

Developing a monitoring and evaluation framework for the mentoring component of the  
Principals Academy Trust

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Compulsory Declaration:

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## Abstract

The Principals Academy Trust (PAT) is a non-profit organisation, whose programme is focused on improving the leadership competencies of school principals in poor and marginalised communities in South Africa largely through mentoring.

While PAT collects quantitative data to monitor the performance of the schools in their programme, currently no data is collected to measure the extent to which PAT's mentoring efforts are positively impacting the schools' culture or climate. This study sought to develop an M&E framework for the mentoring component of the PAT programme. The M&E framework is informed by an extensive programme theory evaluation. The framework is designed to enable PAT to monitor and evaluate the potential changes in school climate and culture as a result of the mentoring component of the PAT programme.

For the purposes of this study, Donaldson's step-by-step model for conducting a programme theory evaluation was merged with Markiewicz & Patrick's step-by-step guide on how to develop an M&E framework. The aim of this approach was to ensure that the results of the theory evaluation provide the foundation for the M&E framework. A combination of desk research, focus groups with PAT's programme staff and a number of semi-structured interviews with the head mentor and the fundraising consultant for PAT, was used to create the M&E framework.

The results of the theory evaluation indicate that according to recent social science research in the field of education, the causality assumed in PAT's programme theory is plausible. The theory evaluation concludes that it is plausible to assume positive impacts on school culture and climate through systematic mentoring of school principals.

The results of the development of the M&E framework are presented as a complete monitoring plan, evaluation plan, data collection and management plan, data analysis and synthesis strategy, learning strategy and implementation plan.

# Contents

- Acknowledgements ..... i**
- Abstract ..... ii**
- List of Tables.....vi**
  - Tables in the main body of dissertation.....vi
  - Tables in the appendices.....vii
- List of Figures.....ix**
- List of Acronyms .....x**
- Chapter 1: Introduction, programme description and definition of key constructs ..... 1**
  - Research/evaluations questions and aims of study ..... 2
    - Theory evaluation questions ..... 2
    - Developing an M&E framework ..... 3
    - Aims and objectives of this study..... 3
  - The structure of the dissertation ..... 3
  - PAT’s programme theory model ..... 4
  - Programme description and explanation of the first draft of PAT’s programme theory model..... 8
    - Inputs, activities and outputs ..... 8
    - Desired outcomes ..... 9
- Chapter 2: Methodology..... 12**
  - Step 1: Scoping the M&E framework ..... 13**
    - Identify requirements ..... 13
    - Determine stakeholders and possible data providers ..... 13
    - Identify possible and preferred approaches for the creation of an M&E framework ..... 14
  - Step 2: Creation of the final programme theory model and theory evaluation ..... 14**
    - Step 2.1: Plausibility check of the programme theory model ..... 15
    - Step 2.2: Finalised programme theory model..... 16
  - Step 3: Creation of evaluation questions ..... 16**
  - Step 4: The monitoring plan ..... 16**
    - Develop performance indicators and targets..... 17
    - Identify data collection processes and tools ..... 19
    - Determine responsibilities and timeframe ..... 19
  - Step 5: The evaluation plan..... 19**
    - Evaluation approach ..... 19
    - Evaluation methods ..... 20
    - Determine responsibilities and timeframe ..... 20
  - Step 6: Collecting, managing, analysis and synthesis ..... 20**
  - Step 7: Learning strategy ..... 20**
  - Step 8: Implementation plan ..... 21**

<b>Chapter 3: Results &amp; discussion .....</b>	<b>22</b>
Defining the dissertation’s key concepts .....	22
Defining school culture .....	22
Defining school climate.....	22
<b>Part 1 of results and discussion: Theory evaluation .....</b>	<b>23</b>
Results for theory evaluation research question 1: the factors which make up an effective principal mentorship programme .....	23
Results for theory evaluation research question 2: the key dimensions of good leadership and management competencies in principals.....	30
Results for theory evaluation research question 3: the effect of mentoring on principals’ leadership competencies .....	36
Results for theory evaluation research question 4: the effect of principal leadership on school culture ..	42
Results for theory evaluation research question 5: the effect of principal leadership on school climate ....	47
Summary and discussion of the theory evaluation .....	51
<b>Part 2 of results and discussion: The monitoring and evaluation framework .....</b>	<b>57</b>
The development of the monitoring plan .....	57
The monitoring plan .....	69
<b>Results and discussion of the evaluation plan.....</b>	<b>77</b>
Results and discussion of the data collection plan, data management plan and data synthesis approach .....	81
Results and discussion of the data collection plan .....	81
Results and discussion of the data management plan .....	86
Results and discussion of the data synthesis approach and creation of evaluative judgments.....	89
<b>Results and discussion of the learning plan .....</b>	<b>90</b>
Learning strategy .....	90
Utilisation strategy .....	90
<b>Results and discussion of the implementation plan .....</b>	<b>93</b>
Evaluation support .....	93
Ethical concerns.....	93
Integration of the M&E framework into the existing programme .....	94
Testing phase.....	94
Plan for monitoring and review of framework .....	95
Work plans.....	95
<b>Chapter 4: Challenges, limitations, recommendations for further research, reflection and conclusion.....</b>	<b>100</b>
Challenges experienced in creating an M&E framework for PAT .....	101
A reflection on the development of the M&E framework .....	102
Limitations of the M&E framework.....	102
Recommendations for PAT and further studies .....	104
Recommendations for PAT .....	104
Recommendations for further studies .....	104
Conclusion .....	105
<b>References.....</b>	<b>106</b>

<b>Appendices .....</b>	<b>117</b>
Appendix A - Interview schedule .....	117
Appendix B - Defining school culture .....	118
Appendix C - Defining school climate and how it differs from school culture.....	121
<b>Appendix D - Identification of dimensions and indicators of a positive school culture and the common instruments used to measure them .....</b>	<b>125</b>
Appendix E - Identification of dimensions and indicators of a positive school climate and the common instruments used to measure them .....	136
Appendix F - Comparison of leadership dimensions .....	162
Appendix G - School culture survey and focus group outcomes .....	167
Appendix H - School climate survey and focus group outcomes .....	171
Appendix I - The principal survey .....	179
Appendix J - The teacher survey .....	180
Appendix K - The student survey .....	181
<b>Appendix L - Informed consent form: principal survey .....</b>	<b>182</b>
<b>Appendix M - Informed consent form: teacher survey .....</b>	<b>183</b>
<b>Appendix N - Informed consent form: student survey.....</b>	<b>184</b>
<b>Appendix O - Informed consent form: principal interview.....</b>	<b>185</b>
<b>Appendix P - Informed consent form: teacher focus group .....</b>	<b>186</b>
<b>Appendix Q - Data synthesis against evaluation questions with example .....</b>	<b>187</b>
Appendix R - Evaluative judgments and conclusions against evaluation questions with example ..	188
Appendix S - Examples of turning evaluative conclusions into recommendations and lessons .....	189
Appendix T - Suggested structure for evaluation report .....	190
<b>Appendix U - Interviewer rating form.....</b>	<b>192</b>

## List of Tables

### Tables in the main body of dissertation

Table 1: Stakeholder mapping matrix

Table 2: Communication

Table 3: Creation of goals and challenges

Table 4: Knowledge and information exchange

Table 5: Caring relationship, trust, respect and training

Table 6: Outliers in the identification of factors which make up an effective principal  
mentorship programme

Table 7: Similarities to Marzano et al.'s 5 key dimensions of good leadership  
competencies in principals

Table 8: Improvements of principals' leadership competencies through mentoring

Table 9: Principal leadership competencies needed to improve school culture

Table 10: Principal leadership competencies needed to improve school climate

Table 11: Dimensions and indicators of a positive school culture

Table 12: Dimensions and indicators of a positive school climate

Table 13: Monitoring plan

Table 14: Evaluation plan

Table 15: Data collection plan

Table 16: Data management plan

Table 17: Reporting and dissemination strategy

Table 18: Work plan for implementation of PAT's M&E framework: Year 1

Table 19: Work plan for implementation of PAT's M&E framework: Year 2

Table 20: Work plan for implementation of PAT's M&E framework: Year 3

Table 21: Required meetings after the finalisation of the evaluation plan

### Tables in the appendices

Table 22: Similarities in school culture and climate definitions

Table 23: Collaborative leadership vs transformational leadership indicators

Table 24: Collegiality and relationships

Table 25: Collaboration

Table 26: Learning

Table 27: Shared direction and opportunities for teacher and student development

Table 28: Outliers in the identification of dimensions of a positive school culture

Table 29: Student-teacher relationship

Table 30: Student-student relationships

Table 31: Rules, norms and order

Table 32: Academic dimensions

Table 33: Physical and social environment

Table 34: Fairness

Table 35: School connectedness

Table 36: Parents' and community influence

Table 37: Principal behaviour

Table 38: Outliers in the identification of dimensions of a positive school climate

Table 39: Comparison of leadership dimensions

Table 40: School culture survey and focus group outcomes

Table 41: School climate survey and focus group outcomes

Table 42: The principal survey

Table 43: The teacher survey

Table 44: The student survey

Table 45: Data synthesis against evaluation questions with example

Table 46: Evaluative judgments and conclusions against evaluation questions with example

Table 47: Examples of turning evaluative conclusions into recommendations and lessons

Table 48: Suggested structure for evaluation report

Table 49: Interviewer rating form

## List of Figures

Figure 1: PAT programme theory model

Figure 2: PAT programme theory model: principal mentoring

Figure 3: Logic of the theory evaluation

Figure 4: Adapted PAT programme theory model

Figure 5: Adapted PAT programme theory model: principal mentoring

## List of Acronyms

ACE	Advanced Certificate in Education: School Leadership
ACE-SML	Advanced Certificate in Education: School Management and Leadership
AESOP	An Exceptional Schooling Outcomes Project
CASE	Comprehensive Assessment of School Environments
CSCSS	California School Climate and Safety Survey
DSCS—S	Developmental Study Center’s School Climate Survey
ESSS	Effective Schools Student Survey
FP	Foundation Phase
ICT	Information and Communication Technology
LDQ	The Leadership Dimensions Questionnaire
MDP	Management Development Programme
MLQ-5X	Multifactor Leadership Questionnaire form 5
M&E	Monitoring and Evaluation
NELS	National Longitudinal Study Student Questionnaire
OCDQ	Organisational Climate Description Questionnaire
OCDQ-RE	The Organisational Climate Description for Elementary Schools
OCDQ-RS	The Organisational Climate Description for Secondary Schools

OCI	Organizational Climate Index
OHI	Organizational Health Inventory
OHI-E	Organizational Health Inventory for Elementary Schools
OHI-M	Organizational Health Inventory for Middle Schools
OHI-S	Organizational Health Inventory for Secondary Schools
PAT	Principals Academy Trust
PEP	Principals Excellence Program
SCS	School Culture Survey
SDP	School Development Program
SMT	School Management Team
TSP	Teacher Support Programme
UCT	University of Cape Town

## Chapter 1: Introduction, programme description and definition of key constructs

Founded in October 2012, the Principals Academy Trust (PAT) is a non-profit organisation in collaboration with the University of Cape Town's (UCT) Graduate School of Business (PAT, 2026) and currently consists of one programme comprising a number of interlinked components.

With the ultimate goal "to provide quality teaching and meaningful learning in schools serving poor and marginalised communities" (PAT, 2016) in South Africa – the PAT programme is designed upon the main assumption that two factors, namely school leadership and teaching quality, provide the greatest impact on learners' performances. As such, the programme largely focuses on improvement in principal leadership competencies and school classroom environments (PAT, 2016). The core component of the programme comprises a mentorship revolved around retired senior principals working for PAT guiding principals in schools serving poor and marginalised communities. Additional components of the programme include the Management Development Programmes (MDP), tailored workshops for school staff, in addition to teacher and foundation phase (FP) classroom support provided by retired senior teachers (PAT, 2020). Twenty-four principals are selected per annum to participate in the programme (PAT, 2016). Since 2012, 221 principals and their respective schools have benefited from the programme. Thus approximately 20000 learners attending said schools have potentially been impacted in some way by PAT's intervention (PAT, 2019).

Currently, the only form of tracking the PAT programme progress in respective schools involves the collection of quantitative data regarding student outcomes from current and previous mentorships. From the researcher's initial exploratory meetings with the PAT mentors and head mentor - it became evident that an effective technique for capturing "people's stories" (PAT mentors, personal communication, March 10, 2020) is lacking. As such, PAT staff expressed the need for an improved system that can monitor and evaluate the qualitative data related to possible changes in school culture and climate resulting from long term mentoring relationships (PAT mentors, personal communication, March 10, 2020). The dissertation's key concepts school culture and climate are defined in Chapter 3 (please see p. 22) and in the appendices B and C with the support of relevant literature.

PAT staff are specifically interested in understanding the impact of the programme's mentoring component on school culture and climate, as this is the main programme activity. After consulting PAT staff, it became evident that a primary evaluation need is for an impact evaluation of their programme. However, as this research commenced in the midst of the COVID-19 pandemic - associated disruptions related to the pandemic and the possibility of conducting an impact evaluation had to be re-evaluated. Reflecting on an alternative evaluation that is both valuable to PAT and possible in the current climate, it was collectively decided that the development of a monitoring and evaluation (M&E) framework to monitor potential changes in school climate and culture is beneficial. Once implemented, this framework would lay the foundation for the collection of data used for an in-depth impact evaluation in the future. This dissertation reports on the development of the M&E framework, informed by findings of full scale theory evaluation and testing of the programme theory's causal links and assumptions.

To prevent confusion, retired PAT principal mentors are hereafter further referred to as "mentors" and benefiting principals referred to as "principals". The term "mentee" is used in sections where the term principal may be mistaken for either the mentor or the principal.

## Research/evaluations questions and aims of study

### Theory evaluation questions

Following the finalisation of the first draft of PAT's programme theory model (please see pp. 6-7) the researcher assessed individual elements of this model (activities and outcomes) and their causal links on the basis of relevant evaluation-centric social science literature. The focus of this step (theory evaluation) was to establish the plausibility of PAT to achieve the desired outcomes if the programme was implemented as intended. The following evaluation research questions and topics were created to evaluate the first draft of PAT's programme theory model:

- **Theory evaluation research question 1:** What factors make up an effective principal mentorship programme?
- **Theory evaluation research question 2:** What are the key dimensions of good leadership and management competencies in principals?

- **Theory evaluation research question 3:** What is the effect of mentoring on principals' leadership competencies?
- **Theory evaluation research question 4:** Can principal leadership affect school culture?
- **Theory evaluation research question 5:** Can principal leadership affect school climate?

#### Developing an M&E framework

The M&E framework was developed to answer these evaluation questions:

- **Evaluation question 1:** Do PAT's principal mentoring efforts produce a change in school culture?
- **Evaluation question 2:** Do PAT's principal mentoring efforts produce a change in school climate?

Both evaluation questions address the impact of the programme. Although evaluation questions 1 and 2 are not answered as part of this dissertation they form the basis for the creation of the M&E framework. Furthermore, both, the mentoring and evaluation plan, are built around providing PAT with data collection and evaluation tools to answer the evaluation questions themselves.

#### Aims and objectives of this study

The main aim of this study is to develop a framework to enable PAT to collect and evaluate data related to the change in school culture and climate that is brought about by the programme's mentoring component.

In order to achieve this the researcher has set out to achieve a number of objectives with this dissertation:

- Perform a theory evaluation of the first draft of PAT's programme theory and test the plausibility of the model's causal connections.
- Create an M&E framework, based on the outcome of the theory evaluation, focused on capturing data regarding the change in school culture and climate in supported schools.

#### The structure of the dissertation

Due to the specific focus of this dissertation, including both a theory evaluation and the creation of an M&E framework, a standard structure (i.e. introduction; literature review;

method; results; and discussion/conclusion) is not appropriate. The following changes to the structure were undertaken to make the dissertation logical and clear:

Chapter 1 outlines the aims and objectives, research questions and provides a description of PAT's programme.

Chapter 2 describes the method for the theory evaluation and the methods used to develop the M&E framework.

Chapter 3.1 presents the results and discussion of the theory evaluation and in doing so comprises an in-depth and focused literature review.

Chapter 3.2 presents the results and discussion of the M&E framework. This chapter includes an additional literature review of the critical indicators of positive school culture and climate dimensions required for the development of the M&E framework.

Chapter 4 includes the challenges, limitations, recommendations for further research, a reflection on the utilised guide for the creation of the M&E framework and a conclusion.

### **PAT's programme theory model**

In order to get an understanding of PAT's programme it is essential to first review the programme theory model. Ebenso et al. (2019) describe how programme theory models are tools that can be used for "planning, describing, managing, communicating, and evaluating a programme or intervention" (p.98). A programme theory can assist an evaluator in developing a clear understanding of a programme and how it should run. Prior to this research endeavour, PAT's programme had not been articulated in the form of a programme theory model. The researcher had no clear indication of the resources PAT uses for their mentoring activities, what specific activities are being performed by mentors, in addition to what the outcomes of their efforts are.

Before the start of the research, a first draft of a programme theory model for PAT in the form of a results chain was produced by groups of students in the Principles of Programme Evaluation module, part of the Master's in Programme Evaluation at UCT. Results chains should present the programme's inputs, activities, outputs and outcomes, demonstrating the expected causal connections (Donaldson, 2007). Readily available information from PAT's official website and the following documents, published by PAT, were used for the creation of

the first draft: the 2016 PAT Brochure, the PAT Trust Report to Funders July 2018, the PAT Concept Paper, the 2018-2019 Impact report, as well as the MDP Module Schedule.

This first draft was further improved upon engagement with the head mentor and 10 other mentors during their monthly mentor meeting, hosted at UCT on the 10<sup>th</sup> of March 2010. An informal interview with a semi-structured schedule was conducted with the mentors in order to refine the first draft of the programme theory model. The interview schedule is presented in Appendix A. After a number of adaptations, the improved version of the first draft was presented to the head mentor and approved as seen in Figure 1, whereas the mentoring component, extracted from the model, is presented in Figure 2.

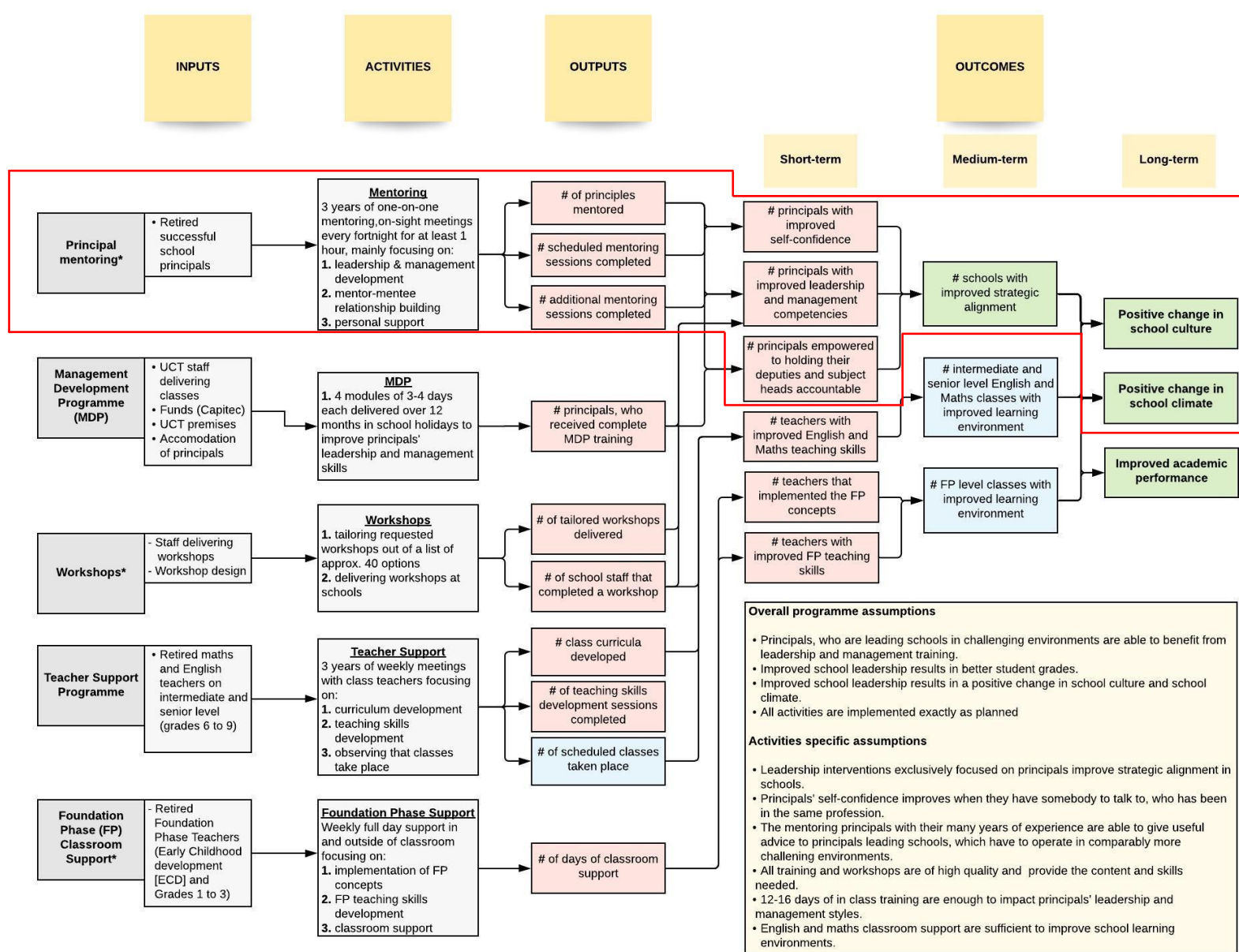


Figure 1: First draft of PAT's programme theory model

History \* Funds are only used to cover costs (e.g. transportation)  Measurement at principal/teacher/session level  Measurement at class level  Measurement at school level

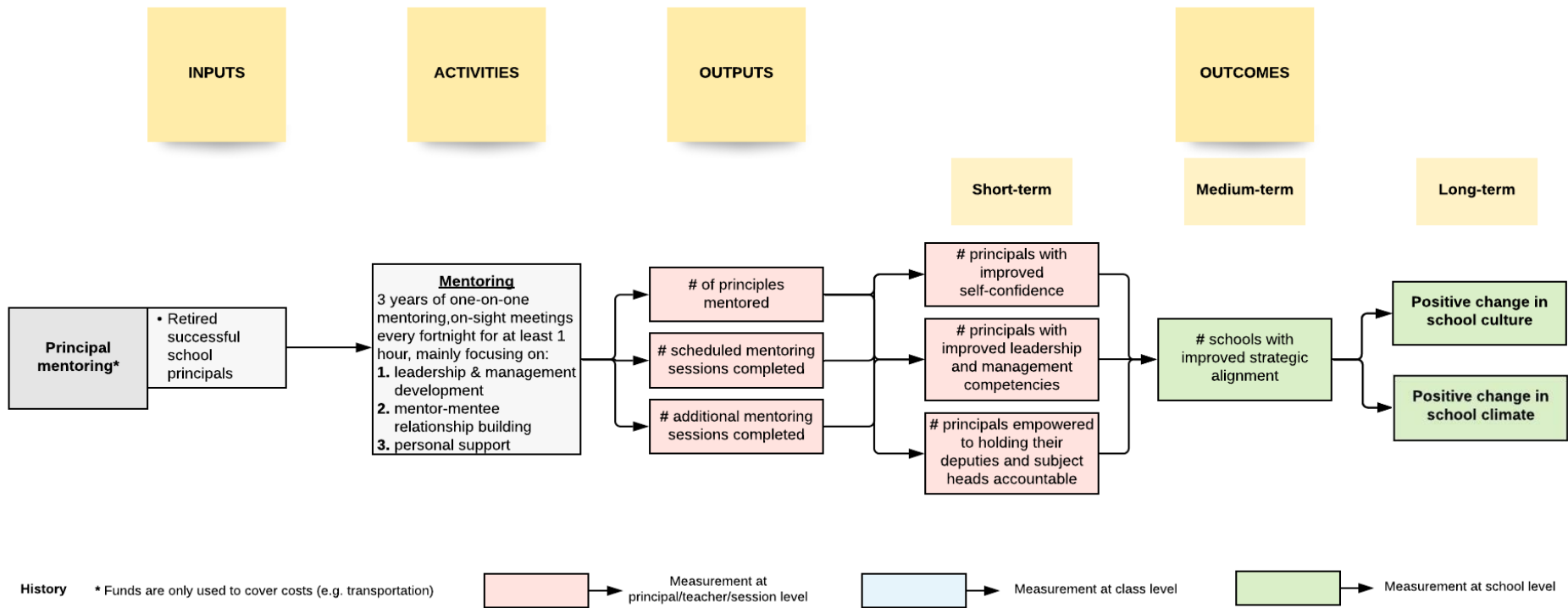


Figure 2: First draft of PAT's programme theory model: Principal mentoring component

## Programme description and explanation of the first draft of PAT's programme theory model

The focus of the dissertation is the mentoring component of the programme. The entire programme theory is illustrated in order to outline how the mentoring component fits into the programme.

### Inputs, activities and outputs

The full programme, as described by PAT (2019), consists of 5 main components:

#### **Mentoring**

The mentoring component of the programme consists of at least 1-hour fortnightly meetings over a period of 3 years and is focused on developing the leadership and management skills of the principal through building a productive and supportive mentoring relationship (PAT, 2019). Preceding the COVID-19 pandemic, fortnightly meetings were done face-to-face, where after restrictions imposed by the pandemic resulted in a shift to an online environment. The mentoring does not follow a specific mentoring plan and instead is tailored to the needs of individual chosen principals and schools by the mentor. The outputs of this activity can be tracked as the number of principals mentored, number of scheduled sessions completed, and number of additional mentoring sessions completed. As described in the section describing the aims and objectives of this study (please see p. 3), this programme component is the focus of this study.

#### **MDP**

The MDP is an academic component funded by Capitec (PAT, 2020) designed and presented by UCT's Graduate School of Business, thus relying on UCT staff to deliver classes. Delivered in 4 modules of 3-4 days, each over 12 months in the school holidays, the MDP improves the principals' leadership and management skills (PAT, 2019) and creates an output in the form of the number of principals who received complete MDP training. The current 4 modules are:

- Systemic management practices for school principals
- Business acumen for school principals
- Leading change
- Action learning projects

## Workshops

Chosen from a list of approximately 40 workshops and designed by PAT, mentors are required to deliver them. Mentors, together with the principals, select the workshops, which are then specifically tailored to the schools' needs and delivered on site (PAT, 2019). Workshops serve to educate the entire schools' staff on a chosen topic, whereas the number of tailored workshops delivered and number of school staff participating represent the outputs.

## Teacher Support Programme

The Teacher Support Programme (TSP) was implemented by PAT to support teachers in their teaching practices and classes for the subjects of mathematics and English. In accordance with other components, TSP is only implemented in schools selected to receive principal mentoring. Inputs for the TSP include retired mathematics and English teachers for intermediate and senior classes who, on a weekly basis for 3 years, support class teachers. The teacher support is focused on curriculum development, development of teaching skills and ensuring classes take place, however, can be expanded into other areas if specific needs arise (PAT, 2019). The number of class curricula developed, the number of teaching skills development sessions completed, and the number of scheduled classes taken place are the activity's main outputs.

## FP classroom support

Retired FP teachers are readily made available by PAT for FP classroom support, which is held weekly for 2 years. It incorporates support in implementing FP concepts, improving FP teaching skills and supporting classroom teaching (PAT, 2019). Activities are tracked as the number of days of classroom support and are planned according to termly timetables outlining which teachers are involved, which schools are supported, and on which day of the week the support is provided.

## Desired outcomes

### Desired short-term outcomes

The envisioned short-term outcomes of the principal mentoring include the number of principals with improved self-confidence, improved leadership and management competencies, and the ability to hold their deputies and subject heads accountable. However,

it cannot be disregarded that the MDP and possibly workshops focusing on management and leadership education may additionally influence these short-term outcomes too. The TSP results in a number of teachers with improved English and mathematics teaching skills with the same seen in FP teaching skills through the FP classroom support.

#### Desired medium-term outcomes

In the medium-term, it is expected that principals with improved self-confidence, leadership and management competencies, and an increased ability to hold their deputies and subject heads accountable result in schools with improved strategic alignment. Strategic alignment in this context can be defined as improved school performance, caused by the optimisation of the operation of processes/systems, in addition to the collaboration of the principal and all school staff (Morrison, Ghose, Dam, Hinge & Hoesch-Klohe, 2011). Moreover, it is expected that improved English and mathematics teaching skills on intermediate and senior level, and improved FP teaching skills and concepts will lead to classrooms with improved learning environments in their respective areas.

