list of fundamental qualities, characteristics and attributes that mentors should possess. This list should then serve

as a selection tool to assess volunteered students against. Only volunteers who have the required qualities, characteristics and attributes should be selected into the programme and trained as mentors. Table 6 outlines these qualities.

Table 6

Mentors quality selection criteria

Mentors qualities
1. Matched programme of study
2. Empathy
3. Integrity
4. Facilitative attributes
5. Good listening skills
6. Academic achievement

Duration

The literature demonstrated that mentoring programmes that last longer tend to produce positive outcomes such as increased academic performance, confidence and peer support (Turban, Dougherty, & Lee, 2002). This is because the transition phase from high school to university takes a full year. In most cases, the long lasting relationships between a mentor and mentee provide enough time for strong bonding and trust (Turban et al, 2002). As a result, mentees might be able to open up about their needs and receive assistance from their respective mentors. On the other hand, mentoring programmes which last for six months or less were characterised with students' decreased self-worth, confidence and academic performance (Grossman, 2002).

The FYEM Programme lasts for six months. The majority of mentees at this stage have not yet fully transitioned into university. On the basis of the results, it is suggested that the programme manager should extend the FYEM Programme for at least one full academic year. This is to enable the mentor and mentee to develop a strong bond which is characterised by increased academic achievement and fewer absenteeism levels. Regardless, of whether the mentee has adjusted or not continuous FYEM programme should proceed until the end of the academic year.

Compulsory Mentoring

According to the literature reviewed, there are mixed opinions on making peer mentoring compulsory or not. Compulsory mentoring means that students are forced into a mentoring relationship (Allen & Aby, 2002). If students are forced into compulsory relationships the complications may mean that they may have a negative feeling, it's a forced relationship which means the mentoring relationship might not be successful (Ragins & Cotton, 1999). The students feel as if they are labelled as 'being in need or at risk' hence they don't fully comply with the programme compulsory mentoring. The likelihood of achieving the intended outcomes in that forced situation is hindered because you are mandating someone, as opposed to them choosing the intervention by choice (Allen & Aby, 2002). Furthermore, it has been discovered that mentor-mentees vs mentoring out of free might lead to decreased internal motivation (Terrion & Leornard, 2007). On the contrary, Gray and Smith (2002) found that mentoring that is based on volunteerism serves as a good criterion for a successful mentoring relationship. The majority of students in compulsory mentoring programmes feel less interested in engaging and participating effectively because they feel as if they freedom of choice has been overpowered (Gray & Smith, 2002).

The compulsory mentoring is only effective for both mentors and mentees when an opt-out option is provided. The mentees may not feel forced to participate and a sense of choice is enhanced (Allen & Aby, 2002).

The FYEM programme currently is compulsory for all EDU students at the Commerce Faculty. Based on the results obtained it is suggested that the programme manager can continue with the compulsory mentoring approach. However, an opt-out option should be provided for students who feel that they have adjusted to university. The first year Commerce students are not made to do the mentoring programme nut given the fact that compulsory mentoring works well this is something to consider as part of the FYEM programme offerings.

Effective method for assigning mentors to mentees

It is clearly evident from the literature review that unassigned peer mentoring relationships in universities are more likely to be effective than assigned mentoring relationships (Kaye & Jacobsen, 1995). According to Hopkins-Thompson (2000) the unassigned mentoring allows mentees to work with their preferred mentors whom they can relate to at the deepest level. As a result, there is a sense of connection and bonding. The

mentoring programmes where mentors and mentees form part of the mentoring assigning process are associated with increased student academic engagement, confidence and peer social interaction than students assigned mentoring relations (Kay & Jacobsen, 1995).

Gray and Smith (2002) argue that randomisation process of assigning mentors to mentees is ineffective as there is a mismatch in terms of the programme of study, personality type, background and interests. This is because mentees have been discovered to be bonded to mentors whom they see as personally competent (Pitney & Ehlers, 2004). In turn the mentors are also interested in mentees whom they perceive as competent.