#### Desired long-term outcomes

Regarding the long-term, improved strategic alignment and a positive change in classroom environments are expected to result in a positive change in both school culture and climate for the entire school.

Positive changes in school culture can be expected to be viewed in the form of development of overarching, school-wide professional values, collegiality in addition to collaboration among teachers and principals, emphasis on continuously improving learning procedures, shared planning between all school employees and a transformational leadership approach (Cavanagh & Dellar, 1998). As discussed in the second part of the results section (please see p. 59), several other dimensions form a school's culture.

To understand such dimensions, it is vital to understand the meaning of indicators. Indicators are specific measures used in monitoring tools to assess the presence or absence of specific variables of interest (Markiewicz & Patrick, 2015), which for this dissertation is the extent to how positive a school's culture or climate is. Utilised by researchers in the field of education, dimensions group indicators into more general themes that influence the development of

school culture or climate. School culture and climate instruments, presented almost exclusively in the form of surveys in the identified literature, utilise dimensions and indicators in order to measure the extent to which there is a positive school culture or climate in a primary or secondary school (Bradshaw, Waasdorp, Debnam & Johnson, 2014; Ding, Liu & Berkowitz, 2011; Hoy, Smith & Sweetland, 2002). Hereafter, school culture and school climate surveys will mostly be referred to as “instruments”.

The presence of academic support and satisfaction, order and discipline, a safe physical environment, a thriving social environment, connectedness felt among pupils and staff, in addition to absence of exclusion and privilege (Zullig, Koopman, Patton & Ubbes, 2010) describe a positive school climate. The dimensions of school climate, as found in the literature, are described in-depth in the second part of the results section (please see p. 63).

PAT proposes that through mentoring school principals’ leadership and management skills, in addition to confidence, a sufficient improvement will result in a measurable effect on both school culture and climate (PAT, 2020). Improved academic performances of pupils are carried by all the aforementioned outcomes and are reflected in improved grades.

The following chapter explains the methodology behind the theory evaluation and the creation of the M&E framework.

## Chapter 2: Methodology

This chapter describes the research methods utilised for the creation of the M&E framework. The researcher followed Markiewicz & Patrick's (2015) steps in developing an M&E framework, which include:

- Step 1: Scoping the M&E framework
- Step 2: Theory evaluation
- Step 3: Creation of evaluation questions
- Step 4: The monitoring plan
- Step 5: The evaluation plan
- Step 6: Collecting, managing, analysis and synthesis
- Step 7: Learning strategy
- Step 8: Implementation plan

Markiewicz & Patrick's (2015) step-by-step guide was utilised as an approach to evaluate PAT's programme theory model and developing an M&E framework, as it provides a comprehensive method for creating an M&E framework from the conceptualisation phase to the implementation plan.

The researcher deviated from Markiewicz & Patrick's (2015) guide in step 2, following a shortened version of Donaldson's (2007) guide for creating a programme theory evaluation. Even though it is 15 years old, Donaldson's guide was utilised, as it is still regarded as state of the art by prominent evaluation researchers (Patton, 2018). A shortened version was used, as a first draft of PAT's programme theory had previously already been created by the researcher, making the first three steps of Donaldson's (2007) guide obsolete. Instead, the researcher solely focused on the last two steps, suggesting a theory evaluation to produce an elaborate programme theory model. A theory evaluation was chosen in step 2, as opposed to eliciting a programme theory model solely on the basis of stakeholder input (as per Markiewicz and Patrick's guide), because it provides a more robust basis for the creation of the evaluation

questions (Donaldson, 2007) in step 3. By assessing the plausibility of the programme theory model in light of relevant social science literature the researcher made sure that the M&E framework sets out to capture realistically achievable long-term outcomes.

**Step 1: Scoping the M&E framework**

Identify requirements

The first step in the creation of the M&E framework was the clarification of its purpose. PAT’s evaluation needs were assessed in an informal interview with the head mentor and the fundraising consultant for PAT. The informal interview included a discussion of expectations from PAT, scoping the available resources and understanding what data is being periodically collected.

Determine stakeholders and possible data providers

Next, a stakeholder mapping matrix (see Table 1) was created to identify key stakeholders in the process of developing, endorsing and implementing the M&E framework.

Table 1								
Stakeholder Mapping Matrix								
Category	Group	Consult, Re-focus, and Scope	Develop Key Constructs	Develop Overall Frameworks	Endorse Final Framework	Implement Framework	Audience for M&E Frameworks	Power & Interest*
<b>A: Program funders, Policy makers, Senior managers</b>	Head mentor	x	x	x	x	x		IP
<b>B: Program managers, Program delivery personnel, Program partners</b>	Capitec (funder)							lp
<b>C: Program beneficiaries, Beneficiary representatives</b>	Mentors	x	x	x	x	x		IP
<b>C: Program beneficiaries, Beneficiary representatives</b>	Principals						x	lp
	Deputy principals						x	lp
	School teachers						x	ip
	Pupils						x	ip
	Community						x	ip

\* IP = high interest & high power, iP = low interest & high power, lp= high interest & low power, ip = low interest and low power

All stakeholders were identified with their respective interest and power over the development of the M&E framework.

Through an informal interview with the head mentor, the researcher identified the head mentor himself, as well as the mentors as the key stakeholders in the development, endorsement and implementation of the M&E framework.

Principals, deputy principals, teachers, pupils and possibly even the community were identified as targets for data collection purposes in the M&E framework.

Identify possible and preferred approaches for the creation of an M&E framework

A combination of both a theory-based, as well as a participatory approach to creating the M&E framework was chosen.

Markiewicz & Patrick's (2015) describe a theory-based approach as one that "clearly establishes anticipated causal relationships, identifies anticipated results from a program, and uses these theories to organize and guide the evaluation process" (p. 25). The M&E framework is theory-based because the theory evaluation presented in Chapter 3 (please see p. 22) shaped the M&E framework by establishing plausible outcome variables to be investigated through the framework's evaluation questions.

The participatory orientation of the M&E framework stems from the close participation with the mentors in the development of the M&E framework, which is required, as their experience is invaluable in setting the theory presented in the social science literature into the context of schools in marginalised areas in Cape Town.

### Step 2: Creation of the final programme theory model and theory evaluation

Bickman (1987) outlines the importance of testing a programme's programme theory by analysing it against relevant social science literature. This theory evaluation is meant to interrogate the plausibility of the first draft of PAT's programme theory model and test the causal links between the programme's activities, outputs and outcomes. This identification of flaws in the programme's logic will prevent PAT from using extensive resources on gathering and analysing data related to outcomes, which according to the literature, were never achievable through principal mentoring. The final programme theory model presents an adapted version of the first draft on the basis of the flaws identified in the theory evaluation.

The steps followed to evaluate the first draft of PAT’s programme theory model are presented in the following:

Step 2.1: Plausibility check of the programme theory model

Evaluation-centric and social science literature was used to assess the plausibility of the first draft of the programme theory model’s causal links. The focus of this step was to establish whether it is plausible for PAT to achieve the desired outcomes if the programme was implemented as intended.

Figure 3 represents the logic of the theory evaluation’s research questions, following the causal sequence of the programme theory model. First, an understanding of effective principal mentoring and leadership was established. The causal link between the activity and the main short-term outcome was then tested. This was followed by testing the causal links between principal leadership and school culture, as well as school climate.

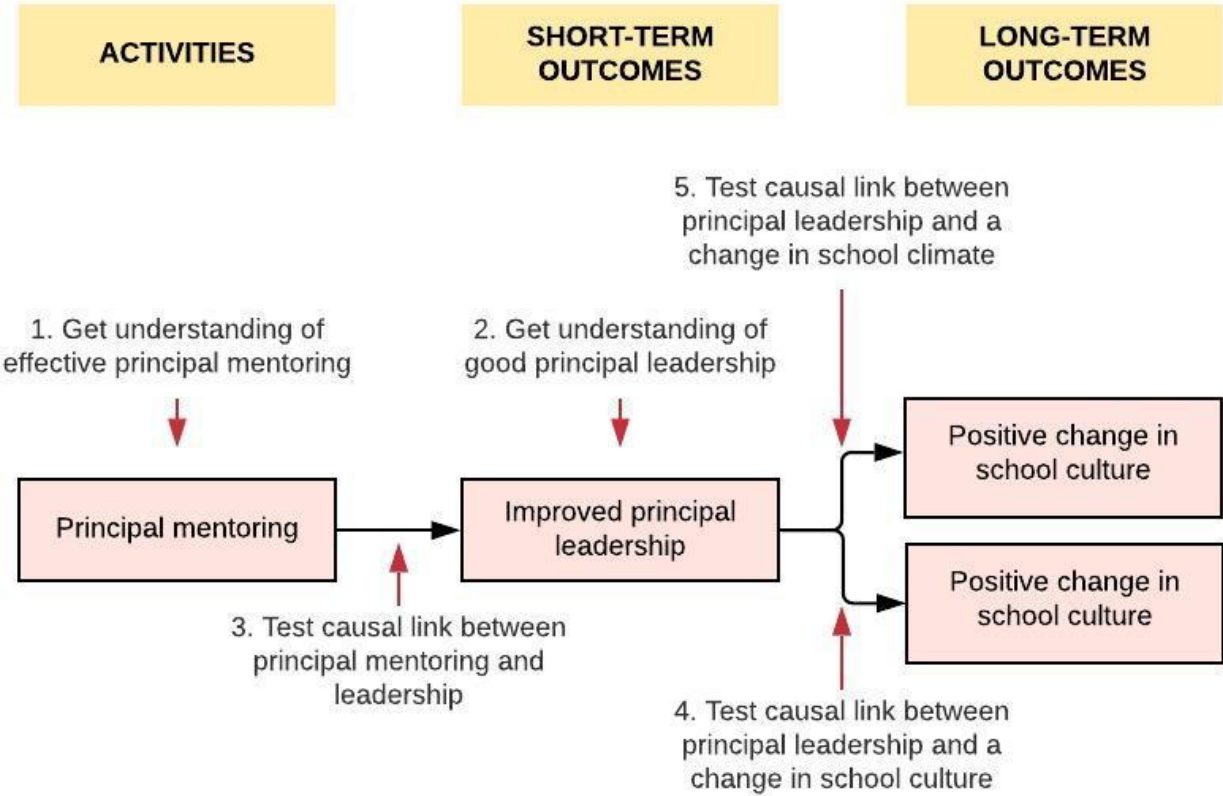


Figure 3: Logic of the theory evaluation

Search strategy for peer-reviewed articles for the theory evaluation and the definition of key concepts

The peer-reviewed articles used for the definition of the dissertation's key concepts, being school culture and climate, and the theory evaluation were identified through the use of an intricate search strategy. The review included peer-reviewed journal articles published between 1973 and 2020. Articles published in the 1970s were required, as some of the definitions of school culture and climate, still prominent in social science literature to this day, were developed during this time (Geertz, 1973; Van Maanen, 1979). Keywords were used in various combinations in the search for literature and included the following terms: [mentoring], [principal mentoring], [leadership], [management], [principal leadership], [school culture], [school climate], [evaluation], [definition], [belief], [believes], [attitude\*], [norm\*], [tradition\*], [ritual\*], [difference], [similarity], [similarities]. The used databases include Google Scholar, JSTOR and EBSCOHost. Reference lists of identified relevant peer-reviewed articles were further used to find more suitable articles to support the theory evaluation.

#### Step 2.2: Finalised programme theory model

The findings of the theory evaluation described in the preceding steps were used to finalise PAT's programme theory. It was approved by the head mentor in an informal online meeting.

#### Step 3: Creation of evaluation questions

As described in Chapter 1, the following evaluation questions were chosen on the basis of the client's needs and the outcome of the theory evaluation:

- Do PAT's principal mentoring efforts produce a change in school culture?
- Do PAT's principal mentoring efforts produce a change in school climate?

#### Step 4: The monitoring plan

Markiewicz & Patrick (2015) describe how a monitoring plan can be used to systematically "track progress against a range of predetermined areas" (p. 78). For this M&E framework these areas will be represented by indicators and targets.

## Develop performance indicators and targets

Performance indicators were developed in a 7 step process:

1. Dimensions and indicators of a positive school climate and school culture, as represented in recent social science literature, were reviewed. Mostly surveys were reviewed. The following strategy was used to find peer-reviewed articles for the identification of dimensions and indicators of a positive school culture and climate:

Peer-reviewed articles published between 1963 and 2020 were used. Articles published as far back as 1963 were included, as several school culture and climate instruments predominantly used up to this day were developed during this time (Halpin & Croft, 1963; Kottkamp, Mulhern & Hoy, 1987). Keywords were used in various combinations in the search for literature and included the following terms: [school culture], [school climate], [indicator\*], [dimension\*], [instrument]. The used databases include Google Scholar, JSTOR and EBSCOHost. Reference lists of identified relevant peer-reviewed articles were used to find further articles.

2. The dimensions and indicators suggested in commonly used school culture and climate surveys were then compared. Similar dimensions identified across surveys, together with their indicators, were grouped in tables. Dimensions, which could only be identified in one of the identified surveys, were titled outliers and presented in a separate table. The researcher then created sub-dimensions for each dimension in order to group similar indicators even further.
3. All indicators were then organised according to their new, overarching dimensions and sub-dimensions into two tables (one for school culture and one for school climate). On the basis of these tables the researcher created two surveys for the mentors to assess which indicators they believe they are able to impact through their work with the principals. They could simply indicate this by placing a cross next to each indicator. The survey included 64 indicators of a positive school culture and 144 indicators of a positive school climate. This was a necessary step due to two reasons:

Firstly, the researcher wanted to create a monitoring plan that only collected essential data. By asking the mentors which indicators they think they can impact, the researcher was able to reduce the list of indicators. Secondly, while there is an extensive number of school culture

and school climate instruments that find use in recent literature, the majority is focused on the US school system (Bradshaw et al., 2014; Ding et al., 2011; Hoy et al., 2002). It is essential to establish the indicators that can be applied to the context of South African schools in marginalised communities.

4. A focus group was then held with nine mentors to discuss the outcome of the survey in more depth. Furthermore, it was done, as some surveys were only partially completed, due to some of the retired principals' limited computer skills. In the focus group, the researcher went through all the sub-dimensions with the mentors again to establish which ones they believe can realistically be impacted by their mentoring work. The researcher decided to go through the sub-dimensions instead of each individual indicator due to time restrictions. The sub-dimensions were either identified by an expected low, medium or high impact. Additionally, principals were asked to add indicators to the tables where they saw fit. No indicators were added.
5. In the fourth step the researcher excluded all sub-dimensions which were identified to be impacted to a low or medium extent by the mentoring work. This was done to reduce the indicators to a number, which it would be realistically possible to collect data for. This step reduced the number of total indicators from 208 to 124.
6. During the identification of indicators of a positive school culture and climate, it was discovered that there was a large overlap. Additionally, PAT's head mentor (B. Probyn, personal communication, June 6, 2020) outlined that there is no capacity to administer separate data collection for both school culture and climate. Therefore, the researcher combined the lists of the remaining 124 indicators of school culture and climate. This simplifies data collection and prevents repetition. As part of the combination process the researcher merged similar indicators, leaving 50 indicators to be included in the monitoring plan.
7. In the last step the researcher grouped these 50 indicators under evaluation questions. In total, 18 evaluation questions were created. Targets for each indicator were chosen with the head mentor in an online meeting.

### Identify data collection processes and tools

Another goal of the focus group was to establish the data collection processes and tools to be used. A discussion with the mentors was held focusing on what data is reasonable and feasible for the program to collect. The mentors visit schools daily, so they know what data is off-limits and what processes and tools are appropriate.

### Determine responsibilities and timeframe

In a meeting, the first draft of the monitoring plan was presented to the head mentor, followed by a discussion of who would be responsible for data collection and which timeframes should be applied to the individual monitoring tasks.

## Step 5: The evaluation plan

### Evaluation approach

While the overall approach for the creation of the M&E framework has been described as theory-based and participatory, the researcher chose a specific approach for the evaluation plan centred around a beneficiary assessment and a contribution analysis.

A beneficiary assessment is described by Salmen (1995), whose definition is regularly referenced in more recent works (Alaedini & Norouzi, 2019; Eshun & Dichaba, 2019), as an assessment of the value of an intervention according to the perception of the beneficiaries, thereby giving priority to their concerns. A contribution analysis is used to assess how far a programme has contributed to particular outcomes (Mayne, 2008) and to track its impact pathways (Mayne, 2019).

The evaluation plan was partly created as a beneficiary assessment, due to PAT's evaluation interests mainly lying in the programme's direct beneficiaries (the principals) and indirect beneficiaries (teachers and students). Priority is given to their perception of the change that has occurred in the schools' culture and climate.

It is part contribution analysis, because PAT has an interest in the extent to which the change in school culture and climate was caused by the programme and which specific mentoring techniques caused or supported the change.

## Evaluation methods

The evaluation methods were developed on the basis of what is realistically implementable for PAT in the sense of capacity, skills and time. PAT currently does not have any staff with extensive M&E skills (PAT mentors, personal communication, March 10, 2020). While there is the possibility of receiving support from a future UCT master's student in the implementation of the M&E framework, the evaluation methods were chosen with PAT's currently available capacity, skills and time in mind.

A first draft of the evaluation methods was presented to PAT's mentors for comment and critique. The draft was finalised based on the feedback provided in the online meeting.

## Determine responsibilities and timeframe

In a meeting with the head mentor, PAT's fundraising consultant and Keith Richardson, one of the mentors, responsibilities for data collection and the timeframes for the implementation of individual evaluation methods were decided.

## Step 6: Collecting, managing, analysis and synthesis

This step required the creation of a data collection plan, a data management plan, a data analysis and synthesis approach and an approach for making evaluative judgments and reaching evaluative conclusions.

The data collection plan was based on the data needs of both, the monitoring and evaluation plan. Data collection methods listed in the data collection plan were used to elicit a way of entering, analysing and reporting data in the data management plan.

Approaches for data analysis, synthesis, making evaluative judgments and evaluative conclusions were developed in close collaboration with the head mentor and based on PAT's availability of resources, skills and time. Templates were provided for all approaches.

## Step 7: Learning strategy

A learning strategy must be in place for areas of school culture and climate where PAT finds no positive change following their mentoring efforts, as well as such where an impact is found. The development of a learning strategy for PAT followed these steps:

- Finding ways to maximise the use of conclusions, recommendations and lessons

- Finding ways for mentors to translate conclusions into recommendations (lessons learned)
- Providing a reporting and dissemination strategy

The strategy was closely aligned with PAT's learning needs, identified in collaboration with the head mentor.

### Step 8: Implementation plan

The implementation plan that was developed for PAT consists of three elements including:

- The development of a work plan for the implementation
- Guidelines for monitoring and reviewing the framework
- Additional recommendations for the implementation

The work plan establishes detailed implementation dates for data collection, managing, analysis, synthesis, as well as reporting and reviewing of data and lessons learned.

An emphasis was put on creating a plan that allows PAT to continuously improve on the M&E framework without external support.

## Chapter 3: Results & discussion

Following the short definition of the key concepts of this dissertation, which are school culture and climate, Chapter 3 is split into 2 parts. The first part, being Chapter 3.1, includes the results and the discussion of the theory evaluation, which ultimately inform the creation of the final programme theory for PAT. Chapter 3.2 presents the identification of indicators of a positive school culture and climate, as well as the M&E framework.

### Defining the dissertation's key concepts

Before delving deeper into the results, it is essential to get an understanding of the two key concepts of this dissertation. They are defined as follows:

#### Defining school culture

Geertz (1973) describes culture as consisting of “norms, values, beliefs, traditions, rituals, ceremonies, and myths translated by a particular group of people” (p. 7). Having been cited in 84197 articles on Google Scholar, it is to this date one of the most widely used definitions (Mohajan, 2018; Veissière, Constant, Ramstead, Friston & Kirmayer, 2020). An in-depth look into the definitions of school culture and why Geertz's definition was chosen for this dissertation can be found in Appendix B.

#### Defining school climate

Cohen, McCabe, Michelli & Pickeral (2009) describe school climate as “the quality and character of school life”, which “is based on patterns of people's experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures” (p. 10). A detailed look into the definitions of school climate, how it differs from school culture, and why Cohen et al.'s definition was chosen is presented in Appendix C.

## Part 1 of results and discussion: Theory evaluation

As outlined in Chapter 1, the theory evaluation is built around the following research questions:

- **Theory evaluation research question 1:** What factors make up an effective principal mentorship programme?
- **Theory evaluation research question 2:** What are the key dimensions of good leadership and management competencies in principals?
- **Theory evaluation research question 3:** What is the effect of mentoring on principals' leadership competencies?
- **Theory evaluation research question 4:** Can principal leadership affect school culture?
- **Theory evaluation research question 5:** Can principal leadership affect school climate?

Results for theory evaluation research question 1: the factors which make up an effective principal mentorship programme

In order to understand the factors, which make up an effective principal mentorship programme, it is essential to define mentoring. Livingstone & Naismith (2018) define mentoring as “an experienced person (mentor) provid[ing] career and/or personal support to another individual” (p.2). Yirci & Kocabas (2010) describe how a mentor “helps you to improve your effectiveness in a certain field, shows you how to become an expert in a profession and teaches you how to develop your skills” (p. 2).

Meyer & Maboso (2007) describe how being a mentor consists of two aspects. The first one is to supply career development opportunities in the form of sponsoring advancement, providing challenging assignments, coaching and fostering the principal's visibility. The second one revolves around providing psychosocial support. Following a thorough review of literature, it could be identified, that these 2 aspects of mentoring (Meyer & Maboso, 2017) can be found all over the limited literature focused on the components of effective principal mentorships (Daresh & Playko, 1994; Roberts, 2007).

While there is an increasing interest in mentoring, specifically principal mentoring, according to Eller, Lev & Feurer (2014) little is known about what behaviours or actions lead to positive outcomes in a principal mentor-mentee relationship. After a thorough review of literature, 6

key researchers could be identified, who make an attempt at formulating the factors that constitute effective principal mentoring. Following this literature review it can be concluded that good communication, the creation of goals and challenges and a frequent exchange of knowledge and information are the main factors that make up an effective principal mentorship programme (Allen & Poteet, 1999; Dukess, 2001; Eller et al., 2014; Lock et al., 2006; Malone, 2001). Sources older than 5 years were utilised due to research regarding effective principal mentorship programmes being very limited (Gimbel & Kefor, 2018). In the following these factors and their dimensions are presented in detail:

### Communication

Communication arises across the literature as a key factor in supporting an effective principal mentor-mentee relationship.

In a qualitative study done by Allen & Poteet (1999) 27 mentors were asked how to make the best out of a mentoring relationship. 54 comments were recorded, which were separated into 12 factors. A total of 15 comments were made about mentor-mentee communication being crucial for a positive mentoring relationship, followed by setting standards, goals and expectations for the mentorship with 8 comments. While the study done by Allen & Poteet (1999) only used a sample of 54 mentors and therefore had small power and a high margin for error, the identification of good communication as a key factor for an effective and healthy mentor-mentee relationship is a prevalent occurrence in the social science literature (Allen & Poteet, 1999; Eller et al., 2014; Dukess, 2001; Lock et al., 2006).

According to Lock et al. (2006), as shown in Table 2, communication between a mentor and their mentee should be embraced and a communication system with reciprocal feedback should be established. Allen & Poteet (1999) point out that communication needs to be open and comfortable (Allen & Poteet, 1999), as well as accessible for the mentee (Eller et al., 2014).

**Table 2**

Communication				
Author	Allen & Poteet, 1999	Eller et al., 2014	Lock et al., 2006	Dukess, 2001
Dimensions	Establish an open communication system with reciprocal feedback	Open communication and accessibility	Embrace your ability to communicate	Being a good listener

### Creation of goals and challenges

As shown in Table 3, Eller et al. (2014) identified the creation of goals and challenges as one of the key factors of effective principal mentoring. 117 mentor-mentee dyads from 12 universities in the US took part in a four-hour-long focus group with the focus on reaching a consensus on the “key components of an effective mentoring relationship” (Eller et al., 2014, p. 1). Dukess (2001) supports Eller et al.’s (2014) factor for a healthy mentor-mentee relationship and states that mentors must be organised and set goals. Dukess (2001) outlines this factor as one of the two most important ones, next to mentors being resourceful, however Dukess' study only used 37 participants and interview transcripts are not available, thus making it difficult to comprehend the selection of these factors. Lock et al. (2006) support this idea by stating that a shared professional vision is necessary between a mentor and mentee for long-term success. The validity of Lock et al. (2006)'s findings is questionable since they do not disclose their methodology.

**Table 3**

Creation of goals and challenges			
Author	Lock et al., 2006	Eller et al., 2014	Dukess, 2001
Dimensions	Create a shared professional vision	Creation of goals and challenges	Mentors must be organised and set goals

### Knowledge and information exchange

Malone (2001) notes that the transfer of knowledge from a mentor to a mentee is vital to developing leadership and management skills in a mentee (Malone, 2001), so any mentor-

mentee relationship must include this. Another factor prevalent in the limited literature, as can be seen in Table 4, are different aspects of the concept of knowledge and its exchange in both directions. While Eller et al. (2014) identify the importance of exchanging knowledge, Lock et al. (2006) point towards the exchange of both knowledge and information. Information can be defined as “organized data” (Saint-Onge, 2002, p. 28). Knowledge is harder to define (Terra & Angeloni, 2003), but can be seen as something that “only reside[s] in one’s mind and is the result of human experience and reflection based on a set of beliefs” (Terra & Angeloni, 2003). Dukess (2001) points towards the importance of sharing information, as well as knowledge. Dukess (2001) mentions that there is certain information, which can only be given by a principal that shares experiences in a district similar to that of the mentee. Allen & Poteet’s (1999) do not point to a transfer of knowledge, but to the importance of mentors learning mentoring skills from each other. However, only mentors were interviewed as part of this study, which might have created a biased outcome, as learning from the mentors could have been more important to mentees if they had been interviewed.

**Table 4**

Knowledge and information exchange						
<b>Author</b>	Malone, 2001	Eller et al., 2014	Lock et al., 2006	Allen & Poteet, 1999	Dukess, 2001	
<b>Dimensions</b>	Knowledge transfer from mentor to mentee	Exchange of knowledge	Share information and knowledge	Learn from others	from	Mentors need to be resourceful

**Caring relationship, trust, respect and training**

As can be seen in Table 5 Allen & Poteet (1999), Eller et al. (2014) and Lock et al. (2006) all outline that a caring relationship between mentor and mentee is crucial for the success of the mentorship. Furthermore, the importance of trust (Allen & Poteet, 1999, Eller et al., 2014), as well as respect (Eller et al., 2014) between the dyads is pointed out as one of the key factors for effective mentoring.

Lock et al. (2006) describe the creation of a repertoire of effective consulting skills, which relates to general mentoring skills and the ability to create communication channels with the

mentee, as crucial. Allen & Poteet (1999) and Dukess (2011) support this by stating how participating in training programs to build, maintain and improve mentoring skills, as well as being a continual learner is essential for effective mentoring.

**Table 5**

Caring relationship, trust, respect and training					
<b>Author</b>	Allen & Poteet, 1999	Eller et al., 2014		Lock et al., 2006	Dukess, 2001
<b>Factor</b>	Care for and enjoy each other	Caring relationship	personal	Create a network of support	Training is key for successful mentors
	Trust	Respect		Creation of a repertoire of effective consulting skills	Being a continual learner
	Take training programs				

 Caring relationship
  Trust and respect
  Training

**Contradictions regarding factors of effective principal mentoring in the literature**  
 While there is a clear consensus on several factors related to effective principal mentoring there are a number of contradictions in the literature. Parylo, Zepeda & Bengtson (2012) specifically outline how informal mentoring is beneficial to mentees and Chao, Walz & Gardner (1992) found that “protégés in informal mentorships reported more career-related support from their mentors and higher salaries than protégés in formal mentorships” (p. 619). The term protégé in this case is interchangeable with the term mentee (Chao et al., 1992). These findings stem from a longitudinal study comparing 549 mentees in informal mentoring, mentees in formal mentoring and individuals who did not have any mentors on three outcome measures: socialization, job satisfaction, salary (Chao et al., 1992). It is unclear how far this specifically applies to principal mentees, as the respondents held managerial and professional positions in a variety of organisations and industries (Chao et al., 1992).

While Parylo et al. (2012) and Chao et al. (1992) speak of an informal mentoring relationship as a factor for effective principal mentoring, Crow & Matthews (1998) take the opposing side and argue that the “mentoring process should be systematic in scope” and should, therefore,

be more formal in nature. Their leading argument is that principals require mentorship at all stages of their career and due to this crucial importance of mentoring it should not be left to chance.

Another contradiction becomes evident when comparing Allen & Poteet (1999), who state that mentors have to be flexible, while Lock et al. (2006) describe the importance of planning for daily activities, lessons and classroom management. While the two do not necessarily contradict each other, it is important to notice how different the focus of researchers is in the area of flexibility.

**Outliers in the identification of factors which make up an effective principal mentorship programme**

As shown in Table 6, no consensus among researchers regarding factors like allowing mistakes, willing participation, considering constraints to mentoring, working on common tasks (Allen & Poteet, 1999), passion and inspiration, independence and collaboration (Eller et al., 2014), considering how you want to be treated, striking a balance between giving and taking (Lock et al., 2006), as well as the importance of university and school district support (Gümüş, 2019) could be identified. Same goes for principal characteristics outlined by Dukess (2001), who expresses that it is crucial for any principal mentor striving for effectiveness to be reflective, flexible, unselfish, proactive, positive and willing to be available and to be a facilitator of change.

**Table 6**

Outliers in the identification of factors which make up an effective principal mentorship programme						
Author	Allen & Poteet, 1999	Eller et al., 2014	Lock et al., 2006	Gümüş, 2019		Dukess, 2001
Dimensions	Allow mistakes	Passion and inspiration	Consider how you want to be treated	Importance of university and school district support		Being reflective
	Willing participation	Independence and collaboration	Striking a balance between giving and taking			Being flexible
	Consider constraints to mentoring					Being unselfish
	Working on common tasks					Being a facilitator of change
						Being proactive
						Being willing to be available
						Being positive

Results for theory evaluation research question 2: the key dimensions of good leadership and management competencies in principals

In order to identify the key indicators for good leadership and management competencies for school principals it is essential to get an understanding of how leadership and management, within an educational context, are defined.

#### Definition of leadership

Leadership emerges as one of the most frequently discussed concepts in the modern social science literature (DeRue, Nahrgang, Wellman & Humphrey, 2011). Winston & Patterson (2006) reviewed hundreds of leadership definitions and forged them into one. This is the definition chosen as it incorporates many elements of leadership prevalent in leadership research. While the definition is more extensive than what can be found in the following, this part of the definition describes the essence of what leadership encompasses:

“A leader is one or more people who selects, equips, trains, and influences one or more follower(s) [...] to achieve the organizational mission and objectives” (Winston & Patterson, 2006, p.16).

#### Educational leadership and management

Bafadal, Nurabadi, Sobri & Gunawan (2019) describe how “educational leadership is basically almost the same as leadership in other fields” (p. 626) with the only difference being “the field of work and its purpose” (p. 626). Management competencies are not separately reviewed, as the majority of school leadership literature points towards principal management competencies having been absorbed by leadership competencies. This shows in the limited mentions of school management in the literature, as well as dimensions of management being present in almost all identified models portraying school leadership standards (Cotton, 2003; Dinham, 2005; Marzano, Waters & McNulty, 2001; Pont, 2013; Robinson, Lloyd, & Rowe, 2008). In the following the researcher will only refer to leadership competencies.

#### Principal leadership research trends

An exhaustive literature review suggests that as numerous as the scientific articles about the most important competencies a principal should inherit are, so are the approaches used to describe them. While some researchers see the epitome of school leadership in a certain leadership style (Piaw, Hee, Ismail & Ying, 2013), others identify specific behaviours (Bulach,

Boothe & Pickett, 2006) and standards principals need to adopt (Pont, 2013), responsibilities to fulfil (Marzano et al., 2005) or illustrate attributes a principal must have (Bush, Kiggundu & Mooros, 2011). Several of the identified studies measure the correlation of school leadership with student outcomes, in the form of grades, since grades are regarded as the most reliable and tangible measure of school performance (Marzano et al., 2005). Therefore, in order to answer this theory evaluation research question, the researcher included all studies that measured the correlation of different school leadership dimensions with student outcomes.

#### Selected studies analysed to provide an answer to theory evaluation question 2

As part of an exhaustive literature review the researcher was able to identify key literature for exploring the key indicators for good leadership competencies in principals. These include three meta-studies executed by Cotton (2003), Marzano et al. (2005) and Robinson et al. (2008). They are considered key literature, due to them being cited most, according to the Google Scholar count, out of all studies attempting to identify key principals' leadership competencies. Additionally, an international study of countries' principal leadership standards (Pont, 2013), as a well as a single case study (Dinham, 2005) were included, to see if researchers that took a different study approach reached similar conclusions to the meta-studies. No equally relevant and rigorous, more recent studies could be identified. The dimensions of principals' leadership competencies, identified in the named studies, are so numerous that the scope was limited. The five key dimensions of the most cited study (according to Google Scholar), which is Marzano et al.'s study (2005) were compared to the key dimensions of the other identified studies. As Cotton (2003) did not rank the dimensions he identified, the researcher decided to see which of Cotton's dimensions match with Marzano et al.'s (2005) five key dimensions.

There is a scarcity of studies that rank the dimensions of good leadership competencies in principals according to their effect on student achievement. However, it was found that situational awareness, flexibility, discipline, frequent monitoring and evaluation and outreach to all stakeholders in the school, promoting and participating in teaching and learning development, as well as establishing goals and expectations are key dimensions of principal leadership competencies (Cotton, 2003; Dinham, 2005; Marzano et al., 2005; Pont, 2013;

Robinson et al., 2008). An in-depth comparison of the key dimensions of principal leadership competencies in principals is shown in the following:

#### Marzano et al.'s 21 principal responsibilities

Marzano et al. (2005) published a meta-analysis of 69 studies, which in total gathered data from 2802 elementary, middle and secondary schools and “examine[d] the quantitative relationship between building leadership and the academic achievement of students” (Marzano et al., 2005, p. 6). The studies included in the meta-analysis all relied on teachers’ reports of their perception of student behaviour. The average score for the teachers’ responses within each school was then correlated with the average achievement of students in that school. On the basis of the findings, Marzano et al. (2005) developed 21 key principal responsibilities<sup>1</sup>. Situational awareness (average correlation of .33), flexibility (average correlation of .28), discipline (average correlation of .27), monitoring and evaluation (average correlation of .27) and outreach (average correlation of .27) were identified as the key principal responsibilities related to higher student achievement. However, as Leithwood, Seashore, Anderson & Wahlstrom (2004) point out, the estimated effects on student achievement described by Marzano et al. (2005) in the study depend on a leader improving their leadership competencies across all 21 practices at the same time. According to Leithwood et al. (2004) that is an extremely unlikely occurrence. Leithwood et al. (2004) argue that, therefore, it is only of limited use to point towards individual responsibilities with the highest correlation identified by Marzano et al. (2005). However, a number of other studies support Marzano et al.’s (2005) findings. Table 7 shows a comparison of Marzano et al.’s (2005) five key dimensions with similar dimensions discovered in the other identified studies described in the following.

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<sup>1</sup> Please note that the researcher created a comprehensive bibliographic repository of all documentation related to principal leadership competencies, surveys, as well as all other school culture and climate instruments named in this dissertation and can make them available by request.

**Table 7**

Similarities to Marzano et al.'s five key dimensions of good leadership competencies in principals				
Author	Marzano et al., 2005	Robinson et al., 2008	Cotton, 2003	Pont, 2013
<b>Indicators</b>	Situational Awareness	-	-	Pedagogical management <ul style="list-style-type: none"> <li>Analyses information for decisions aimed at making improvement (indicator)</li> </ul>
	Flexibility	-	Support of teacher autonomy	Flexible management for change
	Discipline	Ensuring an orderly and supportive environment	Protecting instructional time	Promotes a culture oriented to improvement
				Promotes a culture oriented to collaboration
				Manages conflict resolution
Monitoring and evaluation	Planning, coordinating, and evaluating teaching and the curriculum	Classroom observation and feedback to teachers	-	
			Monitoring student progress and sharing findings	
			Use of student progress data for program improvement	
Outreach	Establishing goals and expectations <ul style="list-style-type: none"> <li>Involvement of staff and others (indicator)</li> </ul>	-	-	

Situational awareness
  Flexibility
  Discipline
  Monitoring and evaluation
  Outreach

#### Cotton's 25 principal leadership practices

Cotton (2003) conducted a meta-study of 81 reports of elementary, middle and secondary schools focused on the connection between principal's behaviour and student achievement. In this study reports analysing teachers' and students' responses were included, but no correlations were created. Cotton (2003) did not identify any dimension related to situational awareness among the 25 principal leadership practices she describes. However, similar to Marzano et al.'s (2005) flexibility dimension Cotton (2003) outlines how important it is for principals to support teacher autonomy and describes how this autonomy creates an environment in which the principal has to flexibly adapt to new practices, utilised by teachers. Instead of discipline, Cotton (2003) describes the significance of protecting instructional time. The gravity of monitoring and evaluation practices in a principal's skillset is even more emphasised in Cotton's (2003) practices, as she points towards 3 dimensions including classroom observation and feedback to teachers, monitoring student progress and sharing findings, as well as the usage of student progress data for programme improvement.

#### Robinson et al.'s 5 leadership dimensions

Robinson et al. (2008) reviewed 12 studies focused on principal leadership competencies, and on the basis of that developed a set of 5 leadership practices essential for a principal to improve student outcomes, and then compared the effect sizes of the practices on student outcomes. Similar dimensions to Marzano et al.'s (2005) key dimensions could be identified. However, among the three dimensions with the highest effect sizes, only one is similar to the dimensions identified by Marzano et al. (2005), namely the principal's efforts towards planning, coordinating, and evaluating teaching and the curriculum (mean effect size of .42). Promoting and participating in teaching and learning development, which showed by far the biggest mean effect size (.84) and establishing goals and expectations (.42) do not match with any of Marzano et al.'s (2005) key dimensions.

#### Pont's comparative study of learning, teaching and school principal standards

Pont (2013) carried out an international study, comparing standards for principal leadership, proposed by different educational systems in 11 developed countries and US states. In a similar way to Marzano et al. (2005), Pont (2013) emphasize the importance of flexibility in a principal, in addition to situational awareness in continuously analysing new information.

While discipline is not directly addressed in the model, Pont (2013) describes a culture that fosters improvement and collaboration along with systems to resolve conflicts, all of which lead to improved discipline among students and teachers.

#### Dinham's An Exceptional Schooling Outcomes Project (AESOP)

Using a case study approach, Dinham (2005) analysed 38 secondary schools across Australia from years 7 to 10 to determine the most essential competencies that principals need to improve student achievement. He identified the focus on students, learning and teaching as the core competency, because every identified successful school had a leader who put a central focus on assisting students so that they could succeed academically. While none of the other identified articles point to a central focus on students, learning, and teaching as an individual dimension, it is undeniable that ensuring an orderly and supportive environment (Robinson et al., 2005), and promoting an improvement culture (Pont, 2013) are factors supporting improved learning and teaching.

#### A comparison of all dimensions of the identified studies

A table comparing all dimensions of the identified studies can be found in Appendix F. It is difficult to draw definitive conclusions about the key leadership competencies required by principals from the comparison, since some studies (Cotton, 2003; Dinham, 2005; Pont, 2013) did not rank their dimensions based on a correlation with student outcomes. However, as shown in Appendix F, the identified dimensions are all of a similar nature to those described by Marzano et al. (2005).

### Results for theory evaluation research question 3: the effect of mentoring on principals' leadership competencies

The researchers in the identified literature largely support the idea of mentoring being able to improve principals' leadership competencies. A prerequisite for that is that mentors utilise an effective monitoring programme, as presented in the results of theory evaluation research question 1. The studies, which are investigating the effect of mentoring on principals' leadership skills, all base their findings on principals' self-reports. While this does introduce self-report bias to the results, there are striking similarities in the findings across the identified literature. The identified studies found that mentoring statistically significantly improved problem solving and decision-making, general leadership skills, their access to new leadership styles and their ability to work in a team, form relationships and communicate (Browne-Ferrigno, 2007; Bush et al., 2011; Clayton, Sanzo & Myran, 2013; Gümüş, 2019; Msila, 2012; Sciarappa & Mason, 2014). Additionally, several studies found that principals gain more confidence in their leadership competencies through mentoring (Allen, Eby, Poteet, Lentz & Lima, 2004; Browne-Ferrigno, 2007; Bush et al., 2011; Clayton et al., 2013; Msila, 2012; Playko, 1995). All improvements in principals' leadership competencies identified in the selected studies are presented in Table 8 and are discussed in more detail thereafter. Articles older than 5 years were selected for this comparison, as no equally relevant and rigorous, newer articles could be identified.

**Table 8**

Improvements of principals' leadership competencies through mentoring						
Author	Gümüş, 2019	Browne-Ferrigno, 2007	Clayton et al., 2013	Msila, 2012	Bush et al., 2011	Sciarappa & Mason, 2014
Improvements	Skill to self-discover, resolve, create and think about solutions for issues	General insight into school leadership	Increased levels of confidence in leadership skills	Awareness of own leadership style and activities	Improved relationships with educators	Developed skills in instructional leadership
	Increased active listening	Adopted new leadership behaviours	New understanding of instructional leadership	Confidence in handling diverse teams	More delegation to other SMT members	Improved problem-solving skills
	Increased objective feedback to teachers	Realised role as a leader in team efforts	Developed new ways of looking at leadership	Awareness of own strengths and weaknesses	Enhanced conflict management	Improved ability of making priority decisions
		Increased self-confidence			Enhanced confidence	Increased data-based decision-making
		New perspectives on school leadership			Improved problem-solving skills	Better decisions in times of crisis
		Involving many people in decision-making and school improvement processes			Better teamwork	Addressing challenges more effectively

**Table 8** (continued)

	Making mistakes and learning from them	Improved policy implementation	Increase in trust building
		Enhanced financial management skills	Improved communication with staff
		Improved financial planning skills	Increased confidence in dealing with discipline concerns
		Introduced classroom observations, designed to improve teaching and learning	Larger focus on curriculum and instruction
		Improved self-control	Improved time management skills
		Improved information and communication technology (ICT) skills	Increased involvement of parents and the community
			Improvements in developing school culture

- Problem solving and decision making
- General improvement in leadership skills
- Confidence
- Leadership style
- Teamwork, relationships and communication

### **Problem solving and decision-making**

Three of the identified studies demonstrate some level of improved problem solving or decision-making skills in principals due to mentoring from a senior principal (Bush et al., 2011; Gümüş, 2019; Sciarappa & Mason, 2014). Gümüş' (2019) study used semi-structured interviews to conduct a study on the impact of mentorship received by seven principals in Georgia, USA. Several principals reported improved self-discovery, resolving, creating and problem solving skills. Bush et al. (2011) describe the evaluation of the first cohort of the Advanced Certificate in Education: School Leadership (ACE), a programme introduced by the former South African Department of Education to help aspiring principals raise their standards. A major focus of the programme was to improve principals' leadership skills through mentoring (Bush et al., 2011). Aspiring principals, who were part of the 430 participants in the first cohort, reported enhanced conflict management, as well as improved problem-solving skills (Bush et al., 2011). Improved problem-solving skills were also described by a number of the 54 principals, who participated in a 9-month national mentoring internship programme in the US and were interviewed by Sciarappa & Mason (2014) through an electronic survey.

### **General improvement in leadership skills**

Some of the principals interviewed in Browne-Ferrigno's (2007) and Clayton et al.'s (2013) studies reported general improvements in leadership skills and behaviours following the mentoring they received. As presented in Table 8, the Principals Excellence Program (PEP) described by Browne-Ferrigno (2007) focused on advanced leadership development and had four theories of action: "situated learning, leadership mentoring, community building, succession planning" (p. 4). In the presented case studies, Browne-Ferrigno (2007) describes multiple principals pointing out how they gained a general insight into leadership, adopted new leadership behaviours and gained new perspectives on school leadership. Clayton et al.'s (2013) study attempted to understand the mentoring relationship between veteran principals and their mentees following a 2 year school leadership programme in a US district. 7 mentees and 4 mentors were interviewed. One of the mentees pointed out how they developed new ways of looking at leadership following the 2-year mentorship (Clayton et al., 2013).

## Confidence

Improvements in various aspects of confidence appear to be most prevalent aspects of the development among principals following a mentorship (Browne-Ferrigno, 2007; Bush et al., 2011; Clayton et al., 2013; Msila, 2012). Principals that took part in mentoring programmes described effects like increased confidence in handling diverse teams (Msila, 2012) or increased confidence in dealing with discipline concerns (Sciarappa & Mason, 2014). Msila (2012) reported this finding as part of an evaluation of the Advanced Certificate in Education – School Management and Leadership (ACE-SML), which is a newer extended version of the ACE. The qualitative study focused on conducting interviews and observational visits with 6 mentors and 14 principals in schools in the Eastern Cape and KwaZulu-Natal. As can be seen in Table 8, Browne-Ferrigno (2007) and Bush et al. (2011) identified an increase in self-confidence as an effect of mentoring too.

While all of the mentioned studies had small sample sizes, their findings are supported by large parts of the social science literature. In a meta-analysis, which reviewed and analysed existing empirical research regarding the career benefits associated with mentoring, Allen et al. (2004) found that specifically psychosocial mentoring improves the principals' self-confidence. Psychosocial mentoring places the mentor into the position of a role-model, who encourages the principal to discuss his anxieties and fears without any hesitation (Allen et al., 2004). Playko (1995) states that mentoring can provide principals with self-confidence regarding their competence and leadership skills.

## Improved understanding and awareness of leadership style

There is evidence in the literature of principals developing, understanding or becoming better aware of their leadership style. In Clayton et al.'s (2013) study, one principal only understood what instructional leadership really meant after having received advice from his mentor. Msila (2012) mentions several principals that gained awareness over their leadership style and their leadership-related activities, which they were applying in the past years. Sciarappa & Mason (2014) describe how a principal, who went through the ACE-SML programme, developed instructional leadership skills through the mentorship and was able to apply them to his job.

### Teamwork, relationships and communication

Frequently mentioned in the reviewed literature is a group of leadership improvements related to better teamwork, enhanced relationships and more effective communication. One of the principals in the mentoring programme described by Gümüş (2019) reported improved active listening skills and the ability to communicate objective feedback to teachers. Similar findings were made in Browne-Ferrigno's (2007) study, where principals started involving their teachers more in school leadership after they completed the mentorship. Principals in this study outlined how they realised their role as a leader in team efforts, involving more people in decision-making and school development processes. Principals in Bush et al.'s (2011) study described improved relationships with educators in the school, better teamwork, and the delegation of work to other school management team (SMT) members. The principals in Sciarappa & Mason's (2014) study pointed towards improved communication with staff too. The principals in this study were the only ones in the identified literature who saw an improvement in trust with staff in the school following their mentorship (Sciarappa & Mason, 2014).

Those principal leadership competencies that were only mentioned in one of the identified studies were labelled outliers and are displayed with a white background in Table 8, as they could not be associated with any of the created sub-dimensions.

### Limitations of the currently available studies on the effects of mentoring on principals' leadership competencies

Some of the studies included in this section of the literature review have not only utilised mentoring in order to improve principals' leadership competencies. The ACE-SML programme evaluated by Brown-Ferrigno (2007), for example, utilised situated learning and community building next to the mentoring efforts. This makes it difficult to judge if their findings did in fact originate from the mentoring activities. Further evaluations exclusively based on mentoring programmes are required.

#### Results for theory evaluation research question 4: the effect of principal leadership on school culture

It is crucial to understand the role of culture in leading a school in order to understand how principal leadership affects school culture. Schein (2004) argues that “the only thing of real importance that leaders do is to create and manage culture” (p. 11). While it may be an exaggeration to argue that culture is the only aspect a leader should manage in an organisation, it points towards the importance of leadership in the creation and maintenance of culture.

There is a limited number of robust studies concerned with the impact of principal leadership on school culture. The few studies that do exist point towards school leadership having a statistically significant impact on school culture (Atasoy, 2020; Blase & Blase, 2001; Calik, Sezgin, Kavgaci & Cagatay Kilinc, 2012; Cavanagh & Dellar, 1998; Cunningham & Gresso, 1993; Kalkan, Aksal, Gazi, Atasoy & Dağlı, 2020; Karadağ & Öztekin-Bayir, 2018; Lucas & Valentine, 2002; Şahin, 2011; Sashkin & Sashkin, 1990; Stolp, 1994). There is less consensus regarding the leadership competencies needed by a principal to impact the school culture. Nevertheless, as can be seen in Table 9, researchers describe that transformational leadership and collaborative leadership lead to an improvement of school culture (Calik et al., 2012; Cavanagh & Dellar, 1998; Cunningham & Gresso, 1993; Lucas & Valentine, 2002). Additionally, they describe how the principal should create a vision and goals, communicate the school’s values and empower, as well as support teachers in order to create a more positive school culture (Cunningham & Gresso, 1993; Lucas & Valentine, 2002; Şahin, 2011; Sashkin & Sashkin, 1990; Stolp, 1994). These principal leadership competencies are described in more detail following Table 9.

**Table 9**

Principal leadership competencies needed to improve school culture									
Author	Calik et al., 2012	Blase & Blase, 2001	Sashkin & Sashkin, 1990	Cavanagh & Dellar, 1998	Stolp, 1994	Lucas & Valentine, 2002	Cunningham & Gresso, 1993	Şahin, 2011	
Principal leadership competencies	Create a leadership style that truly influences and inspires staff members	Collaborative leadership	Visionary leadership	Transformational leadership	Nurture the traditions, ceremonies, rituals, and symbols	Participative decision-making	Create a vision	Instructional leadership	
					Develop shared vision	Foster commitment to the goals of the school	Encourage collegiality	Promote professional development	
					Hire compatible staff	Provide individualised support and intellectual stimulation to teachers	Build trust with school staff	Provide feedback on the teaching and learning process	
					Face conflict rather than avoid it	Holding high expectations for the performance of peers	Empower teachers	Monitor and provide feedback	
					Use story-telling to illustrate shared values	Transformational leadership	Communicate values	Develop the unity of vision and mission	

**Table 9 (continued)**

	Acknowledge, facilitate, and employ the potentially transformational leadership abilities of teacher leaders	Encourage personal and organisational growth
	Creation, training, and enablement of school leadership teams	Support constant innovation
	Create sustained conversations among the leaders and the faculty	
	Create a sense of relatedness among the leaders and the faculty	

- Transformational leadership
- Collaborative leadership
- Create a vision, mission and goals
- Communicate values
- Empower and support teachers

### Transformational leadership affects school culture

As can be seen in Table 9, one of the principal leadership styles frequently mentioned as being correlated with a positive change in a multitude of school culture dimensions, like teacher collaboration, unity of purpose, and collegial support (Lucas & Valentine, 2002), is transformational leadership.

Cavanagh & Dellar (1998) describe how school improvement programmes, which incorporate strategies to improve transformational leadership are likely to effect a positive transformation in a school's culture. In a study involving 475 faculty and 47 school leadership members Lucas & Valentine (2002) used a principal leadership, team leadership and school culture questionnaire explore the correlation between multiple dimensions of principal leadership and school culture. They found that transformational leadership used by the principal and the SMT had the strongest relationship with a positive school culture (Lucas & Valentine, 2002). Calik et al. (2002) point towards the importance of a leadership style that inspires and influences staff members in order to create and sustain a positive school climate. While Calik et al. (2002) do not specifically outline transformational leadership, inspiring and influencing staff are essential parts of transformational leadership (Cavanagh & Dellar, 1998).

### Create a vision, mission and goals

Another key element of transformational leadership among principals, identified by Cavanagh & Dellar (1998), is the creation of a vision for the school. It is a principal leadership competency frequently mentioned as a mediator for an improved school culture. Stolp (1994) and Cunningham & Gresso (1993) describe the creation of a vision to be a way to effectively shape school culture. Şahin explains how specifically the unity in a certain vision is crucial and weighs equal importance to a school's mission. Lucas & Valentine (2002) do not point to either the creation of a vision or a mission but illustrate how a principal must foster the commitment to the goals of the school.

### Collaborative leadership affects school culture

Elements of collaborative leadership find an equal number of mentions in social science literature compared to transformational leadership. While out of the identified articles only Blase & Blase (2001) mention collaborative leadership as a preferred style for principals, there are several other mentions of collaborative efforts among the SMT, as a crucial factor for

positive school culture development. Cunningham & Gresso (1993) point towards the importance of the principal encouraging collegiality among the school staff. Lucas & Valentine (2002) describe how a school leader should create sustained conversations among the leaders and the faculty, create a sense of relatedness among them and facilitate participative decision-making.

#### **Empower and support teachers**

The selected studies point towards hiring the right staff, empowering them and supporting them to create an SMT that works towards a more positive school culture (Cunningham & Gresso, 1993; Lucas & Valentine, 2002; Şahin, 2011). The key leadership competency that emerges in this area is focused on developing the skills of staff. Lucas & Valentine (2002) describe the importance of providing individualised support, intellectual stimulation and holding high expectations of staff. Cunningham & Gresso (1993) describe similar efforts, as they explain how principals should empower teachers and encourage them to grow. Şahin (2011) utilised a quantitative investigation using survey items, which involved demographic descriptors and items on instructional leadership and school culture and collected data from 16 schools in Izmir, Turkey, including 157 teachers. The findings point towards the professional development of teachers being crucial to maintaining high staff performance, which results in an improved school culture. Şahin (2011) adds that constant feedback, supported through monitoring efforts, is equally as important as the development of teachers. As Şahin (2011) did not include survey results in the study, it is difficult to determine which principal leadership competencies are most important to a positive school culture.

#### **Articulation of values**

While less frequently mentioned in the social science literature, the articulation of values by the principal is regarded as a crucial activity for school culture development by Stolp (1994) and Cunningham & Gresso (1993). Stolp (1994) describes that “the most effective change in school culture happens when principals, teachers, and students model the values and beliefs important to the institution” (p. 4). However, only through frequently communicating them can the principal influence the creation of school-wide values (Stolp, 1994).

**Outliers in the identification of principal leadership competencies that affect school culture**  
Instructional leadership (Şahin, 2011) and the principal's attempt at nurturing the traditions, ceremonies, rituals, and symbols of the school (Stolp, 1994) were the only identified outliers.

There is a need for robust studies with a sufficiently high sample size to reliably identify the key principal leadership competencies needed to improve a school's culture.

Results for theory evaluation research question 5: the effect of principal leadership on school climate

An exhaustive literature review has shown that a multitude of principal leadership competencies are positively correlated with dimensions of school climate, like order, environment, involvement, instruction, expectation, and collaboration (Allen, Grigsby & Peters, 2015). All identified peer-reviewed articles spoke for principal leadership having a statistically significant impact on school climate (Allen et al., 2015; Bellibas & Liu, 2018; Black, 2010; Leithwood, 1992; McCarley, Peters & Decman, 2016; Moolenaar, Daly & Slegers, 2010; Ross & Cozzens, 2016; Smith, Escobedo & Kearney, 2020; Spicer, 2016). Researchers point towards transformational leadership, collaborative leadership and the empowerment and support of teachers to be crucial for impacting school climate (Allen et al., 2015; Black, 2010; Leithwood, 1992; McCarley et al., 2016; Moolenaar et al., 2010; Ross & Cozzens, 2016; Spicer, 2016). Additionally, a number of researchers identified the principals' professionalism and authenticity as key elements (Black, 2010; Ross & Cozzens, 2016; Spicer, 2016).

Table 10 shows that all competencies that were identified in the reviewed literature, could be grouped into 4 sub-dimensions. Following Table 10 is a more in-depth presentation of the leadership competencies required by a principal to impact school climate.