In the context of the FYEM programme, the mentees are given the freedom to choose their mentors. The mentors' post picture and biography of themselves and mentees choose. The results obtained suggest that the most effective method to assign a mentor to mentee in the Commerce FYE mentoring programme may be through self-selection. The mentees may continue to be allowed to choose their mentors, however, considering that they are in the same programme of study or stream. The matching of mentors and mentees based on the same programme of study enables mentees to acquire necessary guidance and information to succeed academically (Rawana, 2015). This implies that students should be given freedom to choose their mentors based on certain attributes such as a programme of study, personality type and background.

Effective mentoring medium

There are many mediums used for mentoring relationships. The literature, however, presents the most effective one as group mentoring. A group mentoring can comprise of 5-6 mentees per mentor (Single & Muller, 2001). This will allow the mentor to control, monitoring and evaluation and equal sharing. In these groups, mentees share feelings, concerns, skills and tips at the university. It gives an opportunity for members who are not comfortable with meeting one on one with a mentor (Kram & Isabella, 1985). A group session provides the safe and secure platform for mentees to relate to their peers.

Through constant and weekly group sessions peer group relationship is formed which results in an increased sense of belonging and inclusive. The advantage with group meeting compared to one on one is that there are multiple viewpoints, exchange of ideas and assessments of issues (Crostwaite, 2007). Additionally, other implications include access to information, academic network and a decreased sense of isolation. The reason for one on one

not being the most effective medium is that it only makes an impact at a small scale. The relationships take long to develop trust and reach optimism (Domitrovich & Greenberg, 2000).

The FYEM programme is conducted in group sessions. Based on the results the programme manager might reinforce the group mentoring process. Through group sessions, students share information, form relationships and develop a sense of belonging at a university.

Short term evaluation questions

In order to assess the programme's impact on students' psychosocial outcomes, inferential statistics were conducted on the data collected from mentored and non-mentored students. The results showed that while the students' psychosocial outcomes increased since the start of the programme till the programme ended, the variance were not significant. Likewise, students' psychosocial outcomes continued to improve after the programme finished, but these differences were also not significant. Lastly, overall the means of the psychosocial outcomes for the mentored students across time were higher than those of the non-mentored, but again these differences were not significant. Although the results are insignificant, the increase in means is a positive outcome observed for the programme. It should also be taken into consideration that these results were heavily constrained by the sample size that was obtained and thus were not necessarily a true reflection of the programme itself.

Given the need to conduct paired sample t-tests, the same students needed to complete the data collection measures at Time 1, Time 2 and Time 3. As with any study, there was high attrition, and despite the evaluator's efforts, the original respondents from Time 1 (n = 100), did not all participate in the Time 2 and Time 3 measures. The constant reminders of a questionnaire that were sent had fewer students participating. The evaluator had an incentive for students' participation. However, the attrition was out of the evaluator's control and skewed the results. Miller (2007) argues that when doing a repeated observation measure with a questionnaire design, attrition is common.

According to Miller (2007) when data is gathered over two or more stages (points) in time, it happens that some participants drop out of the study. The reasons for dropout in many mentoring programmes may involve but are not limited to increased workload, scheduling conflicts and lack of motivation (Miller, 2007).

A time series research involves the recording of data at many different points in time prior and after an intervention is introduced (Domitrovich & Greenberg, 2000). The data needs

to be collected at various points across time. Additionally, it is not strong at dealing with one threat to internal validity i.e. selection. Miller (2007) explains that the downfall with the time series is that participants' (students) who register for the first questionnaire usually withdrew before the intervention, or sometimes those who were selected but end up not participating.

In case a larger sample was obtained and the same results were observed it means the programme is not achieving its intended outcomes. The theory and underlying logic of the programme is sound, however, the evaluator would suggest that an implementation evaluation be conducted to investigate reasons for the programme failure.

If a larger sample shows significant results it proves the programme is effective and thus the impact of the programme is likely to lead to increased (i) academic performance, (ii) sense of belonging, (iii) peer group interaction and increased knowledge, and (iv) graduation rates.

Academic performance

The literature undertaken demonstrated that mentored students are more likely to obtain increased academic performance. The students receive tips on effective practical study techniques from their mentors. These tips should help students to prepare well for their assignments, tests and exams (Andrew & Clark, 2011). Additionally, the students should be encouraged because their mentors have shared previous experiences on coursework and memorandums which may lead to students' willingness to engage in their academic activities and to do well (Andrew & Clark, 2011). As a result, decreased absenteeism amongst mentored students is likely.