**Table 10**

Principal leadership competencies needed to improve school climate							
Author	Spicer, 2016	Leithwood, 1992	Moolenaar et al., 2010	Allen et al., 2015	Black, 2010	Ross & Cozzens, 2016	McCarley et al., 2016
Principal leadership competencies	Building relationships with teachers (DiPaola et al., 2004)	Treat the teacher as a whole person	Transformational leadership	Idealized attributes	Build community	Diversity	Idealized attributes
	Interact with staff members	Improve collaboration	Sharing and developing a vision	Idealized behaviours	Value people	Professional development	Idealized behaviours
	Avoid inconsistent behaviour	Carefully diagnose the starting points for teacher development	Provide personalised attention	Inspirational motivation	Display authenticity	Professionalism	Inspirational motivation
	Build trust with staff members (Busman, 1992; Finnigan, 2012; Leithwood & Strauss, 2009; Lindahl, 2001)	Recast routine administrative activities into powerful teacher development strategies	Intellectually stimulate organisational members	Intellectual stimulation	Develop people		Intellectual stimulation
	Support staff members			Individual consideration			Individual consideration

Transformational leadership
  Collaborative leadership
  Empower and support teachers
  Professionalism and authenticity

### **Transformational leadership affects school climate**

As presented in Table 10, the most frequently mentioned leadership style required by a principal to affect school climate in the identified studies is transformational leadership. Allen et al. (2015) and McCarley et al. (2016) both tested the correlation between the 5 transformational leadership dimensions of the Multifactor Leadership Questionnaire form 5 (MLQ-5X), developed by Bass & Avolio (1995), and a number of school climate dimensions. Both groups of researchers found that all 5 dimensions, including idealized attributes, idealized behaviours, inspirational motivation, intellectual stimulation and individual consideration were positively correlated with dimensions of a positive school climate (Allen et al., 2015; McCarley et al., 2016). These findings are supported by a study conducted by Moolenaar et al. (2010), who correlated teachers' perceptions of their principal's transformational leadership with the teachers' perceptions of their schools' innovative climate. Teachers' perceptions of the principals' transformational leadership were measured with a questionnaire based on Geijsel et al.'s (2001) work. Teachers' perceptions of innovative climate were measured through six dimensions developed by Moolenaar et al. (2010). The results of a correlational analysis showed that transformational leadership was positively and significantly related to teachers' perceptions of their school's innovative climate (Moolenaar et al., 2010).

### **Collaborative leadership**

Leithwood (1992) points towards the importance of collaborative leadership, as a principal leadership competency to affect a school's climate. Spicer (2006) supports this by stating that principals should interact with staff members and create an environment characterised by collaboration.

### **Empower and support teachers**

According to the exhaustive literature review, the most significant principal leadership competency contributing to school climate, besides transformational leadership, is teacher empowerment and support. The main aspect of the empowerment and support for teachers across the identified literature is giving teachers the ability to develop professionally (Black, 2013; Leithwood, 1992; Ross & Cozzens, 2016; Spicer, 2016). Leithwood (1992) explains how it is crucial to diagnose the starting points for teacher development and transform routine administrative activities into teacher development strategies. Black (2010) and Ross & Cozzens

(2016) point towards the importance of developing staff in order to impact the school climate in the long run. Spicer (2016) mentions that principals should support teachers.

Another key element of teacher support and empowerment is developing a relationship with teachers (DiPaola, Tschannen-Moran & Walther-Thomas, 2004; Spicer, 2016) and building a community (Black, 2010). One way to do so is to build trust with staff members (Busman, 1992; Finnigan, 2012; Leithwood & Strauss, 2009; Lindahl, 2001; Spicer, 2016). Leithwood (1992) explains that principals should treat teachers as a whole person, while Black (2010) outlines how principals should value people in general to maintain a positive school climate. Ross & Cozzens (2016) describe that principals should embrace diversity in the school staff.

#### Professionalism and authenticity

Another principal leadership competency frequently connected with a positive school climate is avoiding inconsistent behaviour (Spicer, 2016). Instead, a principal should display authenticity (Black, 2010) and professionalism (Ross & Cozzens, 2016) through their actions to earn the school staff's respect and impact the school climate positively.

#### Limitations of the currently available research into the effects of principal leadership on school climate

A limitation of a number of studies in this section is that the principal leadership competencies and the school climate are measured by interviewing teachers (Allen et al., 2015; McCarley et al., 2016; Moolenaar et al., 2010). Teachers' perceptions of leadership and school culture do not necessarily match those of principals, students, the community or other stakeholders in the school. Moreover, the used studies all utilised small sample sizes, which limits the validity of the findings. There is a need for studies with larger sample sizes to draw more robust conclusions.

### Summary and discussion of the theory evaluation

Based on the results of the theory evaluation questions the researcher made a number of changes to the first draft of PAT's programme theory model. The final programme theory model is presented in Figure 4, while the mentoring component, extracted from the model, is presented in Figure 5. An in-depth summary and discussion of the theory evaluation, as well as an explanation of the changes to the programme theory model is given in the following.

On the basis of the identified dimensions, it can be concluded that good communication, the creation of goals and challenges and a frequent exchange of knowledge and information are the basis for effective principal mentoring (Allen & Poteet, 1999; Dukess, 2001; Eller et al., 2014; Lock et al., 2006; Malone, 2001).

According to the social science literature, the key principal leadership dimensions needed in order to improve student achievement are situational awareness, flexibility, discipline, frequent monitoring and evaluation and outreach to all stakeholders in the school, promoting and participating in teaching and learning development, as well as establishing goals and expectations (Cotton, 2003; Marzano et al., 2005; Pont, 2013; Robinson et al., 2008). It is difficult to lead a discussion on how effective PAT's mentoring efforts are, and therefore, how plausible the section in the programme theory, which connects principal mentoring with an improvement in principal leadership skills, is. That is, because the mentoring process is tailored by every mentor specifically to the needs of each principal and their school (B. Probyn, personal communication, August 11, 2020). There is no mentoring plan utilised by the mentors. Nevertheless, it can be stated that this section of PAT's programme theory is expected to be plausible, as long as the dimensions identified for effective principal mentoring are utilised.

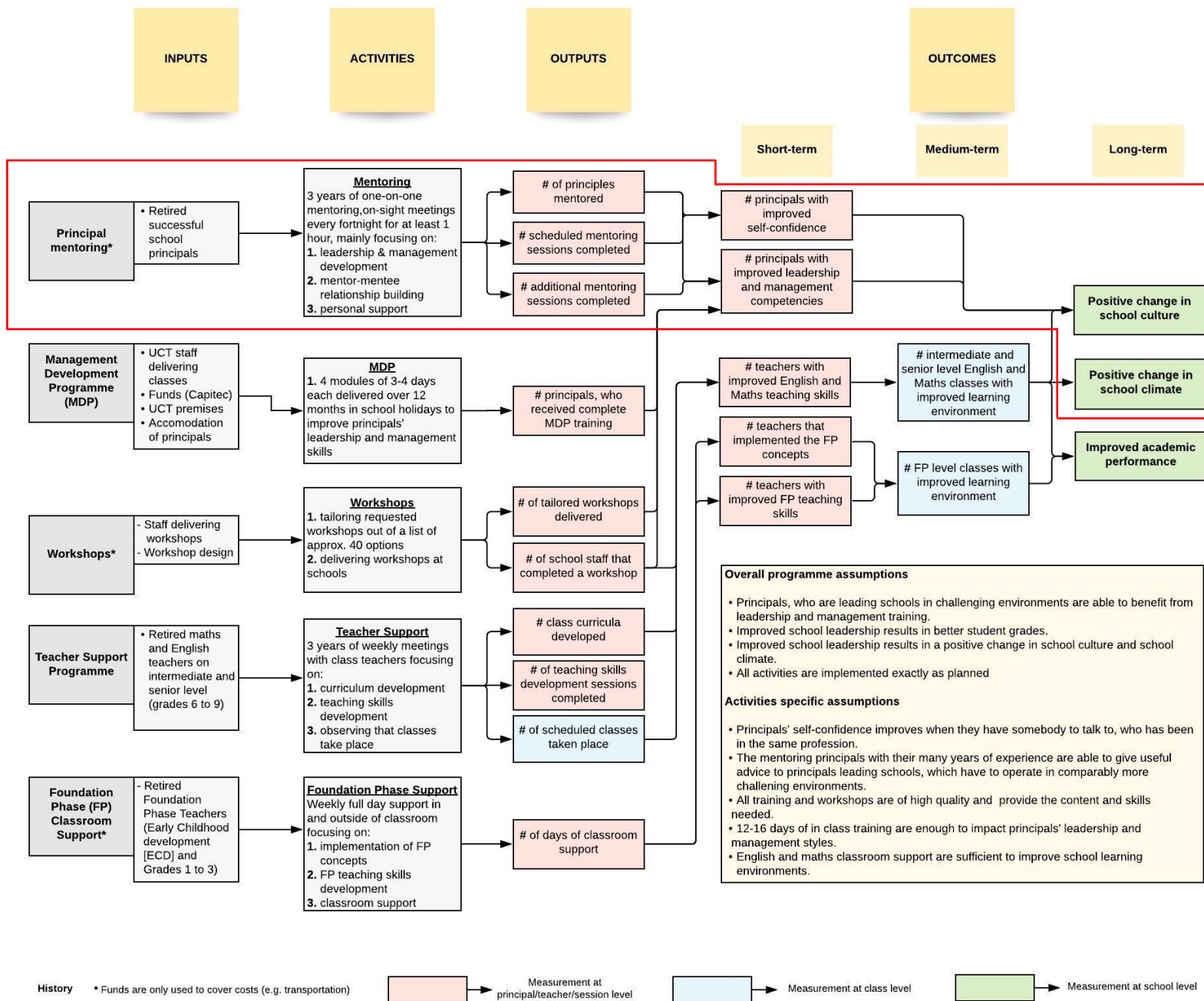


Figure 4: Adapted PAT Programme theory model

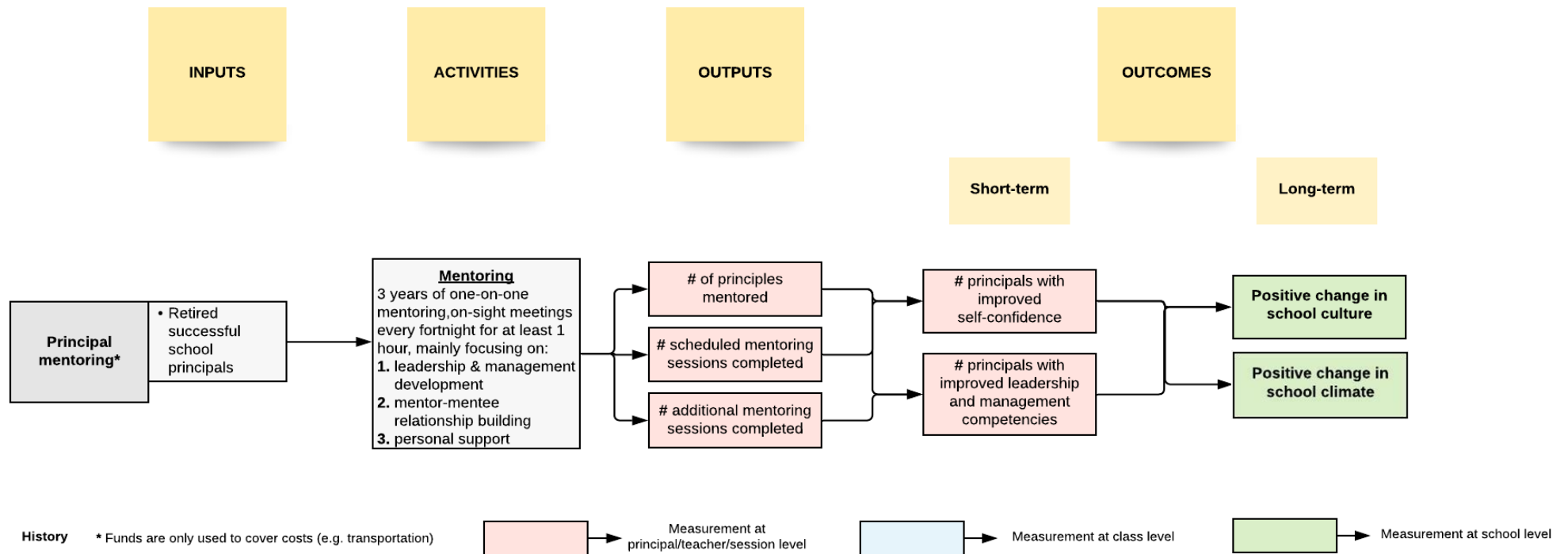


Figure 5: Adapted PAT programme theory model:  
Principal mentoring component

Additionally, five out of six reviewed studies reported an increase in confidence following mentorship (Allen et al., 2004; Browne-Ferrigno, 2007; Bush et al., 2011; Clayton et al., 2013; Msila, 2012; Playko, 1995). This adds support to PAT's first programme theory draft, where improved principal leadership competencies and increased confidence, as a result of PAT's mentoring activities, are listed as short-term outcomes.

In the first draft of the programme theory model, the empowerment of principals to hold deputies and subject heads accountable was included as a separate short-term outcome. However, researchers include the ability to hold subordinates accountable as a leadership competency (Gümüş, 2019; Sciarappa & Mason, 2014). Therefore, it was excluded in the final programme theory model, as principals' improved leadership competencies are already listed as a short-term outcome.

The increase in strategic alignment in schools after an improvement in principal leadership competencies seems logical, however, it could neither be identified as a predominant factor in principal leadership literature (Allen et al., 2004; Browne-Ferrigno, 2007; Bush et al., 2011; Clayton et al., 2013; Msila, 2012; Playko, 1995) nor in such focused on the conditions for a positive school culture or climate (Allen et al., 2015; Black, 2010; Blase & Blase, 2001; Calik et al., 2012; Cavanagh & Dellar, 1998; Cunningham & Gresso, 1993; Leithwood, 1992; Lucas & Valentine, 2002; McCarley et al., 2016; Moolenaar et al., 2010; Ross & Cozzens, 2016; Şahin, 2011; Sashkin & Sashkin, 1990; Spicer, 2016; Stolp, 1994). Hence, it was excluded in the final programme theory model.

Despite the lack of robust studies on principal leadership and school culture, there is a great deal of consensus between those that do exist, which generally point to principal leadership having a great impact (Blase & Blase, 2001; Calik et al., 2012; Cavanagh & Dellar, 1998; Cunningham & Gresso, 1993; Lucas & Valentine, 2002; Şahin, 2011; Sashkin & Sashkin, 1990; Stolp, 1994). Researchers describe that transformational leadership and collaborative leadership lead an improved school culture (Calik et al., 2012; Cavanagh & Dellar, 1998; Cunningham & Gresso, 1993; Lucas & Valentine, 2002). Other key dimensions of principal leadership that can positively impact school culture are creating a vision and goals, communicating school values, and empowering teachers (Cunningham & Gresso, 1993; Lucas & Valentine, 2002; Şahin, 2011; Sashkin & Sashkin, 1990; Stolp, 1994). The researcher notes

how similar the most prominent dimensions identified in the limited literature on identifying principal leadership competencies to impact school culture are to the vast literature on identifying principal leadership competencies to improve student achievement. Both fields of research point towards the importance of empowering and supporting teachers, as well as establishing clear goals (Cotton, 2003; Cunningham & Gresso, 1993; Dinham, 2005; Lucas & Valentine, 2002; Marzano et al., 2001; Pont, 2013; Robinson et al., 2008; Şahin, 2011; Sashkin & Sashkin, 1990; Stolp, 1994). This illustrates that similar leadership competencies are needed to affect both school culture and student achievement.

Literature review results similar to the section on the impact of principal leadership on school climate were found in the section on the impact of principal leadership on school culture. All researchers in the reviewed articles point towards principal leadership having a statistically significant impact on school climate (Allen et al., 2015; Black, 2010; Leithwood, 1992; McCarley et al., 2016; Moolenaar et al., 2010; Ross & Cozzens, 2016; Spicer, 2016). Same as with school culture, researchers found that transformational leadership, collaborative leadership, and the ability to empower and support teachers are essential competencies for principals who want to change a school's climate (Allen et al., 2015; Black, 2010; Leithwood, 1992; McCarley et al., 2016; Moolenaar et al., 2010; Ross & Cozzens, 2016; Spicer, 2016). One dimension of principal leadership that could not be identified in the literature focused on identifying its effect on school culture but is highly prevalent in the literature concerned with school climate is the principals' professionalism and authenticity (Black, 2010; Ross & Cozzens, 2016; Spicer, 2016). This could be, because as opposed to school culture, which relates to the behaviour of students in the school, school climate is concerned with how people perceive that behaviour (Stolp & Smith, 1995). A principal's authenticity is often shaped by people's perceptions (Black, 2010).

The findings of the 5 theory evaluation research questions indicate that if PAT implements an effective mentoring strategy, as outlined above, and is able to affect the principals' leadership skills, long-term positive effects in both school culture and climate will be observable. Based on the review of literature, a specific focus should be put on empowering and supporting teachers, setting clear goals, and developing strong transformational and collaborative leadership skills when mentoring principals, in order for them to influence school culture and

climate (Allen et al., 2015; Black, 2010; Cotton, 2003; Cunningham & Gresso, 1993; Dinham, 2005; Leithwood, 1992; Lucas & Valentine, 2002; Marzano et al., 2001; McCarley et al., 2016; Moolenaar et al., 2010; Pont, 2013; Robinson et al., 2008; Ross & Cozzens, 2016; Şahin, 2011; Sashkin & Sashkin, 1990; Spicer, 2016; Stolp, 1994). These were the most predominant dimensions that had an impact on school culture and climate across the literature, and they are backed up by the vast literature that looks at leadership competencies needed for student success.

Other than the suggested changes, PAT's programme theory model seems plausible and holds up to relevant social science literature. The final programme theory model, approved by the head mentor, appears in Figure 4, while Figure 5 shows only the mentoring component, which has been tested as part of this dissertation.

Having tested the plausibility of the programme's underlying theory it is clear that an impact on school culture and climate can be expected, if PAT's programme is implemented in light of the dimensions discussed in part one of the results chapter. This impact can be assessed by utilising the M&E framework described in part two of the results chapter.

## Part 2 of results and discussion: The monitoring and evaluation framework

### The development of the monitoring plan

The first step in the creation of a M&E framework is the development of a monitoring plan. In order to create a monitoring plan that measures relevant data for PAT, the researcher must first identify the key dimensions and indicators of a positive school culture and climate, as described in recent social science literature.

### Results of the identification of dimensions and indicators of a positive school culture

In the surveys, predominantly utilised in recent social science literature, the following dimensions are viewed as key to achieve a positive school culture:

- Leadership
- Collegiality and relationships
- Collaboration
- Learning
- Shared direction and opportunities for teacher and student development

A full list of the results, including the dimensions, sub-dimensions, indicators, and the studies in which they appear, is presented in Table 11. The indicators were taken verbatim from the instruments in which they were identified by the researcher. Appendix D gives an in-depth, written comparison of presented indicators and the creation of dimensions and sub-dimensions, which could not be included in the main body of the dissertation due to word count restrictions.

**Table 11**

Dimensions and indicators of a positive school culture			
Dimension	Sub-dimension (created by the researcher)	Indicator	Author/s
Leadership	Sharing power with teachers	Leaders engage teachers in decision-making	Gruenert & Whitaker, 2015
		Leaders seek input from teachers	Gruenert & Whitaker, 2015
		Leaders trust teachers' professional judgment	Gruenert & Whitaker, 2015
		Leaders value teacher's ideas	Gruenert & Whitaker, 2015
		Share power with teachers	Cavanagh & Dellar, 1998

**Table 11 (continued)**

	Establishing positive school development through encouraging commitment	Leaders support and reward risk taking, and innovative ideas designed to improve student achievement	Gruenert & Whitaker, 2015
		Leaders reinforce the sharing of ideas and effective practices among all staff	Gruenert & Whitaker, 2015
		Facilitate a school development process that engages the human potential and commitment of teachers	Cavanagh & Dellar, 1998
<b>Collegiality and relationships</b>	Trust and respect	The leader empowers teachers to exercise professional judgements through the development of supportive interpersonal relationships	Cavanagh & Dellar, 1998
		Teachers trust each other	Brankovic et al., 2012; Gruenert & Whitaker, 2015
		Students and teachers trust each other	Higgins-D'Alessandro & Sadh, 1998
		Students trust each other	Higgins-D'Alessandro & Sadh, 1998
		Teachers generally treat students with respect and fairness	Higgins-D'Alessandro & Sadh, 1998
		Teachers respect each other	Brankovic et al., 2012
	Collaborative planning and creating rules	Teachers spend time planning together	Brankovic et al., 2012
		Teachers brainstorm ideas together	Brankovic et al., 2012
		Teachers assist each other as they work to further the school's goals	Gruenert & Whitaker, 2015
		Teachers value each other's ideas	Gruenert & Whitaker, 2015
		Some rules are made by votes from both students and teachers	Higgins-D'Alessandro & Sadh, 1998
		Teachers give students a say in decisions about school rules	Higgins-D'Alessandro & Sadh, 1998
	Help and support	Teachers are willing to help and support each other with problems	Brankovic et al., 2012
		Teachers are really interested in students and want to help	Higgins-D'Alessandro & Sadh, 1998
		Students and teachers openly discuss problems	Higgins-D'Alessandro & Sadh, 1998
		Students help each other even if they are not friends	Higgins-D'Alessandro & Sadh, 1998
		Students who belong to different groups are friendly	Higgins-D'Alessandro & Sadh, 1998
	Students generally treat each other with respect and fairness	Higgins-D'Alessandro & Sadh, 1998	

**Table 11** (continued)

<b>Collaboration</b>	Joint planning, discussions and brainstorming	Interactions between teachers in which information is shared on school operational matters including the instructional programme	Cavanagh and Dellar, 1997
		Joint work on developing projects	Brankovic et al., 2012
		Teachers support exchanging ideas amongst each other	Brankovic et al., 2012
		Teachers encourage each other to bring innovation to the school	Brankovic et al., 2012
		Teachers across the school plan together	Gruenert & Whitaker, 2015
		Teachers observe and discuss teaching practices	Gruenert & Whitaker, 2015
		Teachers develop an awareness of the practices and programs of other teachers	Gruenert & Whitaker, 2015
	Joint evaluating	Teachers' joint work on evaluating projects	Brankovic et al., 2012; Gruenert & Whitaker, 2015
	Outliers	Teachers are well informed	Brankovic et al., 2012
		Teachers are concerned with the issues in the school	Brankovic et al., 2012
		The school mission is in line with the learning effect	Brankovic et al., 2012
		Teachers voice their dissent	Brankovic et al., 2012
		Teachers are motivated to engage in tutoring other colleagues	Brankovic et al., 2012
	<b>Learning</b>	Parents' and teachers' trust	Parents trust teachers
Parents' and teachers' communication		Frequent communication between parents and teachers	Brankovic et al., 2012; Gruenert & Whitaker, 2015
Parents' and teachers' expectations		Parents and teachers share common learning expectations	Brankovic et al., 2012; Gruenert & Whitaker, 2015
Students' responsibility		Students feel a sense of responsibility for their learning outcomes	Brankovic et al., 2012; Gruenert & Whitaker, 2015
Learning community		Learning community with commitment to improved outcomes for students	Cavanagh and Dellar, 1997
		Learning community with commitment to growth	Cavanagh and Dellar, 1997

**Table 11** (continued)

<b>Shared direction and opportunities for teacher and student development</b>	Vision centred	A shared vision is in place, which has been actualised by logical planning	Cavanagh and Dellar, 1997
	Mission centred	Teachers understand the school's mission	Brankovic et al., 2012; Gruenert & Whitaker, 2015
		Teachers support the school's mission	Brankovic et al., 2012; Gruenert & Whitaker, 2015
		Teachers act in accordance with the school's mission	Gruenert & Whitaker, 2015
<b>Outliers</b>	Personal involvement of teachers	Teachers are willing to be actively involved in school policy	Brankovic et al., 2012
		Teachers work sufficiently with students	Brankovic et al., 2012
	Principal-teacher feedback	Teachers have an opportunity to approach the principal in dialogue	Brankovic et al., 2012
		Teachers have a chance to participate in decision-making	Brankovic et al., 2012
	Colleagues' compliments	The principal praises the teachers for a job well done	Brankovic et al., 2012
	Evaluation of employees' achievement	Degree of monitoring taking place in the school	Brankovic et al., 2012
		Teachers' professional development is evaluated by the principal	Brankovic et al., 2012
		Rewards are given to the teachers by the principal	Brankovic et al., 2012
	Normative expectations	There is very little physical fighting	Higgins-D'Alessandro & Sadh, 1998
		There is very little cutting classes or skipping school	Higgins-D'Alessandro & Sadh, 1998
		There is very little stealing	Higgins-D'Alessandro & Sadh, 1998
		There is very little damage done to school property	Higgins-D'Alessandro & Sadh, 1998
		There is very little use of drugs or alcohol	Higgins-D'Alessandro & Sadh, 1998
		There is very little verbal abuse or putting people down	Higgins-D'Alessandro & Sadh, 1998
		There is very little cheating	Higgins-D'Alessandro & Sadh, 1998

## Identification of dimensions and indicators of a positive school climate

In the surveys, predominantly utilised in recent social science literature, the following dimensions are viewed as key to achieve a positive school climate:

- Student-teacher relationship
- Student-student relationship
- Rules, norms and order
- Academic dimensions
- Physical and social environment
- Fairness
- School connectedness
- Parents' and community influence
- Principal behaviour

A list of the results, including the dimensions, sub-dimensions, indicators, and the studies in which they appear, is presented in Table 12. The indicators were taken verbatim from the instruments in which they were identified by the researcher. Red font indicates indicators, whose absence highlights a more positive school climate. Appendix E gives an in-depth, written comparison of presented indicators and the creation of dimensions and sub-dimensions, which could not be included in the main body of the dissertation due to word count restrictions.

**Table 12**

Dimensions and indicators of a positive school climate			
Dimension	Sub-dimension (created by the researcher)	Indicator	Author/s
Student-teacher relationship	Student problems	Teachers understand student problems	Bear et al., 2011; Zullig et al., 2010
		Teachers at the school help children with their problems	Bear et al., 2011; Zullig et al., 2010
	Interest	Teachers and staff seem to take a real interest in the students' future	Bear et al., 2011; Zullig et al., 2010
		There is a teacher or some other adult who notices when a student is not there	Bear et al., 2011; Zullig et al., 2010
		Teachers care about students	Bear et al., 2011; Bradshaw et al., 2014; Zullig et al., 2010

**Table 12 (continued)**

	Every student is connected to a caring and responsible adult in the school	Ciccone et al., 2013	
	Teachers “go the extra mile” with their students	Hoy et al., 2002	
	Teachers accomplish their jobs with enthusiasm	Hoy et al., 2002	
	Teachers notice when students are not there	Bradshaw et al., 2014	
Communication	Teachers are available when students need to talk with them	Bear et al., 2011; Zullig et al., 2010	
	It is easy for students to talk with teachers	Bear et al., 2011; Zullig et al., 2010	
	Teachers ask students what the class should do	Ding et al., 2011	
	The teacher lets students choose what they will work on	Ding et al., 2011	
	In the classes teachers and students decide together what the rules will be	Ding et al., 2011	
Support	Teachers make students feel good about themselves	Bear et al., 2011; Zullig et al., 2010	
	Teachers listen to students when they have something to say	Bradshaw et al., 2014	
Interpersonal indicators	Students get along well with teachers	Bear et al., 2011; Zullig et al., 2010	
	Teachers respect the students	Bradshaw et al., 2014	
	Students trust the teachers	Bradshaw et al., 2014	
<b>Student-student relationship</b>	Support	Students help one another	Bradshaw et al., 2014
		Students cheer up other students who are feeling sad	Ding et al., 2011
		Students share with each other	Ding et al., 2011
		Students help each other clean up	Ding et al., 2011
		Students help other students that are being picked on	Ding et al., 2011
		Students in my class help each other learn	Ding et al., 2011
		Students at this school are willing to go out of their way to help someone	Ding et al., 2011
		Students in my class work together to solve problems	Ding et al., 2011
	Respect	Students treat each other with respect	Bear et al., 2011; Bradshaw et al., 2014; Ding et al., 2011
		Students are friendly towards most other students	Bear et al., 2011
	Students play fair during games	Ding et al., 2011	

**Table 12 (continued)**

	Friendship	Students really care about each other	Bear et al., 2011; Ding et al., 2011
		Students get along with one another	Bear et al., 2011
		Students feel like they belong	Bradshaw et al., 2014
		Students like one another	Bradshaw et al., 2014
		Students trust one another	Bradshaw et al., 2014
	Honesty	Students do what they say they would	Ding et al., 2011
	Students tell the truth about doing something wrong	Ding et al., 2011	
<b>Rules, norms and order</b>	Fair and clear rules	There are clear rules about student behaviour	Bradshaw et al., 2014
		The school has rules against teasing, name-calling, or saying bad things about other people	Ding et al., 2011
		There are rules against shoving, hitting, or tripping people at my school	Ding et al., 2011
		Everyone knows what the school rules are	Bradshaw et al., 2014
		The rules of the school are fair	Zullig et al., 2010
		Classroom rules are applied equally	Zullig et al., 2010
	Enforcement and disciplinary actions	Problems in this school are solved by students and staff	Zullig et al., 2010
		Students get in trouble if they do not follow school rules	Bradshaw et al., 2014; Zullig et al., 2010
		School rules are enforced consistently and fairly	Ding et al., 2011; Zullig et al., 2010
		My teachers make it clear to students when they misbehave in class	Zullig et al., 2010
		Teachers can handle students who disrupt class	Bradshaw et al., 2014
		Teachers and other adults make sure that everyone follows the rules against teasing or bullying people at the school	Ding et al., 2011
		Teachers at the school will stop someone from being teased or bullied if they see it happening	Ding et al., 2011
	Disruptions and disorder	<b>Students disobey the rules</b>	Bradshaw et al., 2014
		<b>Disruptions by other students can get in the way of learning</b>	Bradshaw et al., 2014
		<b>There are often broken windows, doors, or desks in the school</b>	Bradshaw et al., 2014
	<b>Vandalism of school property is a problem at the school</b>	Bradshaw et al., 2014	

**Table 12** (continued)

<b>Academic dimensions</b>	Motivation	Students feel that they can do well in this school	Bradshaw et al., 2014; Zullig et al., 2010
		Students try hard to succeed in their classes	Zullig et al., 2010
		Students try hard to improve on previous work	Hoy et al., 2002
		Students seek extra work so they can get good grades	Hoy et al., 2002
		Students believe that it is important to finish school	Bradshaw et al., 2014
	Parents' influence	Parents exert pressure to maintain high standards	Hoy et al., 2002
		Parents press for school improvement	Hoy et al., 2002
	Academic goals	Teachers make it clear what work needs to be done to get the grade students want	Zullig et al., 2010
		The school sets high standards for academic performance	Hoy et al., 2002
		Students in this school can achieve the goals that have been set for them	Hoy et al., 2002
	Recognition	Students respect others who get good grades	Hoy et al., 2002
		Academic achievement is recognized and acknowledged by the school	Hoy et al., 2002
	Teachers' believe	Teachers believe that their students can do well in school	Bradshaw et al., 2014; Zullig et al., 2010
		Teachers want students to do their best	Bradshaw et al., 2014
	Students' academic satisfaction	Students usually understand their homework assignments	Zullig et al., 2010
		Students are happy about the number of tests they have	Zullig et al., 2010
Students are happy about the amount of homework they have		Zullig et al., 2010	
<b>Physical and social environment</b>	Clean and maintained physical environment	The school grounds are kept clean	Zullig et al., 2010
		My school is usually clean and tidy	Zullig et al., 2010
		My school buildings are generally pleasant and well maintained	Bradshaw, 2014; Zullig et al., 2010
		The bathrooms in this school are clean	Bradshaw, 2014
	General safety	Teachers believe that students feel safe in the school	Bear et al., 2011
		Students feel safe going to the school	Bradshaw, 2014

**Table 12 (continued)**

	Students feel safe in all areas of the school building	Bear et al., 2011; Bradshaw, 2014; Ding et al., 2011
	Students feel safe on the school grounds	Bear et al., 2011; Bradshaw, 2014; Ding et al., 2011
Healthy social environment	Students are happy with the kinds of students that go to the school	Zullig et al., 2010
	Students are generally happy about the other students that go to their school	Zullig et al., 2010
	School leaders promote comprehensive and evidence-based instructional and school-wide improvement efforts designed to support students, school personnel and community members feeling welcomed, supported and safe in school: socially, emotionally, intellectually and physically	Ciccone et al., 2013
	Students, their families, school staff and community stakeholders are regularly surveyed and are asked to indicate what the school should do to further enhance a welcoming, supportive and safe environment	Ciccone et al., 2013
	School leaders monitor and evaluate the prevention and intervention strategies designed to support people feeling welcomed, supported and safe and use that data to improve relevant policies, practices, facilities, staff competencies and accountability	Ciccone et al., 2013
Violence and drug consumption	There are programs for violence and conflict	Bradshaw, 2014
	Students do not carry knives or guns	Bradshaw, 2014
	No physical fighting between students	Bradshaw, 2014
	No harassment or bullying of students	Bradshaw, 2014
	Students have not seen someone else being bullied	Bradshaw, 2014
	Students at this school try to stop bullying	Bradshaw, 2014
	Students do not consume hard drugs	Bradshaw, 2014
	Students do not consume tobacco	Bradshaw, 2014
	Students do not consume alcohol	Bradshaw, 2014
<b>Fairness</b>	Fairness of school rules and policies	School rules are fair Bear et al., 2011
		The school's Code of Conduct is fair Bear et al., 2011
		Consequences of breaking rules are fair Bear et al., 2011
	Equal treatment	Teachers at the school help students with their problems Zullig et al., 2010

**Table 12 (continued)**

	Students who need help with their problems are able to get it through school	Zullig et al., 2010	
	There is someone at school that students can talk to about personal problems	Zullig et al., 2010	
	Students of all races are treated the same	Bradshaw, 2014	
	All students are treated the same, regardless of whether their parents are rich or poor	Bradshaw, 2014	
	Boys and girls are treated equally well	Bradshaw, 2014	
	At school, the same person always gets to help the teacher	Zullig et al., 2010	
	At school, the same kids get chosen every time to take part in after-school or special activities	Zullig et al., 2010	
	The same kids always get to use things, like a computer, a ball or a piano, when students play	Zullig et al., 2010	
	Policies and practices that provide equality	Classroom and school wide policies and practices promote engagement and address barriers to learning and teaching while reengaging disconnected students through an intervention framework that generates a system of learning supports	Ciccone et al., 2013
		Policies ensure continuing development and sustainability of a comprehensive and cohesive system of learning supports	Ciccone et al., 2013
		Classroom practices are designed to promote healthy development and prevent negative problems	Ciccone et al., 2013
		Classroom practices are designed to respond as early after problem onset as is feasible	Ciccone et al., 2013
		Classroom practices are designed to provide for those whose negative problems require more intensive assistance and accommodation	Ciccone et al., 2013
<b>School connectedness</b>	Student satisfaction with school in general	Students like the school	Bear et al., 2011 ; Bradshaw et al., 2014
		This school gives students enough freedom	Bear et al., 2011
		Students like coming to school	Bradshaw et al., 2014
	Student satisfaction with learning and schoolwork	Students' schoolwork is exciting	Zullig et al., 2010
		If the school had an extra period during the day, students would take an additional academic class	Zullig et al., 2010
		The school makes students enthusiastic about learning	Bradshaw et al., 2014; Zullig et al., 2010
	Student pride	Students choose the school over other schools	Bear et al., 2011

**Table 12 (continued)**

		Students and staff are proud of the school	Bear et al., 2011 ; Bradshaw et al., 2014
	Rewards and recognition	Students are publicly recognized for their outstanding performances in speech, drama, art, music, etc.	Zullig et al., 2010
		Students are frequently rewarded or praised by faculty and staff for following school rules	Zullig et al., 2010
<b>Parents' and community influence</b>	Parents' influence	<b>A few vocal parents can change school policy</b>	Hoy et al., 2002
		The principal responds to pressure from parents	Hoy et al., 2002
	Community influence	<b>The school is vulnerable to outside pressure</b>	Hoy et al., 2002
		<b>Select citizen groups are influential with the board</b>	Hoy et al., 2002
		<b>Teachers feel pressure from the community</b>	Hoy et al., 2002
	Efforts to integrate parents	Students' parent(s) or guardian(s) feel(s) welcome at the school	Bradshaw et al., 2014
		If students do something bad at the school, their parent(s) or guardian(s) hear(s) about it	Bradshaw et al., 2014
		When students do something good at school, their parent(s) or guardian(s) usually hear(s) about it	Bradshaw et al., 2014
		The school tries to involve parents or guardians	Bradshaw et al., 2014
		Parents or guardians often come to my school to help out	Bradshaw et al., 2014
<b>Principal behaviour</b>	Principal's dedication to school development	The school has administrative leaders who are responsible for the development, operation and sustainability of high quality practices related to enhancing engagement in teaching, learning and school-wide activities	Ciccone et al., 2013
		The school has administrative leaders who are responsible for the development, operation and sustainability of high quality practices related to addressing barriers to learning and teaching and reengage those who have become disengaged	Ciccone et al., 2013
		The school has administrative leaders who are responsible for the development, operation and sustainability of high quality practices related to developing and sustaining an appropriate systemic infrastructure and capacity building mechanisms for meeting this standard	Ciccone et al., 2013
		Sufficient staff are assigned to developing and sustaining such high quality practices	Ciccone et al., 2013
		Leadership and staff are provided continuous professional development in order to develop and sustain these practices	Ciccone et al., 2013

**Table 12 (continued)**

	Principal's openness and approachability	The principal explores all sides of the topics and admits that other opinions exist	Hoy et al., 2002
		The principal puts suggestions made by faculty into operation	Hoy et al., 2002
		The principal is friendly and approachable	Hoy et al., 2002
		The principal is willing to make changes	Hoy et al., 2002
	Principal's efforts to evaluate and keep standards of performance	An effective school family community operational infrastructure is in place for weaving school and community resources together and for ongoing planning, implementing and evaluating the comprehensive system of learning supports	Ciccone et al., 2013
		The principal maintains definite standards of performance	Hoy et al., 2002
<b>Outliers</b>	Shared vision and plan	School policies and practices support school, family, youth and community members working together to establish a safe and productive learning community	Ciccone et al., 2013
		Schools gather accurate and reliable data about school climate from students, school personnel and parents/guardians for continuous improvement and share it regularly with the school community	Ciccone et al., 2013
		Capacity building is developed over time to enable all school community members to meet school climate standards	Ciccone et al., 2013
	Development and sustainability policies	Policies and mission and vision statements that promote social, emotional, ethical and civic, as well as intellectual, skills and dispositions are developed and institutionalized	Ciccone et al., 2013
		Policies promote use and monitoring of natural and informal opportunities (e.g., recreational and extracurricular aspects of classroom and school life) to ensure they support the helpful norms of learning and teaching that foster mutual respect and caring; engagement; safety and wellbeing; civil, pro social, responsible behaviour; and a psychological sense of community	Ciccone et al., 2013
		Policies ensure the operational and capacity building mechanisms (including staff and student development) related to this standard are fully integrated into a school's infrastructure and are effectively implemented and sustained	Ciccone et al., 2013

## The monitoring plan

### Results and discussion of the focus group

As described in the method section, the mentors were given a survey containing all the indicators of a positive school culture and climate listed in Tables 11 (please see p. 59) and 12 (please see p. 63), which was followed by a focus group discussion. In the survey and follow up focus group, mentors identified specific sub-dimensions and indicators they can influence through their mentoring work. They identified having low impact on the following sub-dimensions:

- Personal involvement of teachers
- Normative expectations
- Honesty
- Fair and clear rules
- Parents' influence
- Students' academic satisfaction
- General safety
- Healthy social environment
- Violence and drug consumption
- Fairness of school rules and policies
- Equal treatment
- Student satisfaction with learning and schoolwork
- Development and sustainability policies

They indicated having medium impact on the following sub-dimensions:

- Parents' and teachers' trust
- Parents' and teachers' communication
- Parents' and teachers' expectations
- Students' responsibility
- Learning community
- Parents' influence
- Community influence

The monitoring plan excluded both low and medium impact sub-dimensions in order to reduce the number of indicators to manageable levels for data collection and to align the indicators with the South African context, which mentors know best.

The mentors indicated having high impact on the following sub-dimensions:

- Share power with teachers
- Establish positive school development through encouraging commitment
- Trust and respect
- Collaborative planning and creating rules
- Help and support
- Joint planning, discussions and brainstorming
- Joint evaluating
- Outliers in the identification of indicators related to teacher collaboration
- Vision centred
- Mission centred
- Principal-teacher feedback
- Colleagues' compliments
- Evaluation of employees' achievement
- Student problems
- Interest
- Communication
- Support
- Interpersonal indicators
- Enforcement and disciplinary actions
- Disruptions and disorder
- Motivation
- Academic goals
- Recognition
- Teachers' believe
- Clean and maintained physical environment
- Policies and practices that provide equality

- Student satisfaction with school in general
- Student pride
- Rewards and recognition
- Efforts to integrate parents
- Principal's dedication to school development
- Principal's openness and approachability
- Principal's efforts to evaluate and keep standards of performance
- Shared vision and plan

The indicators of each sub-dimension and the detailed survey and focus group findings are presented in Appendix G for school culture indicators and Appendix H for school climate indicators.

Mainly sub-dimensions related to student behaviour and such connected to parents and the wider community were rated low or medium by the mentors. A mentor explained in the focus groups that some indicators related to student behaviour, like honesty, had to be excluded since PAT did not believe that the impact of principal mentoring is that far-reaching. Although parents are considered indirect beneficiaries of the program, it is not realistic to expect mentors to collect data from them, as outlined by one of the principals. The third prominent group of subdimensions excluded by mentors were those on which PAT has no influence, as these are governed by the government, including school policies and safety regulations.

#### Results and discussion of the monitoring plan

Table 13 presents the monitoring plan for the PAT, which was derived from desk research into school culture and climate indicators, as well as the mentors' feedback.

**Table 13**

Monitoring plan					
Evaluation question	Focus of monitoring	Indicators	Targets	Monitoring data sources	Who is responsible and when
To what extent was there an increase in the teachers' judgment being included in the principal's decision making?	Inclusion of teachers' judgment in principal's decision making	The extent of engagement of teachers in decision-making	X Likert scale score when asking the principal about the engagement of teachers in decision making	Principal survey	PAT principal mentors
			X average Likert scale score when asking teachers about their engagement in decision making	Teacher survey	
		The extent of principal's trust in teachers' judgment	X Likert scale score when asking the principal about their trust in teachers' judgment	Principal survey	
			X average Likert scale score when asking teachers about their principal's trust towards their judgment	Teacher survey	
		The degree to which the principal is approachable	X Likert scale score when asking the principal about how approachable they believe they are for school staff	Principal survey	
			X average Likert scale score when asking teachers about the approachability of their principal	Teacher survey	
To what extent was there an increase in the principal's encouragement for innovative practices?	Principal's encouragement for the development and sharing of innovative ideas and practices	The extent to which the principal supports and rewards risk taking, and innovative ideas	X Likert scale score when asking principals if they support and reward risk taking, and innovative ideas developed by the school staff	Principal survey	PAT principal mentors
			X average Likert scale score when asking teachers if their principal supports and rewards risk taking, and innovative ideas developed by them	Teacher survey	
		The extent to which the principal reinforces the sharing of ideas and effective practices among all staff	X Likert scale score when asking the principal if they reinforce the sharing of ideas and effective practices among all staff	Principal survey	
			X average Likert scale score when asking teachers if their principal reinforces the sharing of ideas and effective practices among all staff	Teacher survey	
		The extent to which the principal facilitates a school development process that engages the human potential and commitment of teachers	X Likert scale score when asking the principal if they facilitate a school development process that engages the human potential and commitment of teachers	Principal survey	
			X average Likert scale score when asking teachers if their principal facilitates a school development process that engages the human potential and commitment of teachers	Teacher survey	
To what extent was there an increase in trust?	Trust and respect between teachers, teachers and students, and students	The extent to which teachers trust each other	X average Likert scale score when asking teachers if they trust their colleagues	Teacher survey	PAT principal mentors
		The extent to which students trust teachers	X average Likert scale score when asking students if they trust their teachers	Student survey	
		The extent to which students trust each other	X average Likert scale score when asking students if they trust the other students	Student survey	
		The extent of the development of supportive interpersonal relationships	X average Likert scale score when asking teachers if they have built any supportive interpersonal relationships with their colleagues	Teacher survey	
			X average Likert scale score when asking students if they have made any friends in school	Student survey	

**Table 13** (continued)

To what extent was there an increase in collaborative creation of rules?	Collaborative planning and creation of rules	The extent to which teachers assist each other as they work to further the school's goals	X average Likert scale score when asking teachers if they assist other teachers or receive assistance with the aim of furthering the school's goals	Teacher survey	PAT principal mentors
		The extent to which teachers value each other's ideas	X average Likert scale score when asking teachers if they value their colleagues' ideas	Teacher survey	
		The extent to which teachers give students a say in decisions about classroom rules	X average Likert scale score when asking teachers if they give students a say in decisions about classroom rules	Teacher survey	
			X average Likert scale score when asking students if they get a say in making the classroom rules	Student survey	
To what extent was there an increase in support for students' problems?	Help and support for students' problems	The extent to which teachers show an interest and understanding for students' problems	X average Likert scale score when asking teachers about their interest and understanding for students' problems	Teacher survey	PAT principal mentors
			X average Likert scale score when asking students about their teachers' interest and understanding for their problems	Student survey	
		The extent to which students have a contact person to discuss their problems	X average Likert scale score when asking students about their access to an adult at school that they can talk to about their problems	Student survey	
		The extent to which teachers notice the students' absence	X average Likert scale score when asking teachers if they notice the students' absence	Teacher survey	
			X average Likert scale score when asking students whether their teachers notice their absence	Student survey	
		The extent to which students get along well with their teachers	X average Likert scale score when asking students if they like their teachers	Student survey	
The extent to which teachers make students feel good about themselves	X average Likert scale score when asking students whether their teachers make them feel good about themselves	Student survey			
To what extent was there an improvement in the school's alignment with its mission?	The school's alignment with its mission	The extent to which teachers understand the school's mission	X average Likert scale score when asking teachers whether they understand the school's mission	Teacher survey	PAT principal mentors
		The extent to which teachers act in accordance with the school's mission	X Likert scale score when asking the principal whether teachers act in accordance with the school's mission	Principal survey	
			X average Likert scale score when asking teachers whether they act in accordance with the school's mission	Teacher survey	
To what extent was there an improvement in the school's alignment with its vision?	The school's alignment with its vision	The extent to which a shared vision is in place, which has been actualised by logical planning	X Likert scale score when asking the principal whether a shared vision is in place, which has been actualised by logical planning	Principal survey	PAT principal mentors
			X average Likert scale score when asking teachers whether a shared vision is in place, which has been actualised by logical planning	Teacher survey	
To what extent was there a decrease in disorder?	Disruption and disorder	The extent to which students disrupt the lessons	X average Likert scale score when asking teachers whether there is many disruptions by students during class	Teacher survey	PAT principal mentors
		The extent of vandalism caused by students	X Likert scale score when asking the principal about whether students regularly vandalise the school	Principal survey	
			X cases of vandalism per year	School records	

**Table 13** (continued)

To what extent was there an improvement in the execution of disciplinary actions?	Execution of disciplinary actions	The extent to which school rules are enforced consistently and fairly by the school staff	X Likert scale score when asking the principal about whether school rules are enforced consistently and fairly by the school staff	Principal survey	PAT principal mentors
			X average Likert scale score when asking teachers whether they enforce school rules consistently and fairly	Teacher survey	
		The extent to which teachers make it clear to students when they misbehave	X Likert scale score when asking the principal about whether teachers make it clear to their students when they misbehave	Principal survey	
			X average Likert scale score when asking teachers whether they make it clear to their students when they misbehave	Teacher survey	
		The extent to which teachers will stop someone from being teased or bullied if they see it happening	X Likert scale score when asking the principal about whether teachers will stop someone from being teased or bullied if they see it happening	Principal survey	
			X average Likert scale score when asking teachers whether they will stop someone from being teased or bullied if they see it happening	Teacher survey	
To what extent was there an improvement in students' motivation?	Students' motivation	The extent to which students try to succeed in their classes	X average Likert scale score when asking teachers whether their students try to succeed in their classes	Teacher survey	PAT principal mentors
			X average Likert scale score when asking students whether they try to succeed in their classes	Student survey	
		The extent to which students have the feeling that they can succeed at their school	X average Likert scale score when asking teachers whether their students have the feeling that they can succeed at their school	Teacher survey	
			X average Likert scale score when asking students whether they have the feeling that they can succeed at their school	Student survey	
To what extent were there improvements in the formulation of academic goals?	Formulation of academic goals	The extent to which teachers make it clear what work needs to be done to get the grades students want	X average Likert scale score when asking students whether their teachers make it clear what work needs to be done to get the grades they want	Student survey	PAT principal mentors
		The extent to which the school sets high performance standards	X average Likert scale score when asking students whether school is difficult	Student survey	
To what extent was there an increase in the school's recognition of student achievement?	Recognition of student achievement	The extent to which students are being recognised for outstanding performances and grades	X Likert scale score when asking the principal about whether students are being recognised for outstanding performances and grades	Principal survey	PAT principal mentors
		The extent to which students are being rewarded for outstanding performances and grades	X Likert scale score when asking the principal about whether students are being rewarded for outstanding performances and grades	Principal survey	
To what extent were there improvements in the cleanliness of the physical environment?	Cleanliness of the physical environment	The extent to which the school grounds are clean	Inspection of the school grounds by the principal mentor shows satisfactory results	Regular inspection	PAT principal mentors
			X average Likert scale score when asking students whether the school grounds are clean	Student survey	
		The extent to which the classrooms are clean	Inspection of the selected classrooms by the principal mentor shows satisfactory results	Regular inspection	
			X average Likert scale score when asking students whether their classroom is clean	Student survey	
		The extent to which the bathrooms are clean	Inspection of the bathrooms by the principal mentor shows satisfactory results	Regular inspection	
			X average Likert scale score when asking students whether the bathrooms are clean	Student survey	

**Table 13** (continued)

To what extent were there improvements in the equal treatment of all students?	Equality for students	The extent to which policies and practices to address barriers in learning are in place	X Likert scale score when asking the principal where there are policies and practices in place to address barriers in learning	Principal survey	PAT principal mentors
		The extent to which learning support systems for those who require intensive assistance are in place	X Likert scale score when asking the principal whether there are learning support systems in place for those who require intensive assistance	Principal survey	
		The extent to which classroom practices are focused on the healthy development of all students	X Likert scale score when asking the principal whether the classroom practices in place are focused on the healthy development of all students	Principal survey	
To what extent was there an increase in students' satisfaction with the school?	Students' satisfaction with the school	The extent to which students like the school	X average Likert scale score when asking students whether they like the school	Student survey	PAT principal mentors
		The extent to which students feel like the school gives them enough freedom	X average Likert scale score when asking students whether they have a lot of freedom at school	Student survey	
To what extent was there an increase in the efforts to integrate parents into the school life?	Integration of parents into school life	The extent to which students' parent(s) or guardian(s) feel(s) welcome at the school	X Likert scale score when asking the principal whether students' parent(s) or guardian(s) are welcome at the school	Principal survey	PAT principal mentors
		The extent to which students' parent(s) or guardian(s) hear(s) about their actions	X Likert scale score when asking the principal whether students' parent(s) or guardian(s) hear(s) about the students' actions	Principal survey	
		The extent to which students' parent(s) or guardian(s) come(s) to help out at the school	X Likert scale score when asking the principal whether students' parent(s) or guardian(s) come(s) to help out at the school	Principal survey	
To what extent was there an increase in efforts to measure school performance standards in order to maintain them?	Maintenance and measurement of school performance standards	The extent to which the principal maintains definite standards of performance	X Likert scale score when asking the principal about whether they work to maintain definite standards of performance	Principal survey	PAT principal mentors
		The extent to which accurate and reliable data is gathered in the school	X Likert scale score when asking the principal whether accurate and reliable data is gathered in the school	Principal survey	
		The extent to which principals and teacher work together on evaluating the collected data	X Likert scale score when asking the principal whether they work together with teachers on evaluating the collected data	Principal survey	
			X average Likert scale score when asking teachers whether they are being included in evaluation activities, which are done based on data collected at the school	Teacher survey	
To what extent were there improvements in the implementation of specific practices targeted at school improvement?	Implementation of specific practices targeted at school improvement	The extent to which there are practices to enhance engagement in teaching, learning and school-wide activities	X Likert scale score when asking the principal about whether there is practices to enhance engagement in teaching, learning and school-wide activities	Principal survey	PAT principal mentors
		The extent to which there are practices to address barriers to learning and teaching, and reengage those who have become disengaged	X Likert scale score when asking the principal whether there are practices to address barriers to learning and teaching, and reengage those who have become disengaged	Principal survey	
		The extent to which sufficient staff are assigned to developing and sustaining such practices	X Likert scale score when asking the principal whether there is sufficient staff assigned to developing and sustaining such practices	Principal survey	
		The extent to which leadership and staff are provided continuous professional development in order to develop and sustain these practices	X Likert scale score when asking the principal whether which leadership and staff are provided continuous professional development in order to develop and sustain these practices	Principal survey	

As a result of the mentors' feedback on the sub-dimensions and indicators 50 indicators were included in the monitoring plan, as presented in Table 13. In the first column, the evaluation questions to group these indicators are presented. Column 2 outlines the specific focus of each evaluation question. In the monitoring plan, most indicator targets do not feature specific targets, which is signalled by an X. During an interview with the head mentor, it was agreed that the mentors would create tailored targets with the principals as soon as the mentoring programme began (B. Probyn, personal communication, June 6, 2021). The reason is that there are different baseline indicators for school culture and climate in every school, and only by tailoring the targets to each school can realistic targets be established (B. Probyn, personal communication, June 6, 2021).

Likert scale scores will be used to measure most targets. These scores will be retrieved from the principal, teacher and student survey, which are listed as the main monitoring data sources. Monitoring data will also come from regular inspections, which mentors will use to monitor physical school improvements. Due to different baselines, mentors will specify what constitutes satisfactory results for each school. Likert scales were used in all the surveys since they are easy to understand and quick to fill out (Chyung, Swanson, Roberts & Hankinson, 2018; Joshi, Kale, Chandel & Pal, 2015). It is also easy to draw conclusions, reports, results and graphs from the responses (Joshi et al., 2015), which makes it a great fit for organisations with limited M&E capabilities (PAT mentors, personal communication, March 10, 2020).

It was decided to use surveys as the sole tool for monitoring data in conversations with mentors in the focus group. The principal survey is presented in Appendix I, the teacher survey in Appendix J, and the student survey in Appendix K. To assess school culture and climate change from the point of view of both the direct beneficiaries of PAT's mentoring efforts, as well as from their indirect counterparts, it was found that individual surveys would be most beneficial.

## Results and discussion of the evaluation plan

The evaluation plan presented in Table 14 below was created for the evaluation needs arising from the evaluation questions, first presented in the monitoring plan in Table 13. Table 14 shows the methods of evaluation chosen for answering these evaluation questions: semi-structured interviews with principals and focus groups with teachers. PAT can use these evaluation methods to analyse why answers in principal and teacher surveys differ from the baseline.

Semi-structured Interviews were chosen, as they provide the mentors with a way to understand the reasons behind the changes in answers on the principal survey. In the semi-structured interviews, mentors should optimally structure the interview based on indicators explored in the principal survey.

Focus groups were chosen so that mentors could learn why responses in the teacher surveys differed from the baseline, how teachers perceive the changes in school culture and climate, and the extent to which changes have been brought on by principal behaviour. In addition, it is time-saving for the mentor, as individual interviews with every teacher would not be feasible.

Interviews and focus groups are not conducted individually for each evaluation question. The mentor will meet with the principal yearly and hold one focus group with the teachers after the three-year mentoring phase is complete. Follow-up sessions can be arranged by the mentor if more time is needed for the interview or focus group.