Sense of belonging

One of the fundamental positive outcomes of the mentoring programme is the probability of students' sense of belonging. Through mentoring, students may develop the confidence to interact freely with their lectures and faculty departments (Anderman & Jensen, 2007). This is because students may feel safe and valued in their respective mentoring relationships. The freedom of expression is manifested in the students' engagement with their academic activities, students can ask questions, contribute to class discussions and utilise extra support (Gooodenow, 1993). The students' sense of belonging at university correlates with academic self-confidence, internal motivation and task attribute. Additionally, students class sense of belonging is associated with students' perceptions of the lectures openness and kindness, the motivation of student engagement and a feeling of social acceptance (Osterman, 2000). Based

on the results, it is suggested that the FYEM programme manager closely monitors the students' sense of belonging in terms of class participation, utilisation of support structures on campus, engagement with lectures and tutors. It's critical for the FYEM programme to ensure that mentoring results to an increased students sense of belonging.

Peer Group Interaction and Increased Knowledge

Social science literature and theorists have argued that the relationship growth between mentees and mentors can be progressive depending on the creation of strong personal connections, which in turn, are closely related to the formation of empathy, trust and mutuality (Furrer & Skinner, 2003). Through group mentoring, there is the formation of relationships amongst students and mentors beyond the mentoring sessions.

Thus, students can relate to each other and share concerns. There is sharing of information about the academic and social adjustment between fellow mentees and mentors on a continuous basis. The students acquire coping mechanisms and for surviving at university (Osterman, 2000). Similarly, the research found that mentors share specific knowledge and experiences which contribute to mentees learning and skill development (Fox & Stevenson, 2006 as cited in Osterman, 2007). The mentors discuss the organisational resources available on campus with mentees (Osterman, 2007). The at-risk students interacting with a caring mentor is a vital protective factor in fostering resilience in students and greater acceptance by peers.

The literature results obtained suggest that the FYEM programme manager should create a peer group interaction and increased knowledge as predictors for measuring the programme's success. Furthermore, mentors should be encouraged to share knowledge about academic, social and personal resources to ensure students psychosocial adjustment holistically.

Increased Graduation

Quality mentoring should lead to increased graduation rates, particularly at-risk students. Literature found that students who meet frequently with mentors are 53% less likely to be absent at university (Gardner, 2006). This is influenced by the fact that students receive extensive networks and support to cope academically. Secondly, students are two times more probable to have faith that university is exciting and that doing well academically is significant and acquire better grades. This serves as a stimulus for students to preserve towards their studies. The benefits of mentoring go beyond graduation by preparing students to be better equipped for leadership positions in their respective companies and organisations (Campbell

& Campbell, 2005).

The FYEM programme currently focuses mostly on the students' short-term psychosocial outcomes. According to the results acquired, it is suggested that the programme manager may expands the mentoring programme to all commerce students. Additionally, show students that majority of mentored students graduate. Through this, there is the likelihood that the graduation rate within the Commerce Faculty will increase.

Limitation

In previous years the EDU department asked their mentored students to complete satisfaction questionnaires called smile sheets. These sheets obtained qualitative and quantitative responses on how mentors and mentees were coping academically and psychologically, how they were enjoying the programme activities as well as their interaction and relationship with fellow students in the mentoring programme. It was planned that the evaluator's questionnaire as well as the smile sheet data would be analysed in order to determine the short-term outcomes of the programme.

When the evaluator sent the finalised questionnaire (found in Appendix A) to the programme manager, he obtained approval for the questions posed. Miscommunication, however, occurred between the parties. The programme manager assumed that the evaluator would be including smile sheet questions into the questionnaire sent. The evaluator assumed that the stakeholders would continue with their normal data collection and as such did not use qualitative data responses in his questionnaire as he did not want to duplicate the data collection tool used in the mentoring programme. This meant that in 2016, a smile sheet was not administered to the students.

The missing of qualitative responses was a key disadvantage and limitation of the research. Although the statistics for the short term outcomes were insignificant, this was because of sample size. Qualitative data from the students could have provided rich and detailed information on the effects and impact of the programme from the mentees and mentors' perspective.