**Table 14**

Evaluation plan						
Evaluation questions	Summary of monitoring	Focus of evaluation	Evaluation method	Method implementation	Who is responsible	When
To what extent was there an increase in the teachers' judgment being included in the principal's decision making?	Changes in Likert scale scores from baseline, provided by the principal and teachers, regarding the extent of teachers being engaged in decision making, the principal's trust in teachers' judgment and the degree to which the principal is approachable.	Identification of changes attributable to programme as well as any unintended results	Interview and focus group	One interview with the principal and one focus group with the teachers	PAT principal mentors	Interview after every full year of mentoring (3 times in total)  Focus group after the 3-year mentoring phase
To what extent was there an increase in the principal's encouragement for innovative practices?	Changes in Likert scale scores from baseline, provided by the principal and teachers, regarding the extent to which the principal supports and rewards risk taking, and innovative ideas, reinforces the sharing of ideas and effective practices among all staff, and facilitates a school development process that engages the human potential and commitment of teachers.	Identification of changes attributable to programme as well as any unintended results	Interview and focus group	One interview with the principal and one focus group with the teachers	PAT principal mentors	Interview after every full year of mentoring (3 times in total)  Focus group after the 3-year mentoring phase
To what extent was there an increase in trust?	Changes in Likert scale scores from baseline, provided by teachers and students, regarding the extent to which teachers trust each other, students trust teachers, students trust each other and the development of supportive interpersonal relationships.	Identification of changes attributable to programme as well as any unintended results	Interview and focus group	One interview with the principal and one focus group with the teachers	PAT principal mentors	Interview after every full year of mentoring (3 times in total)  Focus group after the 3-year mentoring phase
To what extent was there an increase in collaborative creation of rules?	Changes in Likert scale scores from baseline, provided by the teachers and students, regarding the extent to which teachers assist each other as they work to further the school's goals, value each other's ideas and give students a say in decisions about classroom rules	Identification of changes attributable to programme as well as any unintended results	Interview and focus group	One interview with the principal and one focus group with the teachers	PAT principal mentors	Interview after every full year of mentoring (3 times in total)  Focus group after the 3-year mentoring phase
To what extent was there an increase in support for students' problems?	Changes in Likert scale scores from baseline, provided by the teachers and students, regarding the extent to which teachers show an interest and understanding for students' problems, students have a contact person to discuss their problems, teachers notice the students' absence, students get along well with their teachers, and teachers make students feel good about	Identification of changes attributable to programme as well as any unintended results	Focus group	One focus group with the teachers	PAT principal mentors	After the 3-year mentoring phase
To what extent was there an improvement in the school's alignment with its mission?	Changes in Likert scale scores from baseline, provided by the principal and teachers, regarding the extent to which teachers understand the school's mission and act in accordance with it.	Identification of changes attributable to programme as well as any unintended results	Interview and focus group	One interview with the principal and one focus group with the teachers	PAT principal mentors	Interview after every full year of mentoring (3 times in total)  Focus group after the 3-year mentoring phase

**Table 14 (continued)**

To what extent was there an improvement in the school's alignment with its vision?	Changes in Likert scale scores from baseline, provided by the principal and teachers, regarding the extent to which a shared vision is in place, which has been actualised by logical planning.	Identification of changes attributable to programme as well as any unintended results	Interview and focus group	One interview with the principal and one focus group with the teachers	PAT principal mentors	Interview after every full year of mentoring (3 times in total)  Focus group after the 3-year mentoring phase
To what extent was there a decrease in disorder?	Changes in Likert scale scores from baseline, provided by the principal, teachers and extracted from the school records, regarding the extent to which students disrupt the lessons and the extent to which there is vandalism, which is caused by students.	Identification of changes attributable to programme as well as any unintended results	Interview and focus group	One interview with the principal and one focus group with the teachers	PAT principal mentors	Interview after every full year of mentoring (3 times in total)  Focus group after the 3-year mentoring phase
To what extent was there an improvement in the execution of disciplinary actions?	Changes in Likert scale scores from baseline, provided by the principal and teachers, regarding the extent to which school rules are enforced consistently and fairly by the school staff, teachers make it clear to students when they misbehave, and will stop someone from being teased or bullied if they see it happening.	Identification of changes attributable to programme as well as any unintended results	Interview and focus group	One interview with the principal and one focus group with the teachers	PAT principal mentors	Interview after every full year of mentoring (3 times in total)  Focus group after the 3-year mentoring phase
To what extent was there an improvement in students' motivation?	Changes in Likert scale scores from baseline, provided by teachers and students, regarding the extent to which students try to succeed in their classes, and have the feeling that they can succeed at their school.	Identification of changes attributable to programme as well as any unintended results	Focus group	One focus group with the teachers	PAT principal mentors	After the 3-year mentoring phase
To what extent were there improvements in the formulation of academic goals?	Changes in Likert scale scores from baseline, provided by the students, regarding the extent to which teachers make it clear what work needs to be done to get the grades students want, and the extent to which the school sets high performance standards.	Identification of changes attributable to programme as well as any unintended results	Focus group	One focus group with the teachers	PAT principal mentors	After the 3-year mentoring phase
To what extent was there an increase in the school's recognition of student achievement?	Changes in Likert scale scores from baseline, provided by the principal, regarding the extent to which students are being recognised and rewarded for outstanding performances and grades.	Identification of changes attributable to programme as well as any unintended results	Interview	One interview with the principal	PAT principal mentors	After every full year of mentoring (3 times in total)
To what extent were there improvements in the cleanliness of the physical environment?	Changes in Likert scale scores from baseline, based on regular inspections and provided by students, regarding the extent to which the school grounds, classrooms and bathrooms are clean.	Identification of changes attributable to programme as well as any unintended results	Interview	One interview with the principal	PAT principal mentors	After every full year of mentoring (3 times in total)
To what extent were there improvements in the equal treatment of all students?	Changes in Likert scale scores from baseline, provided by the principal, regarding the extent to which learning support systems for those who require intensive assistance are in place, and classroom practices are focused on the healthy development of all students.	Identification of changes attributable to programme as well as any unintended results	Interview and focus group	One interview with the principal and one focus group with the teachers	PAT principal mentors	After every full year of mentoring (3 times in total)

**Table 14 (continued)**

To what extent was there an increase in students' satisfaction with the school?	Changes in Likert scale scores from baseline, provided by the students, regarding the extent to which students like the school, and feel like the school gives them enough freedom.	Identification of changes attributable to programme as well as any unintended results	Interview and focus group	One interview with the principal and one focus group with the teachers	PAT principal mentors	Interview after every full year of mentoring (3 times in total)  Focus group after the 3-year mentoring phase
To what extent was there an increase in the efforts to integrate parents into the school life?	Changes in Likert scale scores from baseline, provided by the principal, regarding the extent to which students' parent(s) or guardian(s) feel(s) welcome at the school, hear(s) about the students' actions and help out at the school.	Identification of changes attributable to programme as well as any unintended results	Interview	One interview with the principal	PAT principal mentors	After every full year of mentoring (3 times in total)
To what extent was there an increase in efforts to measure school performance standards in order to maintain them?	Changes in Likert scale scores from baseline, provided by the principal and teachers, regarding the extent to which the principal maintains definite standards of performance, accurate and reliable data is gathered in the school, and principals and teachers work together on evaluating the collected data.	Identification of changes attributable to programme as well as any unintended results	Interview	One interview with the principal	PAT principal mentors	After every full year of mentoring (3 times in total)
To what extent were there improvements in the implementation of specific practices targeted at school improvement?	Changes in Likert scale scores from baseline, provided by the principal, regarding the extent to which there are practices to enhance engagement, address learning and school-wide activities, as well as barriers to learning and teaching, and reengage those who have become disengaged. Additionally, Changes in Likert scale scores from baseline regarding the extent to which sufficient staff are assigned to developing and sustaining such practices, and leadership and staff are provided continuous professional development in order to develop and sustain these practices.	Identification of changes attributable to programme as well as any unintended results	Interview and focus group	One interview with the principal and one focus group with the teachers	PAT principal mentors	Interview after every full year of mentoring (3 times in total)  Focus group after the 3-year mentoring phase

## Results and discussion of the data collection plan, data management plan and data synthesis approach

This data collection and management plan, as well as the data synthesis approach, are designed to ensure structured and effective data gathering and storage of data for the monitoring plan.

### Results and discussion of the data collection plan

Table 15 presents the results of the data collection plan, including the purpose, focus, sampling, implementation, potential ethical concerns and further required developments for all the data collection methods included in the monitoring and evaluation plan.

### Pre-post survey

In accordance with the data collection plan in Table 15, the pre-post survey will assess how school culture and climate have changed since PAT's mentoring efforts began. Surveys are designed to gather data according to school culture and climate indicators selected by the mentors.

All principals will be required to participate in the pre-post surveys, while all teachers and students will be voluntary participants. The aim is to include as many teachers and students as possible in the surveys.

A baseline will be done for the principal, teacher and student survey. The principal survey will be administered three more times. One additional teacher and student survey will be administered at the end of the 3-year mentoring program.

### Inspections

Mentors will inspect the physical environment of the schools, including the school grounds, classrooms, and bathrooms on a yearly basis. The responsible mentors will decide which classrooms, bathrooms and areas of the school grounds need to be inspected.

**Table 15**

Data collection plan				
	Pre-post survey	Inspections	Semi-structured principal interview	Teacher focus group
<b>Purpose</b>	To identify the extent to which indicators of school culture and climate have changed since the implementation of PAT's mentoring efforts	To monitor the cleanliness of the physical environment of the schools	<ul style="list-style-type: none"> <li>To identify in how far the change in the measured school culture and climate indicators can be attributed to PAT's mentoring efforts</li> <li>To identify the specific mentoring practices, which led to positive changes in the measured school culture and climate indicators</li> </ul>	To identify in how far the change in the measured school culture and climate indicators can be attributed to PAT's mentoring efforts
<b>Focus</b>	<p>Changes that occurred in respect of:</p> <ul style="list-style-type: none"> <li>Teachers' judgment being included in the principal's decision-making</li> <li>Principal's encouragement for the development and sharing of innovative ideas and practices</li> <li>Increase in trust and respect</li> <li>Collaborative planning and creation of rules</li> <li>Help and support for students' problems</li> <li>School's alignment with its mission</li> <li>School's alignment with its vision</li> <li>Disruptions and disorder</li> <li>Execution of disciplinary actions</li> <li>Students' motivation</li> <li>Formulation of academic goals</li> <li>School's recognition of student achievement</li> <li>Physical environment</li> <li>Equal treatment of all students</li> </ul>	<ul style="list-style-type: none"> <li>The cleanliness of the school grounds</li> <li>The cleanliness of the classrooms</li> <li>The cleanliness of the bathrooms</li> </ul>	<ul style="list-style-type: none"> <li>Explore with the principal where the positive and negative changes captured in the pre-post surveys originated from</li> <li>After the establishment of the sources for the changes, the mentor in collaboration with the principal will then attempt to explore which mentoring practices, if any, contributed to the changes</li> </ul>	<ul style="list-style-type: none"> <li>Lead a conversation with the teachers about where the changes indicated in the pre-post survey could have originated from</li> <li>Try to establish in how far the changes indicated in the pre-post survey are linked to changed principal behaviour</li> </ul>

**Table 15 (continued)**

	<ul style="list-style-type: none"> <li>• Students' satisfaction with the school</li> <li>• Efforts to integrate parents into school life</li> <li>• Efforts to maintain and measure school performance standards</li> <li>• Implementation of specific practices targeted at school improvement</li> </ul>			
<b>Sampling</b>	<ul style="list-style-type: none"> <li>• Participation in the survey will be mandatory for all principals participating in the programme, as the pre-survey will be used to guide the mentoring efforts</li> <li>• Teachers and students will self-select whether to participate or not</li> <li>• Aim to include as many teachers in the pre-post survey as possible</li> <li>• Aim to include as many students in the pre-post survey as possible (first and second grades in primary schools will not be included)</li> </ul>	<ul style="list-style-type: none"> <li>• The mentor will decide which classrooms, bathrooms and parts of the school grounds to inspect</li> </ul>	<ul style="list-style-type: none"> <li>• Participation in the interviews will be mandatory for all principals participating in the programme, as the interviews will be used to guide further mentoring efforts</li> </ul>	<ul style="list-style-type: none"> <li>• Aim to include as many teachers as possible in the focus group (mentors will individually decide on a manageable number of teachers)</li> <li>• Teachers will self-select whether to participate or not</li> </ul>
<b>Implementation</b>	<ul style="list-style-type: none"> <li>• Administer to principals before the first mentoring session and after that every year until the end of the 3-year mentoring component (4 times in total)</li> <li>• Administer to teachers and students before the first mentoring session and at the end of the 3-year mentoring component (2 times in total) <ul style="list-style-type: none"> <li>○ Informed consent letters will be handed out to all teachers for them to inform the students about the survey and get their written consent</li> <li>○ Then the students will be provided with survey sheets, which will be collected by the teachers and handed over to the principal for later collection by the mentor</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• The inspections of the school grounds, classrooms and bathrooms are to be done by the mentor in each school they are supporting</li> <li>• Inspection should take place on a yearly basis</li> </ul>	<ul style="list-style-type: none"> <li>• Takes place yearly after the principal survey has been administered (first, second and third year of mentoring)</li> </ul>	<ul style="list-style-type: none"> <li>• Teacher focus group will take place once after the teacher survey has been administered, following the end of the 3-year mentoring component</li> <li>• The teacher focus group should ideally be implemented before the final principal interview, as the outcomes can guide questions about the reasons for the change in principal behaviour</li> </ul>

**Table 15 (continued)**

<p><b>Potential ethical issues</b></p>	<ul style="list-style-type: none"> <li>• Privacy and confidentiality of the collected data</li> <li>• Informed consent is required so respondents know how the collected data will be used and how their identities will be protected</li> <li>• Implications if respondents are not literate</li> <li>• Implications if respondents have limited English language proficiency</li> <li>• Implications if respondents are disabled</li> </ul>	<ul style="list-style-type: none"> <li>• Issues could arise from a male mentor inspecting female bathrooms</li> </ul>	<ul style="list-style-type: none"> <li>• Privacy and confidentiality of the collected data</li> <li>• Informed consent is required so respondents know how the collected data will be used and how their identities will be protected</li> </ul>	<ul style="list-style-type: none"> <li>• Privacy and confidentiality of the collected data</li> <li>• Informed consent is required so respondents know how the collected data will be used and how their identities will be protected</li> </ul>
<p><b>Requiring development</b></p>	<ul style="list-style-type: none"> <li>• Survey instruments in other required languages</li> <li>• Spreadsheets for entry of results</li> <li>• Processes for generating data reports</li> </ul>	<ul style="list-style-type: none"> <li>• Guidelines for inspections</li> <li>• Format for writing up inspection results</li> </ul>	<ul style="list-style-type: none"> <li>• Guidelines for semi-structured interviews</li> <li>• Format for writing up interview results</li> </ul>	<ul style="list-style-type: none"> <li>• Guidelines for teacher focus group</li> <li>• Format for writing up focus group results</li> </ul>

### **Semi-structured principal interview**

Using semi-structured principal interviews, mentors will be able to explore with the principals where the positive and negative changes captured in the pre-post surveys originated from and identify which mentoring practices, if any, contributed to the changes.

Principals will be required to participate after the principal survey each year until the end of the mentoring programme.

### **Teacher focus group**

By holding teacher focus groups, mentors can discover where changes in teacher responses compared to the baseline have occurred, as well as establishing how far the changes indicated in the pre-post survey are linked to changed principal behaviour, as teachers are the school staff that is most directly influenced by their principal.

The aim is to include as many teachers as possible, but participation is optional. The focus group should be conducted after the completion of the 3-year mentoring programme, ideally before the principal interview, since the results may provide guidance to the principal interview as to the reasons for certain behaviour changes.

In Table 15, the specific implementation procedures, potential ethical issues, as well as documents and tools that will need to be developed by PAT for all data collection methods are outlined. The consent letters for the principal, teacher, and student surveys can be found in Appendices L, M, and N. The informed consent letters for principal interviews and teacher focus groups are presented in Appendices O and P.

## Results and discussion of the data management plan

Table 16 presents the results of the data management plan, including the database requirements, data entry requirements, methods for analysing and reporting the data, and necessary staff training for all data collection methods.

As presented in the data management plan in Table 16, all data entry will be done by the mentors. PAT determines who enters which data. Results of the surveys, inspections, interviews and focus groups will be entered into suitable spreadsheets, uploaded and stored on Google Drive. PAT selected Google Drive as a data storage and management platform due to its ease of use and accessibility (B. Probyn, personal communication, August 11, 2021). Data entry for all data collection methods should happen right after the data collection process. Interview and focus group results should be organized based on the questions on the principal and teacher surveys before being entered into the system.

The analysis of the survey data should be focused on finding the biggest changes in Likert scale scores as compared to the baseline, which will then be addressed in interviews and focus groups. Inspection data should be analysed to identify trends in the cleanliness of the physical environment across schools. Nvivo will be used to analyse the results of interviews and focus groups. The focus should be on identifying patterns in principals' and teachers' answers across schools. Interviews should then be used to determine mentoring practices that led to positive and negative changes to Likert scale scores. Additionally, the focus groups should identify principal practices across different schools that have improved or deteriorated since the start of the principal mentoring.

Monitoring reports are to be created yearly on the basis of the principal surveys and the cleanliness of the physical environment to report on the progress of the principals in supported schools. After the 3-year mentoring cycle, a progress report is to be created from the perspective of principals, teachers, students, and based on inspections. The data management plan outlines training requirements for mentors. Specific training schedules are beyond the scope of this dissertation and need to be addressed by PAT instead.

**Table 16**

Data management plan				
Database requirements				
<ul style="list-style-type: none"> <li>- Access to a computer/laptop for every mentor</li> <li>- Access to Nvivo</li> <li>- Access to Google Drive to store survey spreadsheets, interview and focus group outcomes</li> <li>- Formats for data entry (survey, inspection, interview and focus group spreadsheets)</li> <li>- Staff with technical capabilities to administer surveys, inspections, interviews and focus groups and upload them to the data storage software</li> </ul>				
Data collected	Data entry	Data analysis	Database reports	Staff training/orientation
<b>Pre-post survey results</b>	<p><b>Responsible:</b> A chosen mentor</p> <p><b>Tasks:</b> Enter results from completed principal, teacher and student surveys onto spreadsheet and upload to Google Drive</p> <p><b>Timing:</b> Principal survey: before implementation and then yearly Teacher survey: before implementation and after 3 years Student survey: before implementation and after 3 years</p>	<ul style="list-style-type: none"> <li>• Identify and highlight largest changes in scores per survey question in comparison to pre-survey results</li> </ul>	<ul style="list-style-type: none"> <li>• Yearly report on progress of all principals</li> </ul>	<ul style="list-style-type: none"> <li>• Administration of survey</li> <li>• Managing ethical issues</li> <li>• Data entry</li> <li>• Generating required data reports</li> </ul>
<b>Inspections</b>	<p><b>Responsible:</b> A chosen mentor</p> <p><b>Tasks:</b> Enter results from all conducted inspections onto spreadsheets and upload to Google Drive</p> <p><b>Timing:</b> Yearly</p>	<ul style="list-style-type: none"> <li>• Identify trends in changes in cleanliness of physical environments across schools</li> </ul>	<ul style="list-style-type: none"> <li>• Report every 3 years on progress from perspective of teachers and students, as well as changes in cleanliness of school environments</li> </ul>	<ul style="list-style-type: none"> <li>• Conducting an inspection</li> <li>• Managing ethical issues</li> <li>• Data entry</li> <li>• Generating required data reports</li> </ul>

**Table 16 (continued)**

<p><b>Principal interview results</b></p>	<p><b>Responsible:</b> Interview facilitator (the specific mentor that undertook the interview)</p> <p><b>Tasks:</b></p> <ul style="list-style-type: none"> <li>• Structure the results of the semi-structured interview according to the evaluation questions provided in the evaluation plan and upload to Google Drive</li> </ul> <p><b>Timing:</b> Yearly after the start of the mentoring programme</p>	<p><b>Responsible:</b> Evaluator (possibly a UCT master’s student)</p> <ul style="list-style-type: none"> <li>• Qualitative data analysis using Nvivo</li> <li>• Identify patterns in the different principals’ interviews in relation to the evaluation questions</li> <li>• Specifically identify mentoring practices, which led to positive and negative changes in the school culture and climate measures in the principal survey</li> </ul>	<ul style="list-style-type: none"> <li>• Managing interviews</li> <li>• Managing ethical issues</li> <li>• Data entry</li> <li>• Generating required data reports</li> </ul>
<p><b>Focus group results</b></p>	<p><b>Responsible:</b> Focus group facilitator (the specific mentor that undertook the focus group)</p> <p><b>Tasks:</b> Structure the results of the focus group according to the evaluation questions provided in the evaluation plan and upload to Google Drive</p> <p><b>Timing:</b> After the end of the mentoring programme (after 3 years)</p>	<p><b>Responsible:</b> Evaluator (possibly a UCT master’s student)</p> <ul style="list-style-type: none"> <li>• Qualitative data analysis using Nvivo</li> <li>• Identify patterns in the different teachers’ interviews in relation to the evaluation questions</li> <li>• Specifically identify principal practices across different schools that have improved or worsened after the start of the principal mentoring from the perspective of the teachers <ul style="list-style-type: none"> <li>○ Data can be used in the principal interviews to get an understanding of why the principals’ behaviour changed</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Administration focus group results</li> <li>• Managing ethical issues</li> <li>• Data entry</li> <li>• Generating required data reports</li> </ul>

Results and discussion of the data synthesis approach and creation of evaluative judgments

“The process of data synthesis is assisted by reference to two types of constructs already developed as part of the Monitoring and Evaluation Framework” (Markiewicz & Patrick, 2015, p.164). These are performance indicators and targets.

Data synthesis for PAT will be done by assessing it against the evaluation questions, as suggested by Markiewicz & Patrick (2015). Appendix Q provides a template with examples of how to synthesize data against evaluation questions. Each evaluation question is displayed with its performance indicators and results. Monitoring data and evaluation data from interviews and focus groups will be fed into the table. A synthesis of this data is shown in the last column, that gives a "clearer understanding of how the data are derived in relation to the evaluation question" (Markiewicz and Patrick, 2015, p.167).

On the basis of the data synthesis, evaluative judgments and conclusions can be made for each evaluation question. Appendix R provides an example showing how to make evaluative judgments and conclusions using the synthesised data. “Judgments draw on data synthesis, while the process of making evaluative conclusions draws on both the preceding data synthesis and the range of evaluative judgments made” (Markiewicz & Patrick, 2015, p.168). The evaluative conclusions formed on the basis of the evaluative judgments, as shown in the example in Appendix R, then feed into the learning plan where they create the basis for the creation of evaluative recommendations and lessons (Markiewicz & Patrick, 2015).

## Results and discussion of the learning plan

As plans are never perfect, it is key that organisations learn from their successes and failures (Markiewicz & Patrick, 2015). To do so, PAT requires a learning and utilisation strategy, incorporating a clear plan on how to identify and integrate recommendations and lessons into the programme.

### Learning strategy

To begin with, it is crucial to establish the specific need and context for learning. PAT is interested in the change in school culture and climate on the basis of their mentoring efforts. Ideally, PAT can learn about which areas of school culture and climate are being impacted through the mentoring efforts. PAT's mentors could also learn how to better mentor principals through refining their mentoring skills to have a greater impact on school culture and climate. PAT should schedule a dedicated mentor meeting to discuss the monitoring report every year, since principal interviews are conducted throughout the school year. After the 3-year monitoring and evaluation cycle and the creation of the evaluation report, the researcher suggests an extensive mentor meeting to discuss the outcomes of the evaluation report. Mentors should discuss all evaluative conclusions reached through the evaluation efforts, turn them into recommendations, and finally into specific lessons learned. PAT can use these lessons to make evidence-based adjustments to the programme's design or operation.

Appendix S provides examples of how evaluation conclusions can be turned into recommendations, and in turn into lessons, based on Markiewicz & Patrick (2015). Lessons are also expected to emerge on the basis of patterns occurring in the yearly principal surveys and the follow-up principal interviews. These lessons can be compared with those that are developed on the basis of the final evaluation plan. This will ensure that the recommendations and lessons match the needs and experiences of PAT's direct beneficiaries (Markiewicz & Patrick, 2015).

### Utilisation strategy

The flat hierarchy of PAT facilitates the use of recommendations and lessons developed internally because findings will not have to be communicated far up the chain (Markiewicz & Patrick, 2015). Compared to large organisations, PAT can bring all members together in one meeting, so the chain of dissemination of learning is greatly reduced. However, in order to

support utilisation, it is suggested that PAT rests its utilisation strategy on three main pillars, suggested by Markiewicz & Patrick (2015):

- The credibility of information
- Information utility
- A positive organisational culture

In terms of the credibility of information, Markiewicz & Patrick (2015) point out that for lessons learned to be used effectively, the methodology must be viewed as credible, which was ensured by adopting a highly collaborative approach in the design of the M&E framework. Additionally, PAT should choose an independent evaluator free of bias to assist with the creation of the evaluation report and ensure that the conclusions and recommendations are in line with the mentors' knowledge and experience of the program. Therefore, it is essential to have regular meetings to discuss monitoring and evaluation results.

PAT should focus on forming recommendations in a nonthreatening, positive manner and be careful to respond only to issues and concerns identified by mentors as a group (Markiewicz & Patrick, 2015).

As suggested by Markiewicz & Patrick (2015), PAT should make its findings widely available, in order to maintain a positive organisational culture. This includes the findings from both monitoring and evaluation efforts. The use of an in-depth evaluation report, developed on the lessons discussed in the meeting at the end of the 3-year monitoring and evaluation phase, can greatly increase the use of the developed lessons. The researcher suggests the use of a formative evaluation report, which establishes the “progress to date and identif[ies] recommended areas for improvement” (Markiewicz & Patrick, 2015, p.143). A structure for the report can be found in Appendix T. In order to increase the dissemination of the evaluation report, an additional meeting can then be held with all mentors to discuss the key results and lessons. Table 17 shows the described reporting and dissemination strategy.

**Table 17**

Reporting and dissemination strategy						
Report type	Due date	Audience & their interests		Overall focus	Contents	Dissemination
Principal routine monitoring	Each year	<ul style="list-style-type: none"> <li>• Head mentor</li> <li>• Mentors</li> </ul>	<ul style="list-style-type: none"> <li>• Management</li> <li>• Programme improvement</li> </ul>	<ul style="list-style-type: none"> <li>• Programme progress</li> </ul>	<ul style="list-style-type: none"> <li>• Principal survey results</li> </ul>	<ul style="list-style-type: none"> <li>• Distribute to head mentor and mentors ahead of mentor meeting</li> </ul>
Teacher, student and inspection routine monitoring	After 3 years	<ul style="list-style-type: none"> <li>• Head mentor</li> <li>• Mentors</li> </ul>	<ul style="list-style-type: none"> <li>• Management</li> <li>• Programme improvement</li> </ul>	<ul style="list-style-type: none"> <li>• Programme progress</li> </ul>	<ul style="list-style-type: none"> <li>• Teacher and student survey results</li> <li>• Inspection results</li> </ul>	<ul style="list-style-type: none"> <li>• Distribute to head mentor and mentors ahead of mentor meeting</li> </ul>
Formative evaluation report	After 3 years	<ul style="list-style-type: none"> <li>• Head mentor</li> <li>• Mentors</li> <li>• Funder</li> </ul>	<ul style="list-style-type: none"> <li>• Management</li> <li>• Programme improvement</li> <li>• Accountability</li> </ul>	<ul style="list-style-type: none"> <li>• Recommendations regarding programme continuation</li> <li>• Lessons</li> </ul>	<ul style="list-style-type: none"> <li>• Overall performance</li> <li>• Programme quality and value for the beneficiaries</li> <li>• Conclusions</li> <li>• Recommendations</li> <li>• Lessons</li> </ul>	<ul style="list-style-type: none"> <li>• Distribute to head mentor and mentors ahead of mentor meeting</li> </ul>

## Results and discussion of the implementation plan

In order to implement the suggested framework effectively and ethically, the researcher identified a number of important arrangements.

### Evaluation support

While all components of the M&E framework are designed to be implemented by PAT's mentors, the researcher advises PAT to seek assistance for the evaluation of the gathered data. Mentors are encouraged to conduct the monitoring tasks outlined in the monitoring plan and to write the yearly monitoring report themselves. Support should be considered for the evaluation, including the full evaluation report, which is to be done at the end of the 3-year mentoring phase. PAT already has ties with UCT, so it is recommended to gain assistance from another student following the Master's in Programme Evaluation, once all the data have been collected. By using the collected data and this dissertation as a guide, the student could conduct the evaluation, attempt to showcase the relationship between PAT and changes in school culture and climate in the supported schools, and assist PAT in improving its mentoring efforts based on the findings.

### Ethical concerns

As children, in the form of students, are targeted by the monitoring data collection plan, ethical concerns should be a central part of the implantation process. PAT should give everyone who could be included in the surveys a chance to express their opinions on the school's culture and climate. The illiteracy of students might pose an ethical challenge for PAT. It is not possible to create infographics for all the questions on the student survey. However, according to the data collection plan, class teachers should distribute the surveys. Besides what is mentioned in the data collection plan, the mentors should educate the teachers about how important it is to assist students with low reading capabilities, who wish to participate, by reading each section of the student survey to them.

South African schools are also home to a variety of languages, which is of concern. PAT must ensure that the surveys developed by the researcher are translated into other languages in case there are students who do not speak English well enough to fill out the survey. Mentors should talk to the principal about possible translation needs before conducting the student survey.

## Integration of the M&E framework into the existing programme

It may add to the workload of mentors, but the M&E framework can also be used to support their current mentoring work. Before the mentoring activities begin, all mentors will administer a survey to the school principals to establish a baseline of school culture and climate indicators. Optionally, this baseline survey could be integrated into the application process. In view of the limited capacity of PAT to include principals in the mentoring programme, PAT could use the principal survey as an additional tool to explore whether the school is one of those most in need of mentoring support.

Regardless of the option chosen by PAT, the results of the baseline principal survey can be used to create mentoring outcomes and specific objectives related to the improvement of school culture, school climate, and principal competencies. In the focus group, a number of principals emphasized how different schools' and principals' needs are, expressing the need for individual mentoring programmes for every principal. In this manner, realistic objectives can be set and tracked over time as part of a customised mentoring program.

## Testing phase

PAT should test the practicability of the principal, teacher, and student surveys, and how they fit into the monitoring plan. Focus here should be on determining which survey questions may cause potential problems with respondents:

- having trouble reading the question as written.
- not understanding words or ideas in the questions.
- having trouble providing answers to the question.

Fowler & Roman (1992) developed an interviewer rating form that can help identify these problems. It is attached in Appendix U. It would be beneficial for mentors to attend the testing of the student survey in a select number of classes to get a sense of the difficulties students have filling out the survey.

While testing becomes more accurate as more schools are included, PAT should choose a number of schools that do not exceed their capacity and in that way affect the quality of the trial run.

### Plan for monitoring and review of framework

The M&E framework has been developed and presented as one complete piece in this dissertation, but PAT is looking for a tool that can cater to the wide range of environments in the supported schools (PAT mentors, personal communication, March 10, 2020). When a school environment only allows the principal survey to be administered, it is still better than collecting no data at all. Data collection should be adapted to each environment.

Furthermore, the M&E framework should be viewed as a living document. An M&E framework should be regularly modified based on well-founded monitoring and evaluation outcomes (Markiewicz & Patrick, 2015). A meeting with all mentors should be held after the evaluation meeting to discuss possible changes to the M&E framework. Mentors should also be able to suggest optional yearly meetings following the implementation of the principal survey in case any severe problems with the monitoring process are detected.

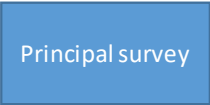




### Work plans

The work plans presented in the following are based on all meetings and deliverables discussed in the preceding sections of the M&E framework.

**Table 18**

Work plan for implementation of PAT's monitoring and evaluation framework											
Year 1											
January	February	March	April	May	June	July	August	September	October	November	December
Baseline principal survey					Principal survey	Principal monitoring report	Mentor meeting to discuss monitoring outcomes				
Baseline teacher survey					Principal interview						
Baseline student survey					Inspection						
Baseline Inspection											

**Table 19**

Work plan for implementation of PAT's monitoring and evaluation framework											
Year 2											
January	February	March	April	May	June	July	August	September	October	November	December
					  						

**Table 20**

Work plan for implementation of PAT's monitoring and evaluation framework											
Year 3											
January	February	March	April	May	June	July	August	September	October	November	December
					Principal survey						
					Teachersurvey						
Principal interview					Studentsurvey			Mentor meeting to discuss monitoring outcomes			
Mentor meeting to discuss monitoring outcomes					Principal interview	Full monitoring report		Start of evaluation report			
					Teacher focus group						
					Inspection						

**Table 21**

<p><b>Required meetings after the finalisation of the evaluation plan</b></p>	<p>Mentor meeting to discuss evaluation outcomes</p>	<p>Mentor meeting to discuss recommendations and lessons</p>	<p>Mentor meeting to discuss possible changes to the programme's mentoring component</p>
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For all three years that the mentoring component of the programme will be implemented in the supported schools, work plans were developed. Meetings required after the completion of the evaluation report have been added separately, as it is not known when the evaluation report will be completed during the first evaluation cycle. Work plans are closely aligned with the school calendar in South Africa. School data collection begins in January and continues in June. In January, before the mentoring program begins, baseline surveys are conducted. As a recurring month for data collection, June was chosen rather than December, around the end of the school year, due to the natural stress principals experience at this time of year (B. Probyn, personal communication, August 11, 2021). PAT does not wish to add to this stress (B. Probyn, personal communication, August 11, 2021). Mentoring reports are created in July and meetings are planned in August to prevent work overload for mentors in June.

## Chapter 4: Challenges, limitations, recommendations for further research, reflection and conclusion

The purpose of this dissertation is to evaluate the impact of the mentoring component of PAT's program. Specifically, the impact of the mentoring programme on the direct (and indirect) beneficiaries, and the stories they relate about daily school life at the schools and special events. As outlined in the introduction (please see p. 1), through desk research and conversation with the PAT mentors, it was determined that an impact evaluation of the mentoring component's impact on school culture and climate would be most beneficial to PAT. This is because so far PAT has been collecting data only regarding the change in student outcomes in schools they support. As a result of the COVID-19 pandemic and the additional stressors on teachers and principals, it was not possible to conduct an impact evaluation. In collaboration with PAT's head mentor, the researcher proposed creating an M&E framework which could be used by PAT (or by an external evaluator) to begin documenting programme impact as beneficial. Implementation of an impact evaluation could take place when conditions are more conducive to this type of intervention. A deep programme theory evaluation was conducted prior to the development of the M&E framework in order to confirm the plausibility of both the underlying assumptions and approach of PAT's mentoring component.

In the first part of the results chapter, the theory evaluation showed that the program theory is plausible and that effective mentoring practices can have a positive impact on school culture and climate.

Given that chapter 3 already contained both the presentation and discussion of the results of the theory evaluation and M&E framework design, this chapter outlines and discusses the researcher's challenges in conducting the research that led to this dissertation, the potential limitations of the M&E framework proposed, recommendations for further studies, for both PAT and in the field of principal mentoring/leadership research, the researcher's reflection on the creation of the M&E framework and a conclusion.

## Challenges experienced in creating an M&E framework for PAT

While conducting the dissertation research, a number of methodological challenges were encountered.

Conducting empirical research during the COVID-19 pandemic was the biggest challenge. PAT's initial request was for an evaluation of the mentoring component's impact on school culture and climate. Due to the additional pressures placed on school principals and the unpredictable closures of schools due to lockdown regulations in South Africa, PAT's principal mentor determined that it would not be feasible to conduct impact evaluations in the schools (B. Probyn, personal communication, March 10, 2020). As described previously, instead an M&E framework was created. This forced the researcher to rethink the entire methodology and tailor it to what was realistically achievable under the new COVID-19 restrictions.

Creating an M&E framework suitable for the South African context was another methodological challenge. All of the identified, and to this day heavily used, school culture and climate measurement instruments were developed for the context of US schools (Bear, Gaskins, Blank & Chen, 2011; Bradshaw et al., 2014; Brankovic, Rodić & Kostović, 2012; Cavanagh & Dellar, 1998; Ciccone & Freiberg, 2013; Ding et al., 2011; Higgins-D'Alessandro & Sadh, 1998; Hoy & Tarter, 1997; Gruenert, 2015; Gruenert & Whitaker, 2015; Zullig et al., 2010). Consequently, the relevance and appropriateness of the indicators identified were challenged. The researcher engaged in a lengthy process of compiling indicators of a positive school culture and climate across several of the most utilised instruments in recent social science literature. This was done to create a basis for the creation of an M&E framework suitable for the South African context. The researcher was able to adjust the M&E framework for the South African context by receiving detailed feedback from mentors on all the indicators identified in US instruments. With their extensive knowledge of the South African education system, they were able to pick such indicators, which they believed they had influenced through their mentoring work.

Several of the identified instruments were developed to measure school culture and climate in primary (Brankovic et al., 2012; Smith et al., 2020) or secondary schools (Bradshaw et al., 2014; Cavanagh & Dellar, 1998; Higgins-D'Alessandro & Sadh, 1998; Hoy & Tarter, 1997). PAT decided, however, to create only one set of surveys, which can be used both in primary and

secondary schools, because implementing and administering two sets of surveys for primary and secondary schools would have added too much work to the mentors' workload. The challenge for the researcher was to create one set of surveys that could cater to both primary and secondary schools.

### [A reflection on the development of the M&E framework](#)

A reflection on the suitability of Markiewicz & Patrick's (2015) guide for the creation of an M&E framework to cater to both, the academic requirements from UCT's side and the practical needs of PAT, is a valuable addition to this dissertation. As a result, a deeper understanding of why this specific guide was selected and a reflection on how well it met the needs of this dissertation can be achieved.

Markiewicz & Patrick's (2015) guide, in retrospect, perfectly met PAT's needs, since it allowed the researcher to create an extremely detailed guide to M&E, and most importantly, a practical guide for the actual implementation of the framework. Additionally, Markiewicz & Patrick's (2015) detailed guide allowed the researcher to gain a deep understanding of the processes involved in creating an M&E framework, which permitted easy adaptations of any desired section. It allowed the researcher to incorporate all academic requirements, as well as a full theory evaluation into the M&E framework drafting process.

### [Limitations of the M&E framework](#)

The research approach and the methods chosen for M&E framework limit PAT's ability to prove causality of their programme's mentoring component to a change in school culture and climate. For causal attribution of effect, experimental research designs and random assignment of control and treatment groups are needed. PAT operates in an applied setting where this is not likely to happen.

A comparison is made between the responses to the yearly survey and the responses to the baseline survey. There is no comparison group proposed. Therefore, there is the possibility of a number of confounding variables impacting the school culture and climate in the schools. These confounding variables might prove difficult to account for. In addition to this limitation, PAT's programme has a number of aligned components that could impact principal leadership and, in turn, school culture and climate, or even directly influence school culture and climate. These include the MDP, workshops and the teacher and foundation phase support. This is one

of the weaknesses of the current M&E framework implementation plan. In order to generate a strong and defensible argument that mentoring is the key driver for changing school culture and climate, PAT should consider how to best use both qualitative and quantitative data from the M&E framework. An experimental research design would be needed to measure the actual impact of mentoring.

The approach presented in this dissertation was chosen due to two main reasons: what is realistically achievable by PAT and the ethical nature of the selection of participants. With an increasing number of mentoring partnerships, PAT's mentors are already overwhelmed with work. An M&E framework approach with a control group, for example, would lead to onerous capacity issues. There is no M&E specialist supporting PAT, and the mentors are too busy to implement a sophisticated control group design. PAT mentors have no experience implementing experimental or quasi-experimental designs. Hence, the researcher considered a simpler M&E framework to be more realistic and therefore more effective. If implemented with rigour, the proposed plan is likely to generate insightful data.

Furthermore, ethical issues were of concern. PAT might implement a pipeline design in which schools would be offered access to the program after serving as a control group for three years, but there is no guarantee that the former control group schools would still be the ones with the greatest need for mentoring. It is possible that other schools in PAT's area of operation developed a greater need for mentoring during these three years. As a result, it might be ethically questionable to include the former control group schools in the programme.

It takes a lot of effort and resources to change school culture and climate (Zullig et al., 2010). Accordingly, a triangulation of the findings of the surveys, interviews, focus groups, and other observations could fairly reliably confirm that the mentoring activities led to a shift in school culture and climate. Such key findings and observations include:

PAT or a M&E specialist working for them can confirm that no other programmes were implemented simultaneously in the schools.

By conducting principal and teacher surveys, as well as facilitating teacher focus groups, PAT or an M&E specialist working for them can confirm that the principal is the main driver of change in school culture and climate.

PAT or an M&E specialist working for them can verify from the results of principal interviews that the principal attributes his newfound ability to affect change in school culture and climate to the mentoring program.

### Recommendations for PAT and further studies

This section is split into recommendations for further studies to be done by PAT and by researchers in the field of social sciences.

#### Recommendations for PAT

The researcher has created a highly detailed M&E framework for PAT, but the main recommendation is to experiment with its implementation. Mentors have repeatedly said that every school needs a customised mentoring solution (PAT mentors, personal communication, March 10, 2020). Therefore, this M&E framework should be viewed as a set of tools that PAT can use. Not all parts of it must be implemented. PAT will have to see what parts of the M&E framework are implementable over time and adapt the framework accordingly. In addition, the implementation of the M&E framework should be accompanied by constant efforts to improve the M&E framework and PAT's programme on the basis of evaluative lessons learned.

#### Recommendations for further studies

Based on the findings presented in the theory evaluation, the researcher identified a need for more rigorous studies of leadership competencies that can improve school culture and climate. Although studies do exist, their sample sizes are too small and they rely solely on interviews of the principals or teachers (Blase & Blase, 2001; Calik et al., 2012; Cavanagh & Dellar, 1998; Cunningham & Gresso, 1993; Kalkan et al., 2020; Lucas & Valentine, 2002; Şahin, 2011; Sashkin & Sashkin, 1990; Stolp, 1994). Especially studies relying on interviews of the principals are problematic, as it creates a self-report bias. There is a need for robust evaluations of principal mentoring programmes, as all existing ones have small sample sizes, do not use comparison groups, and do not fully describe how they collected their data.

In addition, future research should attempt to identify those indicators of a positive school climate and culture which are most prevalent in the measurement tools primarily used in recent studies and rank their importance in creating a healthy school climate and culture. It would be interesting to understand if these indicators are equally applicable across multiple kinds of schools (e.g. private and public) and specific to different regions.

## Conclusion

The desk research done as part of this dissertation has shown that mentoring is a recognised method for developing principal leadership and has the potential to impact a school's culture and climate. However, there is little convincing evidence that principal mentoring contributes to long-term changes in leadership competencies and school culture and climate. In all of the identified studies, principals' self-report measures or other research designs with weak scientific rigour were used to measure the impact of their mentoring interventions. A literature review revealed a lack of sophisticated M&E frameworks or models that could demonstrate the impact of principal mentoring interventions in a more robust manner. This dissertation was an attempt at providing PAT with an M&E framework to demonstrate an impact of their programme's mentoring component on school culture and climate in schools supported by them.

PAT's work environment may make the creation of this detailed M&E framework overly ambitious. As every school has different needs, a different starting point and will require different targets, it is extremely challenging to create a framework that fits all of PAT's monitoring and evaluation needs. Members of the PAT will have to adapt, refine, and improve the framework following its first implementation in order to fit the organisation's exact requirements.

The M&E framework provides PAT with concrete tools for capturing peoples' stories (P. Probyn, personal communication, March 10, 2020), which was identified by the head mentor as PAT's main M&E need. Surveys, interviews, and focus groups provide PAT with a set of tools that can be implemented without the help of an M&E specialist. Through these tools, PAT can capture principals', teachers', and to a limited extent, students' stories about the schools' culture, the schools' climate, and how PAT's mentoring efforts have impacted them. Moreover, it allows PAT to capture specific stories about which parts of their mentoring activities brought about the most significant change and which parts might require further improvement.

By working closely with PAT throughout the development of the M&E framework, the researcher feels confident that PAT has been provided with an adaptable tool that suits their monitoring and evaluation needs.

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## Appendices

### Appendix A - Interview schedule

1. What are programme inputs for the mentoring component?
2. What are programme inputs for the MDP?
3. What are programme inputs for the workshops?
4. What are programme inputs for the teacher support programme?
5. What are programme inputs for the foundation phase support?
6. What activities take place as part of the mentoring component?
7. What activities take place as part of the MDP?
8. What activities take place as part of part of the workshops?
9. What activities take place as part of the teacher support programme?
10. What do you regard as intermediate outputs of the mentoring?
11. What do you regard as intermediate outputs of your mentoring efforts?
12. What do you regard as intermediate outputs of the MDP?
13. What do you regard as intermediate outputs of the workshops?
14. What do you regard as intermediate outputs of the teacher support?
15. What do you regard as intermediate outputs of the foundation phase support?
16. What outcomes do you expect in the short, medium and long term from the mentoring?
17. What outcomes do you expect in the short, medium and long term from the MDP?
18. What outcomes do you expect in the short, medium and long term from the workshops?
19. What outcomes do you expect in the short, medium and long term from the teacher support?
20. What outcomes do you expect in the short, medium and long term from the foundation phase support?
21. What do you believe are the underlying assumptions of your programme?
22. Do you believe your programme is being implemented as planned?
23. Is there a mentoring plan?

## Appendix B - Defining school culture

Starting in the late 1970s, education researchers made increased efforts in finding connections between school culture and the educational outcomes of students (Jerald, 2006). However, as pointed out by Stolp (1994) and Simon & Johnson (2015) the field of education still lacks a clear and consistent definition of school culture, even though there has been intensive research in the past years. Deal & Peterson (1999) went so far as to say that there is no single universally agreed upon definition of school culture among researchers. After an exhaustive literature review, it is clear that there are certain elements that resurface in a majority of the definitions. More recent publications do not seem to offer any novel solutions to the debate about a clear school culture definition, as for instance Karadağ & Öztekin-Bayir (2018) and Kalkan et al. (2020) still refer back to the definitions of Deal & Peterson (1999) and Schein (2004).

### Common beliefs and attitudes

The beliefs a group of people holds are part of these elements. Stolp & Smith (1995) describe the beliefs held by a number of people in a school as one of the key components in shaping a school's culture. As do Lewis, Asberry, DeJarnett & King (2016), who point out that school culture is the belief and attitude influencing every aspect of how a school operates. Spicer (2016) indicates that the beliefs and values in a school set the standards for behaviour.

### Shared values and norms

Not only Spicer (2016) believes that values intrinsic to a school shape the standards of behaviour. Deal & Kennedy (1982), two of the researchers that have shaped school culture research in the 1980s, describe school culture as a concept that consists of shared beliefs and values, which knit a group or community together. Drago-Severson (2012) describes it similarly and points towards culture being made up of norms, values, and beliefs, which exist in a group and can be difficult to change.

Norms are another aspect, which can be found in a range of definitions. Stolp & Smith (1995) indicate that norms can play an important part in shaping the way the principal runs staff meetings. Deal & Peterson (1999) include them as well in their definition and describe school culture as being comprised of "unwritten rules and traditions, norms and expectations that permeate everything" (p. 11).

### Other elements of school culture

There are several other elements of school culture that emerge from the literature. While the beliefs, values and norms of a group are predominant descriptors of school culture, they are not the only ones to be found in social science literature. Researchers also commonly highlight traditions (Deal & Peterson, 1999; Schein, 2004; Stolp & Smith, 1995), rituals (Jones, Moore & Snyder, 1988; Stolp & Smith, 1995; Trice & Beyer, 1993; Van Maanen, 1979) and attitude (Lewis et al., 2016; Stolp & Smith, 1995) as descriptors of school culture.

### Ambiguity of definitions

While it is a good first step to find similarities among the more acknowledged definitions of school culture, it becomes evident that many of the elements used to explain school culture are characteristically ambiguous, which may be due to its intangible and elusive nature, rendering it troublesome to define it (Schoen & Teddlie, 2008). The ambiguity shows in the predominant use of broad and nonspecific terms to define school culture.

It is possible to compare different “bodies of solutions” (Owens, 2001). However, due to the ambiguous nature of the definitions, it becomes clear why still to this day it remains a challenge for researchers in the field of education to come up with a universal definition of school culture.

While a solution to this problem requires further research, the researcher decided to choose a definition of school culture for this dissertation, based on its inclusion of elements prevalent in the literature.

### The school culture definition chosen for this study

The chosen definition is presented by Geertz (1973) who describes culture as consisting of “norms, values, beliefs, traditions, rituals, ceremonies, and myths translated by a particular group of people” (p. 7). Therefore, the values demonstrated in lesson plans and in the classroom, the principal’s approach to running staff meetings and even the decorations placed in the hallway are all integral parts of a school’s culture.

Besides showing elements like values and beliefs, which are the most prevalent in the literature, the definition has been chosen, as in contrast to others (Drago-Severson, 2012; Lewis et al., 2016; Spicer, 2016) Geertz (1973) takes a broader approach in his definition. This is essential for the design of the M&E framework, as it would be detrimental to have chosen

a limiting definition that does not include elements that are possibly part of school culture. Especially, as there are a number of elements like traditions (Deal & Peterson, 1999; Schein, 2004; Stolp & Smith, 1995), rituals (Jones et al., 1988; Stolp & Smith, 1995; Trice & Beyer, 1993; Van Maanen, 1979), attitude (Lewis et al., 2016; Stolp & Smith, 1995), which are not supported by all researchers in the field of education science.

## Appendix C - Defining school climate and how it differs from school culture

Research into the definition of school climate and the differing factors between school climate and school culture mainly unearthed two schools of thought: researchers that believe that school culture and school climate are separate concepts (Stolp & Smith, 1995; Spicer, 2016; Gülşen & Gülenay, 2014) and those that believe that these concepts are not substantively different (Schoen & Teddlie, 2008). No relevant, recent studies could be found arguing towards these two concepts being substantively different.

### The different traditions of school climate studies

The literature review revealed that even among those researchers that regard school culture and school climate as different concepts there are contrasting views about what elements should be regarded as part of school climate. Schoen & Teddlie (2008) attribute this to school climate having been studied by four different research traditions: (1) school effects research, which focused on factors such as orderliness, (2) classroom effects research, which focuses on managerial techniques, (3) psychological research on classroom learning environments, which mainly looks at students' perceptions of the classroom environment, and (4) effectiveness research, which engages with highly cognitive outcomes. All 4 aspects can be seen in some of the more acknowledged definitions, like Lindahl's (2001) definition, who refers to school climate as being the stakeholder's (parents, teachers and students) perceptions in regard to the leadership and working environment, which is a mix of classroom effects and classroom learning environments research. Hoy (1990) defines school climate as a concept, which captures the atmosphere of a school, including the experiences made by administrators and teachers, and affects their behaviour and attitudes inside the school. This definition can be sorted into the area of effectiveness research.

### Similarities between school culture and climate definitions

No matter what the reason for the manifold differences between definitions is, when examining them it becomes evident that many of them share similarities with definitions of school culture. Hoy (1990) describes attitudes to be a defining element of school climate. As part of this literature review, the attitudes of groups inside the school have been identified as a prevalent element in school culture definitions (Lewis et al., 2016; Stolp & Smith, 1995). Cohen et al. (2009) state that school climate "refers to the quality and character of school life [...] based on patterns of people's experience of school life and reflects norms, goals, values,

interpersonal relationships, teaching and learning practices, and organizational structures” (p. 10). Norms and values are in fact two of the most prevalent variables in school culture literature (Deal & Kennedy, 1982; Drago-Severson, 2012; Spicer, 2016; Stolp & Smith, 2015). These similarities in definitions between school culture and climate are presented in more detailed form in Table 22. This is supported by Schoen & Teddlie’s (2008) findings, who as part of a comparative study between school culture and climate concluded that there is are substantial similarities in the definitions of school climate and culture, that they are commonly used interchangeably in many published educational articles, and that there is a large overlap in the variables examined in both school climate and culture studies.

**Table 22**

Similarities in school culture and climate definitions	
School culture definitions	School climate definitions
<p>“School culture is the belief and <b>attitude</b> influencing every aspect of how a school functions” (Lewis et al., 2016, p. 57).</p>	<p>“School climate is a general concept that captures the atmosphere of a school: it is experienced by teachers and administrators, describes their collective perceptions of routine behaviour, and affects their <b>attitudes</b> and behaviour in the school” (Hoy, 1990, p. 7).</p>
<p>Geertz (1973) describes that culture includes elements like “<b>norms, values,</b> beliefs, traditions, rituals, ceremonies, and myths translated by a particular group of people” (p. 7).</p>	<p>Cohen et al. (2009), define school climate as “the quality and character of school life”, which “is based on patterns of people’s experiences of school life and reflects <b>norms, goals, values,</b> interpersonal relationships, teaching and learning practices, and organizational structures” (p. 10).</p>
	<p>Besides a number of other variables Schoen &amp; Teddlie (2008) describe school climate to be referring to <b>academic norms.</b></p>

### A clear distinction between definitions of school culture and climate

Despite there being visible similarities in a limited number of school culture and climate definitions, the majority of researchers make clear distinctions between school culture and climate. Stolp & Smith (1995) explain how school culture is related to the “assumptions and values underlying behaviour” (p. 18), while school climate is referring to people’s perceptions of the behaviour itself. This means that the school climate is immediately visible through the behaviour of people in the school, while the school culture, for example in the form of values, could be a lot harder to detect. A similar point is made by Spicer (2016), who points out that school climate is more amenable to change. It is to note that many researchers that argue for the existence of a significant difference between school culture and climate point towards school climate being the perception, feeling or experience of such dimensions that are used to describe school culture (Cohen et al., 2009; Dunn & Harris 1998; Hoy, 1990; Saldern, 1986; Stolp & Smith, 1995). Stolp & Smith (1995) describe this fittingly when they write about how “climate emerges from people’s shared perception of culture” (p. 18). Same as Saldern (1986), who points out that even though there are varying viewpoints regarding what climate is, there is a general agreement in the literature that it is centred on a consensus in perception, and it concerns aspects of the physical, psychological and social environment of the school that impact behaviour.

While there is no absolute consensus on school culture and climate being substantively different or not, the general agreement in the literature on it being like-mindedness in perception among the people in a school makes it differentiable from school culture. On top comes that the researcher was only able to identify one article that spoke of school culture and climate not being substantively different (Schoen & Teddlie, 2008).

### The chosen school climate definition

For the purposes of this research Cohen et al.’s (2009) definition of school climate was used. They describe school climate as “the quality and character of school life”, which “is based on patterns of people’s experiences of school life and reflects norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures” (p. 10). This definition for school climate was chosen, as it clearly describes how school climate is based on the perception of such variables as norms, goals, values, interpersonal relationships, teaching and learning practices, and organizational structures, rather than what these

variables actually are in the schools. Another reason for picking this definition is that it takes a broad approach by including the perception of a large number of variables in comparison with other definitions (Hoy, 1990; Spicer, 2016). Just as with the definition of school culture this is beneficial for the design of the M&E framework, as there is no absolute consensus on what variables constitute school climate and it would be detrimental for the framework to miss out on measuring possibly essential variables. Additionally, it was chosen as it

## Appendix D - Identification of dimensions and indicators of a positive school culture and the common instruments used to measure them

Jerald et al. (2006) describe how a positive school culture can be identified by “the school’s atmosphere [being] orderly without being rigid [...] quiet without being oppressive, and generally conducive to the instructional business at hand” (p. 1).

This description of positive school culture is representative of most of the limited available research into the indicators of a positive school culture. This is, because just as Jerald et al.’s (2006) description most of the other studies describe positive school cultures in very general and vague terms without naming tangible dimensions or indicators (Drago-Severson, 2012; Gülşen & Gülenay, 2014; Hoy et al., 2002; Spicer, 2016), which can only be of very limited use in supporting the creation of an M&E framework as part of this dissertation.

An exhaustive literature search showed that there is only a limited number of scientific articles, which attempt to define specific instruments to measure school culture or such that try to identify indicators for a positive school culture. It also became clear that the only scientific articles discussing specific indicators for a positive school culture are such that describe them as part of an instrument, which exceptionally are presented in the form of surveys (Brankovic et al., 2012; Cavanagh & Dellar, 1998; Gruenert & Whitaker, 2015; Gumuseli & Eryilmaz, 2011; Higgins-D’Alessandro & Sath, 1998).

In the following, the similarities and differences in indicators and dimensions of the identified surveys, presented and shortly discussed in the results section (please see p. 59), are outlined in detail. Additionally, the surveys themselves are shortly described. Similar dimensions across instruments were grouped in tables in order to allow a comparison of their indicators. These indicators were then grouped into new sub-dimensions in order to understand the similarities and differences between them. A color-coding system paired with a history below the tables were used for grouping them into sub-dimensions.

### School culture instruments

The most predominant school culture instrument is the School Culture Survey (SCS) developed by Gruenert (2015) and used in its original or adapted structure all across the literature (Brankovic et al., 2012; Gumuseli & Eryilmaz, 2011). According to Gruenert & Whitaker (2015), the SCS helps to inventory the behaviours typical of a collaborative school culture, by making

use of 35 survey items divided into six main categories, being professional values, an emphasis on learning procedures, collegiality, collaboration, shared planning, and transformational leaders.

When comparing the SCS with other school culture surveys and instruments that could be identified, namely being the School Improvement Model of School Culture developed by Cavanagh & Dellar (1997), Brankovic et al.'s (2012) adapted version of Gruenert's (2015) SCS, and Higgins-D'Alessandro & Sadh's School Culture Scale (1998), it becomes noticeable that all of them share very similar dimensions. The similarities and differences in dimensions and indicators across these instruments are discussed in the following:

#### Leadership

While Gruenert & Whitaker (2015) included the dimension of collaborative leadership in the SCS, Cavanagh & Dellar (1997) point towards the existence of transformational leadership in any positive school culture. While the chosen leadership styles do not match, when reviewing the indicators of the two leadership styles identified by Gruenert & Whitaker (2015) and Cavanagh & Dellar (1997) it becomes clear that the indicators are similar in nature, as can be seen in Table 23.