Recommendation for another short-term outcome evaluation

This research study was unable to conclude the true effects of the programme. As such, another short-term outcome evaluation is required. The FYEM programme needs to re-do the short term outcome evaluation but ensures that the design be more rigorous in order to acquire increased numbers for the matched repeated measures. A suggestion is to get mentees to

complete the data collection tool during one of their first mentored sessions, in their last mentored session and then in a follow-up visit with the mentor once the programme has ended. In addition, the smile sheet reaction process needs to be carried out to find out that the mentees are happy with mentors, the topics discussed, and relationships with fellow mentees in the mentoring sessions.

To further enhance the qualitative results, at the start of the mentoring programme students could be asked to do a diary-like entry and write down what their feelings are (psychosocial behaviours: academic adjustment, overall satisfaction, and peer group interaction), as well as what they expect from the FYEM programme and from their mentor. Once the students have completed the programme, the programme manager can then give each student their initial diary entry back and ask them to engage in a reflection exercise based on their experiences in the programme and whether their initial expectations were met.

If another short-term outcome evaluation is conducted and the programme manager ascertains that the programme has achieved its desired outcomes there is an opportunity for the programme to also undergo an implementation evaluation. This kind of evaluation would provide stakeholders with information on whether the roll-out of the programme needs improvement or not.

Future Implementation Evaluation

According to Rossi et al. (2004) programme implementation assess programme impact with a definite comprehension of the extent to which a programme was implemented increases the quality of evaluation and the likelihood of programme's success.

Through gathering a picture of how well a programme was implemented gives programme managers' confidence to link programme's to observed outcomes (Rossi et al., 2004). The implementation evaluation provides FYEM programme manager insights into how their programmes are being carried out and how they can be improved significantly. Additionally, implementation research assists researchers to accurately replicate the programme. It is beneficial to combine both implementation and outcome evaluation to facilitate the tracing of effective programmes (Dane & Schneider, 1998). FYEM programme stakeholders could benefit from paying close attention to integrated evaluations.

Within the implementation process is programme integrity. Rossi et al. (2004) refer to programme integrity as the extent to which a programme is implemented as originally

anticipated. It is made up of five components: adherence, dosage, quality of delivery, participant responsiveness and programme differentiation (Dane & Schneider, 1998):

Adherence defines how committed the programme is to its design.

Dosage measures the size of a service provision given to service participant.

The quality of delivery gives an indication on how the delivery of service.

Participant Responsiveness highlights individuals' engagement and involvement in a programme (Domitrovich & Greenberg, 2000).

Programme Differentiation indicates programme elements to ensure their various inputs to the programme outcomes.

Evaluating programme implementation

When evaluating programmes FYEM programme manager should form rigorous picture of their programmes. According to Watts and Preslar (2002) to measure process implementation, programme people should pay attention on these elements implementation, programme indicators, and programme monitoring.

Multiple programmes are embedded upon the programme theory logic. Programme theory explains the processes in which programme elements mix to lead to interested outcomes (Scheirer, 1987). Even though programme people can understand the theory underlying their programme, FYEM programme manager need to collaborate with programme personnel including mentors, mentees and supervisors to ensure everyone comprehends the justifications why a programme is trusted to work (Rossi et al., 2004). When a clear picture of a programme has been formed it could be used to create an implementation process theory, which explains the systems in which services are provided to beneficiaries (Scheirer, 1987).

The implementation process stands for the interior of a programme and how they correlate to one another (Watts & Preslar, 2002). Implementation and intervention results in programme outcomes together (Chen, 1998). The internal and external factors need to be involved in the implementation process (Dusenbury, Brannigan, Falco, & Hansen, 2003). These include characteristics such as implementer, delivery mode, implementing organisation, participant, coordination between multiple organisations, and social context (Chen, 1998).

The next step is to develop a strategy to measure integrity, called programme monitoring. Rossi et al (2004) state that the progress of any programme monitoring framework is precisely dynamic based on the description of what data is gathered, and how it is gathered, and by whom. Table 7 depicts a number of vital implementation components.

Table 7
A Process Evaluation Strategy Table

Evaluation Elements	**Observation Process**	**Process Domain**
Topics and Subjects during FYEM sessions	Observation of peer mentoring and session seen by mentors	Adherence
FYE mentoring sessions	Session record	Dosage
Quality of mentoring delivery and mentor-mentee relationship	Survey questions about mentoring relationship completed by mentors and mentees	Quality of delivery
Mentee participation and satisfaction in mentoring process	Interviews with mentee and survey engagement and participation questions	Participant responsiveness

Table 7 could be used by the FYEM programme manager when undertaking an implementation evaluation in future.

Concluding Thoughts

Through this evaluation research study, lessons were learnt. As an evaluator, it is critical to undertake an evaluation analysis in the early stages of the programme prior to conducting a full-scale evaluation. The evaluability assessment would help to assess the level to which; a programme is ready for upcoming evaluation. It will also assist programme staff and the evaluator to gain the agreement of programme design. In future, the evaluator comprehends that the provision of regular feedback on the development in implementation and outcomes and early problems that needs to be rectified. This will eliminate miscommunication as witnessed in this study. When the evaluator is involved in a research study he should utilise a variety of data collection methods i.e. qualitative and quantitative. These data methods will give the evaluation an in-depth analysis of findings and conclude a true effect of the study.

As this was the first research evaluation study conducted by the evaluator, the evaluator comprehended that a successful evaluation is possible through the involvement of stakeholders. The evaluator is part of a team and has to be fully aware of the processes, activities, implementers and resources available in order to make concrete feasible recommendations. Although the results were insignificant the evaluator learnt that in every programme there are positive attributes attained. In the case of the FYEM programme a person may be easily deceived by the statistical insignificance of the short-term evaluation, however, not knowing that the programme actually somehow contributed to students academically and psychological adjustment to a certain extent. In other words, an evaluator needs to have a broader view of the programme and not only draw a conclusion on the outcomes. A good monitoring and evaluation specialist is able to create a well-structured monitoring and evaluation framework for the programme that he works with.

Conclusion

This research aimed to conduct both a theory/design evaluation and a short-term outcome evaluation of the FYEM Programme. The FYEM programme is a mentoring support structure intervention intended to assist first year students (mentees) adapt to tertiary education. Through the design and short term outcome evaluation component of the research, the evaluator was able to recommend and present guidelines for best practice to the client. Unfortunately, while the short-term outcome evaluation hinted to the benefits of the programme for the primary beneficiaries i.e. the students, the small sample size prevented the researcher from reaching statistical significance of these effects.

The theory and design evaluation results enabled the evaluator to suggest that the stakeholders modify the FYEM Programme by extending the mentoring programme to one year. The literature suggests that specifically when a programme aims to acclimatise first year students, it should run for the duration of that first year. Additionally, the literature supported compulsory mentoring with an opt-out option. Currently the FYEM Programme is mandated for EDU students, but not for mainstream students. The evaluator suggested that the stakeholders investigate whether to make the programme compulsory for non-EDU students, and then to implement an opt-out process. Students could apply and motivate as to why they do not need to the support services provided through the intervention. The reason for the compulsory nature of these programmes is due to the beneficial effects they have for university students.

The recruitment and selection of mentors was also assessed as part of the research. The evaluator was able to provide the programme staff with a list of specific criterion that volunteers should be rated and selected against. Students with these characteristics have an increased likelihood of success in the role of mentor. Contributing to the success of these relationships is also the ability to choose a mentor as opposed to be assigned one as a student. Currently self-selection is used in the programme, and the evaluator supports this continued practice. Lastly, the evaluator could produce evidence about the vitality of mentoring taking place in groups. Group mentoring held more positive benefits compared to one-on-one sessions. In some cases, this occurs within the FYEM Programme, but in others not. This is an important consideration for the stakeholders to consider.

Based on the short term outcome evaluation, the scores on the perceived psychosocial outcomes of the mentees increased from time one to time two to time three. This was evident for peer group interaction, sense of belonging, academic adjustment and overall satisfaction with the university. These increases were, however, not as high as expected and a similar pattern were observed in the control group.

Due to substantial limitations within the study this evaluation could not render strong evidence to demonstrate the benefits of the FYEM programme for both mentors and mentees. With a lack of qualitative data, the evaluator was not able to report on the experiences of the mentees, which would have provided in-depth and rich data about the experiences of students. Owing to this and other limitations, the evaluator suggested conducted another short-term outcome evaluation; with a strategy on how to increase the numbers of students participating in the data collection measures at all three time points.

Overall, the FYEM programme seemed to achieve its primary goal of improving students' psychosocial outcomes. Despite the shortcomings, this evaluation provides meaningful information into the effectiveness of the mentoring programme, and vital recommendations for its improved design for 2017. Given the increased dropout rate at South African universities including UCT, the work of performed by FYEM programme is a significant initiative in rendering first year students, particularly those struggling, with the psychosocial and academic support they require.

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Appendix A: Questionnaire

Dear Student

My name is Themba Moeketsi I am a Masters student at the University of Cape Town researching your experiences in the First Year Experiences (FYE) Programme.

With your responses we will be able to identify whether the programme is helping you with your first year.

Data collection for the research will take place on three occasions: In April, May and June. Each time the data collection will be a questionnaire.

Due to the nature of the study you will be asked for your student number so that your responses from the 1st, 2nd and 3rd questionnaire can be grouped together. Once we have collated your responses, your student number will be discarded. Please note that all responses will be confidential and used for the purposes of this research only.

This study has been approved by the Commerce Faculty's Ethics in Research Committee. Your participation is voluntary and you can choose to withdraw from the research at any stage.

The questionnaire contains approximately 80 questions. It will take approximately 15 minutes to complete. The student numbers of those students who complete all three questionnaires will go into a lucky draw to win a R300 Cavendish voucher. The winner will be contacted using their UCT student email account.

Thank you for your participation. Please contact my supervisor, Mrs Carren Field carren.field@uct.ac.za if you have any questions regarding the research.

Informed Consent Section

Below you will be asked for your student number. There are two reasons for this:

(1) It will allow us to match responses for the three questionnaires and
(2) We need the student number in order to contact the lucky draw winner.

If you agree to participating in this study - please tick the box below

☐

Student Version – Engagement Scale (17 items)
The Utrecht Work Engagement Scale (UWES) (Schaufeli, Salanova, González Romá and Bakker (2002)

Vigor (VI) Items (6)

	Item	*Never*	*Rarely*	*Sometimes*	*Most of the time*	*Always*
		1	*2*	*3*	*4*	*5*
1	When I get up in the morning, I feel like going to class.					
2	When I'm doing my work as a student, I feel bursting with energy.					
3	As far as my studies are concerned I always persevere, even when things do not go well.					
4	I can continue studying for very long periods at a time.					
5	I am very resilient, mentally, as far as my studies are concerned.					
6	I feel strong and vigorous when I'm studying or going to class.					

Dedication (DE) Items (5)

	Item	*Never*	*Rarely*	*Sometimes*	*Most of the time*	*Always*
		1	*2*	*3*	*4*	*5*
7	To me, my studies are challenging.					
8	My study inspires me.					

9	I am enthusiastic about my studies.					
10	I am proud of my studies.					
11	I find my studies full of meaning and purpose.					

Absorption (AB) Items (6)

	Item	*Never*	*Rarely*	*Sometimes*	*Most of the time*	*Always*
		1	*2*	*3*	*4*	*5*
12	When I am studying, I forget everything else around me.					
13	Time flies when I am studying.					
14	I get carried away when I am studying.					
15	It is difficult to detach myself from my studies.					
16	I am immersed in my studies.					
17	I feel happy when I am studying intensely.					

Student Adaptation to College Questionnaire (SACQ) (Baker & Syrik, 1990)

Academic Adjustment (19 items)

	Item	*Strongly disagree*	*Disagree*	*Neutral*	*Agree*	*Strongly Agree*
		1	*2*	*3*	*4*	*5*
18	I have been keeping up to date on my academic work.					
19	I am finding academic work at university difficult.					

20	I have not been functioning well during tests and exams.					
21	I am satisfied with the level at which I am performing academically.					
22	I'm not working as hard as I should at my course work.					
23	My academic goals and purposes are well defined.					
24	I'm not really smart enough for the academic work I am expected to be doing now.					
25	I haven't been very efficient in the use of study time lately.					
26	I enjoy writing assignments for courses.					
27	I am satisfied with the number and variety of courses available at the Commerce Faculty.					
28	I'm not doing well enough academically for the amount of work I put in.					
29	I am satisfied with the quality of courses available at the Commerce Faculty.					
30	I am attending classes regularly.					
31	I am enjoying my academic work at university.					
32	I am having a lot of trouble getting started on assignments.					
33	I am satisfied with my programme of courses for this semester.					
34	Most of the things I am interested in are not related to any of my course work at UCT.					
35	I am very satisfied with the lecturers I have now in my courses.					
36	I am quite satisfied with my academic situation at UCT.					

Overall Satisfaction Subscale of: Cultural Attitudes and Climate Questionnaire (CACQ) (Sedlacek, Helm & Prieto, 1997) (5 items)

	Item	*Strongly disagree*	*Disagree*	*Neutral*	*Agree*	*Strongly Agree*
		1	*2*	*3*	*4*	*5*
37	This university provides an environment for the free and open expression of ideas, opinions and beliefs.					
38	Overall, my educational experience at this university has been a rewarding one.					
39	I would recommend this university to siblings or friends as a good place to go to university.					
40	The overall quality of academic programmes at the Commerce Faculty is excellent.					
41	I feel as though I belong in the university community.					

Peer-group Interactions Subscale:
Academic and Social Integration Scale
(Pascarella & Terenzini, 1980) (6 items)

	Item	*Strongly disagree*	*Disagree*	*Neutral*	*Agree*	*Strongly Agree*
		1	*2*	*3*	*4*	*5*
42	Since coming to this university I have developed close personal relationships with other students.					
43	The student friendships I have developed at this university have been personally satisfying.					

44	My interpersonal relationships with other students have had a positive influence on my personal growth, attitudes, and values.					
45	My interpersonal relationships with other students have had a positive influence on my intellectual growth and interest in ideas.					
46	It has been difficult for me to meet and make friends with other students.					
47	Most students at this university have values and attitudes different from my own.					

Brief Sense Of Community Scale
(BSCS) McMillan and Chavis (1986)
(5 items)

	Item	*Strongly disagree*	*Disagree*	*Neutral*	*Agree*	*Strongly Agree*
		1	*2*	*3*	*4*	*5*
48	I can get what I need in this university.					
49	This university helps me fulfill my needs.					
50	I feel like a member of this university.					
51	I belong in this university.					
52	I have a say about what goes on in my university.					
53	People in this university are good at influencing each another.					
54	I feel connected to this university.					
55	I have a good bond with others in this university.					

Academic Confidence Scale (24 items)
Sander and Sanders (2006)

	Item	*Not at all confident*	*Slightly confident*	*Neutral*	*Moderately confident*	*Very confident*
		1	*2*	*3*	*4*	*5*
56	Study effectively on your own in independent /private study.					
57	Produce your best work under examination conditions.					
58	Respond to questions asked by a lecturer in front of a full lecture theatre.					
59	Manage your work load to meet coursework deadlines.					
60	Give a presentation to a small group of fellow students.					
61	Attend most taught sessions.					
62	Attain good grades in your work.					
63	Engage in profitable academic debate with your peers.					
64	Ask lecturers questions about the material they are teaching, in a one-on-one setting.					
65	Ask lecturers questions about the material they are teaching, during a lecture.					
66	Understand the material outlined and discussed with you by lecturers.					
67	Follow the themes and debates in lectures.					
68	Prepare thoroughly for tutorials.					
69	Read the recommended background material.					

70	Produce coursework at the required standard.					
71	Write in an appropriate academic style.					
72	Ask for help if you don't understand.					
73	Be on time for lectures.					
74	Make the most of the opportunity of studying for a degree at university.					
75	Pass assessments at the first attempt.					
76	Plan appropriate revision schedules.					
77	Remain adequately motivated throughout.					
78	Produce your best work in coursework assignments.					
79	Attend tutorials.					

Age: _____

Student Number: _____

Degree / Stream: _____

How many year have you been at UCT? _____

Are you an exchange / study abroad student? Yes | No | Unsure

Do you serve on any UCT Student Societies / Clubs? Yes | No | Unsure

How many years have you been living in Cape Town? _____

Do you stay in Res/Digs? Yes | No | Unsure

Thank you