**Table 23**

Collaborative leadership vs transformational leadership indicators		
Dimension	Collaborative leadership	Transformational leadership
Author	Gruenert & Whitaker, 2015	Cavanagh & Dellar, 1998
Indicators	Leaders engage teachers in decision-making	Share power with teachers
	Leaders seek input from teachers	Facilitate a school development process that engages the human potential and commitment of teachers
	Leaders trust teachers' professional judgment	
	Leaders value teacher's ideas	
	Leaders support and reward risk taking, and innovative ideas designed to improve student achievement	
	Leaders reinforce the sharing of ideas and effective practices among all staff	



Sharing power with teachers



Establishing positive school development through encouraging commitment

### Collegiality


Some dimension of collegiality can be found in most of the instruments ranging from general collegiality (Brankovic et al., 2012; Cavanagh & Dellar, 1998; Gruenert & Whitaker, 2015) to specifically teachers' collegiality (Brankovic et al., 2012). Out of the identified articles only Higgins-D'Alessandro & Sadh (1998) do not include collegiality. Their focus rests on student-teacher-, school- and student relationships instead (Higgins-D'Alessandro & Sadh, 1998), as it is shown next to the collegiality indicators in Table 24. The indicators of these dimensions can mainly be split into trust and respect, and collaborative planning and creating rules, as well as help and support.


**Table 24**


Collegiality and relationships						
Dimension	Collegiality	Teachers' collegiality		Collegial support	Student-Teacher/ School relationships	Student relationships
Author	Cavanagh and & Dellar, 1997	Brankovic et al., 2012		Gruenert & Whitaker, 2015	Higgins-D'Alessandro & Sadh, 1998	Higgins-D'Alessandro & Sadh, 1998
Dimension						
Indicators	The leader empowers teachers to exercise professional judgements through the development of supportive interpersonal relationships	<b>Teachers' collegiality</b>	Teachers spend time planning together	Teachers assist each other as they work to further the school's goals	Some rules are made by votes from both students and teachers	Students trust each other
			Teachers brainstorm ideas together	Teachers value each other's ideas	Teachers give students a say in decisions about school rules	Students help each other even if they are not friends
			Teachers trust each other	Teachers trust each other	Students and teachers trust each other	Students who belong to different groups are friendly
			Teachers are willing to help and support each other with problems		Teachers generally treat students with respect and fairness	Students generally treat each other with respect and fairness

**Table 24** (continued)

	<b>Colleagues' compliments</b>	Teachers respect each other	Teachers are really interested in students and want to help
			Students and teachers openly discuss problems

 Trust and respect

 Collaborative planning and creating of rules

 Help and support

## Collaboration

Three of the instruments point towards collaboration inside the school being essential for a positive school culture. As can be seen in Table 25, Cavanagh & Dellar (1997) present one broad indicator, which points towards high collaboration being represented by a high number of interactions between teachers. Brankovic et al. (2012) and Gruenert & Whitaker (2015) describe similar, more detailed indicators in the form of joint planning, interaction and the exchange of ideas, but extend on that by adding the joint evaluation of projects as a further indicator. Brankovic et al. (2012) extends on the indicators that Cavanagh & Dellar (1997) and Gruenert & Whitaker (2015) present, and include the teachers' general concern with the school, them voicing their opinions, how well informed they are, how far the mission is in line with the learning effect and the motivation of teachers to tutor colleagues. Brankovic et al. (2012) do not further explain how a mission aligned to the learning effect taking place in the school could look like.

**Table 25**

Collaboration				
Dimension	Collaboration		Encouraging joint work	Teacher collaboration
Author	Cavanagh & Dellar, 1998		Brankovic et al., 2012	Gruenert & Whitaker, 2015
Dimension				
Indicators	Interactions between teachers in which information is shared on school operational matters including the instructional programme	<b>Encouraging joint work</b>	Joint work on evaluating projects	Teachers across the school plan together
			Joint work on developing projects	Teachers observe and discuss teaching practices
			Teachers support exchanging ideas amongst each other	Teachers develop an awareness of the practices and programs of other teachers

**Table 25** (continued)

		Teachers encourage each other to bring innovation to the school	Teachers evaluate programs
		Teachers are well informed	
		Teachers are concerned with the issues in the school	
		The school mission is in line with the learning effect	
		Teachers voice their dissent	
	<b>Personal involvement of teachers</b>	Teachers are motivated to engage in tutoring other colleagues	



Joint planning, discussions and brainstorming



Joint evaluating

### Learning

Another theme emerging from the literature regarding school culture indicators is learning. As it is shown in Table 26, Cavanagh & Dellar (1997) emphasise the importance of a functioning interplay between all members of the learning community including the principal, teachers, parents and students. Brankovic et al. (2012) and Gruenert & Whitaker (2015) list indicators which highlight specific conditions between different groups of the learning community that need to be given, in order to guarantee a positive school culture. Interesting is that while Brankovic et al.'s instrument is inspired by Gruenert & Whiteaker's (2015) SCS all dimensions and indicators, besides those related to learning, are significantly different. However, for learning all indicators were copied almost exactly. Brankovic et al. (2012) outline that the differences can be attributed to the dissimilarity of school systems. The fact that Brankovic et al. (2012) did not adapt the indicators of the learning dimensions speaks towards them having some form of prevalence across different countries' school systems. While Gruenert & Whitaker (2015) only include the relationship between teachers and parents in this

partnership, Brankovic et al. (2012) add students to the equation. The reason for this is most probably that Brankovic et al. (2012) attempted to expand on Gruenerts SCS and included additional factors.

**Table 26**

Learning			
<b>Dimension</b>	An emphasis on Partnership in learning learning procedures		Learning partnership
<b>Author</b>	Cavanagh & Dellar, 1998	Brankovic et al., 2012	Gruenert & Whitaker, 2015
<b>Indicators</b>	Learning community with commitment to improved outcomes for students	Parents trust teachers	Parents trust teachers
	Learning community with commitment to growth	Frequent communication between parents and teachers	Parents and teachers communicate frequently about student performance
		Common learning expectations amongst parents and teachers	Parents and teachers share common expectations
		Students feel a sense of responsibility for their learning outcomes	Students generally accept responsibility for their schooling.

Parents' and teachers' trust
  Parents' and teachers' communication
  Parents' and teachers' expectations
  Students' responsibility
  Learning community

**Shared direction and opportunities for teacher and student development**  
 Two additional common dimensions of school culture found in the literature are those of shared direction and opportunities for teacher and student development. As shown in Table 27, Cavanagh & Dellar (1997) describe how having a shared plan for the future is crucial for a school’s culture to blossom but fail to name any tangible indicators to measure it. It is simply

referred to as a shared vision being in place at the school. Gruenert & Whitaker (2015) point towards the importance of a unity of purpose and describe a more tangible indicator by stating that teachers should be working towards a common mission for the school. Part of the dimensions of principal-teacher feedback identified by Brankovic et al. (2012) are two indicators identical with those of Gruenert & Whitaker (2015). They point towards the importance of teachers understanding and supporting the school’s mission in order to improve the school culture (Brankovic et al., 2012).

**Table 27**

Shared direction and opportunities for teacher and student development			
<b>Dimension</b>	Shared planning	Unity of purpose	Principal-teacher feedback
<b>Author</b>	Cavanagh & Dellar, 1998	Gruenert & Whitaker, 2015	Brankovic et al., 2012
<b>Indicators</b>	A shared vision is in place, which has been actualised by logical planning	Teachers understand the school’s mission	Teachers understand the school’s mission
		Teachers support the school’s mission	Teachers support the school’s mission
		Teachers act in accordance with the school’s mission	

 Vision centred     Mission centred

**Discrepancies between school culture definitions and dimensions**

It is striking that even though values and beliefs are the most common concepts found in school culture definitions (Deal & Kennedy 1982; Drago-Severson, 2012; Lewis et al. 2016; Stolp & Smith, 1995), few researchers have included this construct in their instruments. A review of the literature shows that only Cavanagh & Dellar (1997) created a dimension for this

item in their survey labelled professional values. This points toward a disconnect in the literature regarding the definition and measurement of school culture.

### Outliers

There are several other dimensions of school culture which surface in the literature but are only being identified by a single researcher or do not fit into any of the grouped dimensions above. These outliers are dimensions like colleagues' compliments, evaluating (Brankovic et al., 2012), and normative expectations (Higgins-D'Alessandro & Sath, 1998), which mainly speak towards vandalism, violence, and abuse in schools. The dimensions of personal involvement of teachers and principal-teacher feedback only partly consist of outliers.

This shows that even though there is overwhelming consensus in the literature regarding the dimensions of a positive school culture, there is still a divide about certain dimensions. However, this does not reflect a substantial divide in indicators of a positive school culture. When reviewing the indicators listed under these outlier dimensions it becomes evident that they are mostly listed as a single indicator in other researchers' instruments.

For example, Higgins-D'Alessandro & Sath's (1998) dimension of normative expectations cannot be found in any other school culture instrument. However, one could argue that indicators such as not fighting physically and not taking drugs at school, which are presented in Table 28, relate to students taking responsibility for their schooling. Students taking responsibility for their schooling is listed as an indicator under the dimension of learning partnerships by Gruenert & Whitaker (2015). This means that Higgins-D'Alessandro & Sath (1998) simply saw the need for a full dimension of what Gruenert & Whitaker (2015) described in only one indicator.

The same can be seen in Brankovic et al.'s (2012) dimension of personal involvement of teachers, which describes indicators related to teachers' willingness to be involved in school policy and tutoring each other. Similar indicators can be found in several other researchers' dimensions of collegiality (Cavanagh & Dellar, 1998; Gruenert & Whitaker, 2015) and school relationships (Higgins-D'Alessandro & Sath, 1998).

This shows that even though there are small differences in focus and detail in chosen dimensions for instruments in the field of school culture research, there is a strong consensus regarding indicators of a positive school culture.

**Table 28**

Outliers in the identification of dimensions of a positive school culture						
<b>Dimension</b>	Personal involvement of teachers	Principal-teacher feedback	Colleagues' compliments	Evaluation of employees' achievement	Normative expectations	
<b>Author</b>	Brankovic et al., 2012	Brankovic et al., 2012	Brankovic et al., 2012	Brankovic et al., 2012	Higgins-D'Alessandro & Sadh, 1998	
<b>Indicators</b>	Teachers are willing to be actively involved in school policy	Teachers have an opportunity to approach the principal in dialogue	The principal praises the teachers for a job well done	Degree of monitoring taking place in the school	There is very little physical fighting	
	Teachers work sufficiently with students	Teachers have a chance to participate in decision-making		Teachers' professional development is evaluated by the principal	There is very little cutting classes or skipping school	
				Rewards are given to the teachers by the principal	There is very little stealing	
					There is very little damage done to school property	
					There is very little use of drugs or alcohol	
					There is very little verbal abuse or putting people down	
					There is very little cheating	

## Appendix E - Identification of dimensions and indicators of a positive school climate and the common instruments used to measure them

An exhaustive literature review into the dimensions and indicators of a positive school climate showed that there is a great consensus regarding dimensions, but even more so regarding indicators. While researchers emphasize measuring different elements of school climate with their instruments, exceptionally in the form of surveys, similar indicators can be found in all of the identified instruments.

### School climate instruments

One of the most influential instruments for the study of school climate (Hoy et al., 2002) is the Organisational Climate Description Questionnaire (OCDQ), which was developed by Halpin & Croft (1963) and focuses on measuring the openness of a school climate through exploring the openness and authenticity between teachers and principals, and teachers themselves. While the OCDQ has been used in hundreds of studies until this day (Hoy et al., 2012) several researchers (Hoy, Tarter & Kottkamp, 1991; Hoy & Tarter, 1997; Hoy et al., 2002; Kottkamp et al., 1987) have expanded on Halpin & Croft's ideas and created new instruments to measure school climate.

The latest of these instruments is the Organisational Climate Index (OCI) which was created on the basis of the OCDQ and the Organizational Health Inventory (OHI) (Hoy & Tarter, 1997), which is an earlier adaptation of the OCDQ. The OHI was developed out of need of expanding on the idea of only measuring principal and teacher relationships, and therefore includes dimensions focused on the relationships between the school and students, and the school and the community (Hoy et al., 2002). It is mainly used to measure the health of a school climate.

The OCI was an attempt at combining both the OCDQ and OHI to measure both openness and health of a school climate at the same time and reducing the dimensions of both instruments to:

- **Environmental Press**, which describes the relationship between the school and community.
- **Collegial Leadership**, which points towards the openness of the leader behaviour of the principal.

- **Teacher Professionalism**, which outlines how open teachers are in interactions.
- **Academic Press**, which describes all relationships between the school and students.

There are other noteworthy adaptations of the OCDQ like the Organizational Health Inventory for elementary schools (OHI-E) (Hoy & Tarter, 1997), for middle schools (OHI-M) (Hoy & Tarter, 1997), and for secondary schools (OHI-S) (Hoy & Tarter, 1997), as well as the Organisational Climate Description for elementary schools (OCDQ-RE) (Hoy et al., 1991) and for secondary schools (OCDQ-RS) (Kottkamp et al., 1987). However, as several Google Scholar searches showed, none of them is used as frequently as the OCI and their indicators share many similarities with those of the OCI, which would not make a comparison worthwhile. Therefore, out of all of these adaptations only the OCI is included in the comparison of dimensions and indicators in the following.

Zullig et al. (2010) created an instrument by combining the dimensions and indicators of 5 “historically common school climate domains” (p. 2), namely being the California School Climate and Safety Survey (CSCSS), the U.S. Department of Education’s National Longitudinal Study Student Questionnaire (NELS), the National Association of Secondary School Principal’s Comprehensive Assessment of School Environments (CASE), the San Diego County Effective Schools Student Survey (ESSS), and the School Development Program (SDP). It has similarities with the OCI in the form of dimensions focused on school relationships and the inclusion of students. However, Zullig et al. (2010) expand on these ideas by including indicators under the dimensions of order and discipline and such focused on a healthy physical and social environment. Same as Zullig et al.’s instrument (2010), the MDS3 Student Survey (Bradshaw et al., 2014), which with its dimensions of perceived safety, engagement and environment puts a large emphasis on a safe physical and social school environment. Its numerous sub-dimensions are discussed in the coming sections.

The Delaware School Climate Survey (Bear et al., 2011) and the Developmental Study Center’s School Climate Survey (DSCS—S) (Ding et al., 2011) share similar dimensions focused on student-teacher and student-student relationships, as well as school safety. The Delaware School Climate Survey (Bear et al., 2011) is the only instrument besides the MDS3 Student Survey, which includes how students like the school. The Developmental Study Center’s

School Climate Survey (DSCS—S) (Ding et al., 2011) instead includes school norms and rules as key dimensions of a positive school climate.

Ciccione & Freiberg (2013) include social practices, activities and norms too in what they call the US National School Standards. In contrast to all other identified instruments, these standards outline a positive school climate by mainly referring to dimensions and indicators associated with school policies, plans and practices. Besides social practices, activities and norms, Ciccione et al. (2013) describe a shared vision and plan, development and sustainability policies, school community practices, as well as a safe and welcoming school environment as the main dimensions of a positive school climate.

After having reviewed some of the major instruments there is a clear trend to be seen in the literature towards shorter, more focused instruments. While the OCDQ (Halpin & Croft, 1963) relied on school climate indicators formulated in 64 Likert-style items, a more modern instrument like the OCI only has 30 (Hoy et al., 2012). There is a clear direction towards the inclusion of students (Bear et al., 2011; Bradshaw et al., 2014; Ciccione & Freiberg, 2013; Ding et al., 2011; Hoy et al., 1991; Hoy et al., 2002; Zullig et al., 2010) and community-related dimensions and indicators (Bradshaw et al., 2014; Ciccione & Freiberg 2013; Ding et al., 2011; Hoy et al., 1991; Hoy et al., 2002). It can be seen that researchers are starting to give less importance to the principal's direct influence on the school climate. While in the OCDQ 4 out of the 8 dimensions were related to principal behaviour (Halpin & Croft, 1963), out of all of the reviewed, more recent, instruments only 2 instruments (Ciccione & Freiberg, 2013; Hoy et al., 2002) incorporated 1 dimension related to the direct influence principals have on school climate.

#### **Student-teacher relationship**

A positive student-teacher relationship (Bear et al., 2011; Zullig et al., 2010) was identified as one of the most prevalent dimensions of a positive school climate in the literature. As can be seen in Table 29, researchers include indicators related to student-teacher relationships in dimensions like social practices, activities and norms (Ciccione et al., 2013), professional teacher behaviour (Hoy et al., 2002), connection to teachers, as well as autonomy and influence (Ding et al., 2011).

The comparison in Table 29 shows that there is a fair amount of consensus among researchers regarding the indicators of a healthy student-teacher relationship. Caring teachers being interested in their students doing well and going the extra mile for them is the most widespread indicator in the literature (Bear et al., 2011; Bradshaw et al., 2014; Ciccone et al., 2013; Hoy et al., 2002; Zullig et al., 2010). Researchers agree that it is essential for teachers to be available for students, to talk to them and have an open ear for student recommendations regarding class content and rules (Bear et al., 2011; Ding et al., 2011; Zullig et al., 2010).

Researchers argue that to create a positive school climate teachers need to understand students' problems and be available to help them solve these problems (Bear et al., 2011; Zullig et al., 2010). However, when comparing the indicators that Bear et al. (2011) and Zullig et al. (2010) present for the student-teacher relationship it becomes evident that Zullig et al. (2010) copied this whole dimension from the Delaware School Climate Survey (Bear et al., 2011), meaning that there is little consensus about problem solving being an indicator of a positive school climate. Teachers supporting students in the form of making them feel good about themselves, appreciating their good work and actually listening to them when they have something to say, does find some consensus as an indicator of a positive school climate (Bear et al., 2011; Bradshaw et al., 2014; Zullig et al., 2010). Several researchers also point towards interpersonal indicators between students and teachers like trust and getting along with each other (Bear et al., 2011; Bradshaw et al., 2014).

**Table 29**

Student-teacher relationship										
Dimension	Positive Student-Teacher Relationships	Social practices, activities and norms	Professional Teacher Behaviour	Teacher – Student relations	Connection to teachers	Autonomy and influence				
Author	Zullig et al., 2010	Ciccone et al., 2013	Hoy et al., 2002	Bear et al., 2011	Bradshaw et al., 2014	Ding et al., 2011				
Indicators	Teachers understand student problems	Curriculum and instructional practices promote curiosity, inquiry into and celebration of diverse beliefs, customs, languages, and traditions of all members of the school community	Teachers “go the extra mile” with their students	Teachers understand students’ problems	Teachers listen to students when they have something to say	Teachers ask students what the class should do				
	Teachers and staff seem to take a real interest in the students’ future	Students have ongoing opportunities to provide service to others in meaningful and engaging ways in their school and in the larger community	Teachers accomplish their jobs with enthusiasm	Teachers and staff seem to take a real interest in the students’ future	Teachers care about students	The teacher lets students choose what they will work on				
	Teachers are available when students need to talk with them	Every student is connected to a caring and responsible adult in the school		Teachers are available when students need to talk with them	Teachers respect the students	In the classes teachers and students decide together what the rules will be				
	It is easy for students to talk with teachers	Social norms in the school support responsible and positive peer relationships		It is easy to talk with teachers	Teachers tell students when they have done a good job					

**Table 29** (continued)

	Students get along well with teachers	Discipline procedures are aligned with the goals of supporting students in their learning and being respectful of all individuals; the goals are enhanced with authentic student-driven opportunities for reconciliation when appropriate		Students get along well with teachers	Teachers notice when students are not there
	There is a teacher or some other adult who notices when a student is not there			At the school, there is a teacher or some other adult who notices when students are not there	Students trust the teachers
	Teachers at the school help children with their problems			Teachers at the school help children with their problems	
	Teachers care about students			Teachers care about students	
	Teachers make students feel good about themselves			Teachers make students feel good about themselves	

Student problems
  Interest
  Communication
  Support
  Interpersonal indicators

### Student-student relationship

As can be seen in Table 30, Bear et al. (2011) point towards the importance of good student-student relations and Bradshaw et al. (2014) present general student connectedness as a key element of a positive school climate. Ding et al. (2011) discuss the students' behaviour and showcase indicators that represent classroom and school connectedness.

All 3 researchers mention indicators of students caring for each other, trusting each other and getting along with each other (Bear et al., 2011; Bradshaw et al., 2014; Ding et al., 2011). Also, several indicators of respect between the students in the form of treating each other with respect (Bear et al., 2011; Bradshaw et al., 2014; Ding et al., 2011), being friendly towards each other (Bear et al., 2011) or playing fair games (Ding et al., 2011) can be found among all of the three instruments. Out of the identified studies, only Bradshaw et al. (2014) and Ding et al. (2011) identified indicators showing support between students as essential for a positive school climate. While there is no support for this by other researchers, Ding et al. (2011) state that the honesty of students is equally important for the health of the school climate.

**Table 30**

Student-student relationships				
Dimension	Student-student relations	Student connectedness	Student behaviour, classroom and school supportiveness	
Author	Bear et al., 2011	Bradshaw et al., 2014	Ding et al., 2011	
Dimension				
Indicators	Students really care about each other	Students feel like they belong	<b>Student behaviour</b>	Students play fair during games
	Students get along with one another	Students help one another		Students cheer up other students who are feeling sad
	Students treat each other with respect	Students respect one another		Students share with each other
	Students are friendly towards most other students	Students like one another		Students follow the teacher's rules
		Students trust one another		Students try hard to do their best
				Students do what they say they would
				Students help each other clean up
				Students help other students that are being picked on
				Students tell the truth about doing something wrong
			<b>Classroom and school supportiveness</b>	Students in my class help each other learn
				Students at this school really care about each other
				Students in this school treat each other with respect
				Students at this school are willing to go out of their way to help someone
			Students in my class work together to solve problems	

Support
  Respect
  Friendship
  Honesty

### Rules, norms and order

Dimensions directed at rules, norms and order surface in most of the identified instruments, as it is presented in Table 31. While Zullig et al. (2010) list indicators focused on order and discipline in schools, Bradshaw et al. (2014) point towards factors of disorder that need to be contained to guarantee a healthier school climate. Bradshaw et al. (2014) also point towards rules and consequences, while Ding et al. (2011) additionally include school norms. Ciccone et al. (2011) have a different focus and describe social practices and norms that point towards a positive school climate.

The most prevalent indicators in this dimension are related to the enforcement of rules and order and the execution of disciplinary actions (Bradshaw et al., 2014; Ding et al., 2011; Zullig et al., 2010). To improve the school climate, researchers agree that teachers need to be able to keep up the discipline in the classroom and on the school grounds (Bradshaw et al., 2014; Zullig et al., 2010), prevent bullying (Ding et al., 2011) and implement fair disciplinary measures when necessary (Bradshaw et al., 2014; Ding et al., 2011; Zullig et al., 2010).

An almost equal amount of consensus exists regarding classroom and school rules having to be clear and fair to all employees and students (Bradshaw et al., 2014; Ding et al., 2011; Zullig et al., 2010). Bradshaw et al. (2014) describe how disruptions and disorder in the form of disobeying rules, disturbances in the classroom and vandalism can negatively affect the school climate. Only Ciccone et al. (2013) describe how social practices and norms, like the opportunity for students to provide meaningful services to others, need to be prioritised to improve the school climate.

**Table 31**

Rules, norms and order					
Dimension	Order and discipline	Social practices and norms	Rules and consequences, disorder	School norms and rules	
Author	Zullig et al., 2010	Ciccone et al., 2013	Bradshaw et al., 2014	Ding et al., 2011	
Dimension					
Indicators	Classroom rules are applied equally	Curriculum and instructional practices promote curiosity, inquiry into and celebration of diverse beliefs, customs, languages, and traditions of all members of the school community.	<b>Rules and consequences</b>	Students listen to the teachers	The school has rules against teasing, name-calling, or saying bad things about other people
	Problems in this school are solved by students and staff	Students have ongoing opportunities to provide service to others in meaningful and engaging ways in their school and in the larger community.		Teachers can handle students who disrupt class	There are rules against shoving, hitting, or tripping people at my school
	Students get in trouble if they do not follow school rules			There are clear rules about student behaviour	Teachers and other adults make sure that everyone follows the rules against teasing or bullying people at the school
	The rules of the school are fair			Students are rewarded for positive behaviour	Teachers at the school will stop someone from being teased or bullied if they see it happening
	School rules are enforced consistently and fairly			Everyone knows what the school rules are	The teachers here always try to be fair
	My teachers make it clear to students when they misbehave in class		<b>Disorder</b>	Students disobey the rules	

**Table 31** (continued)

	Discipline is fair	Disruptions by other students can get in the way of my learning
		Misbehaving students get away with it
		There are often broken windows, doors, or desks in school
		Vandalism of school property is a problem at school

- Fair and clear rules
- Enforcement and disciplinary actions
- Disruptions and disorder
- Social practices and norms

### Academic dimensions

There are a number of academic dimensions related to a positive school climate identified in the literature. Researchers suggests the importance of academic support, satisfaction (Zullig et al., 2010), pressure (Hoy et al., 2002), and engagement (Bradshaw et al., 2014) as shown in Table 32.

The literature points towards students in a positive school climate being academically motivated (Bradshaw et al., 2014, Hoy et al., 2002, Zullig et al., 2010), believing that they can do well in school (Bradshaw et al., 2014, Zullig et al., 2010) and putting in extra work to improve their grades (Hoy et al., 2002). While students need to be able to believe that they can succeed in school, Bradshaw et al. (2014), as well as Zullig et al. (2010) have identified that it is equally important that principals believe in their students' success. Zullig et al. (2010) and Hoy et al. (2002) describe that schools with positive school climates have clear, attainable goals for their students, which are communicated by the teachers.

Other indicators of a positive school climate, identified by some of the researchers, find less popularity with others. Only in the OHI is it described how pressure from parents can raise academic standards and how it is healthy for the school climate for students to respect other students' success (Hoy et al., 2002). Zullig et al. (2010) are the only of the identified researchers that points towards students being satisfied with the workload, including homework and tests, as an indicator for a positive school climate.

**Table 32**

Academic dimensions				
Dimension	Academic support, Academic satisfaction		Achievement press	Academic engagement
Author	Zullig et al., 2010		Hoy et al., 2002	Bradshaw et al., 2014
Dimension				
Indicators	Academic support	Students usually understand their homework assignments	Parents exert pressure to maintain high standards	Teachers believe that their students can do well in school
		Teachers make it clear what work needs to be done to get the grade students want	Students respect others who get good grades	Students believe that they can do well in school
		Students believe that teachers expect all students to learn	Students try hard to improve on previous work	Teachers want students to do their best
		Students feel that they can do well in this school	Students seek extra work so they can get good grades	Students believe that it is important to finish school
		Teachers believe that students can do well in their schoolwork	Parents press for school improvement	
		Students try hard to succeed in their classes	The school sets high standards for academic performance	
	Academic satisfaction	Students are happy about the number of tests they have	Students in this school can achieve the goals that have been set for them	
		Students are happy about the amount of homework they have	Academic achievement is recognized and acknowledged by the school	

Motivation
  Parents' influence
  Academic goals
  Recognition
  Teachers' believe
  Students' academic satisfaction

### Physical and social environment

As displayed in Table 33, dimensions regarding the physical and social environment can be found in five of the identified instruments. Some of them do overlap with those dimensions presented in Table 31, which focus on rules, norms and order, as the social environment shapes the norms and order in schools (Bradshaw et al., 2014). While Bear et al. (2011) and Ding et al. (2011) describe the dimensions of school safety, Ciccone et al. (2013), Zullig et al. (2010) and Bradshaw et al. (2014) point towards the importance of the whole school environment, including its physical and social elements.

Safety, as an indicator of a healthy climate, is measured through surveying the students' and teachers' perceptions of safety inside the school and on the school grounds (Bear et al., 2011; Bradshaw et al., 2014; Ding et al., 2011). The physical school environment in schools with a positive school climate is described as clean, tidy, well maintained, bright and pleasant (Bradshaw et al., 2014; Zullig et al., 2010). Ciccone et al. (2013) and Zullig et al. (2010) both identify the social environment to be an indicator of school climate. Zullig et al. (2010) describe that students, who are happy with the school and other students that go to the school, speak for a positive social environment, which in turn affects the school climate positively.

Ciccone et al. (2013) summarise most of the previous indicators in one indicator and outline the importance of the promotion of "comprehensive and evidence-based instructional and school-wide improvement efforts designed to support students, school personnel and community members feeling welcomed, supported and safe in school: socially, emotionally, intellectually and physically" (p. 7). Ciccone et al. (2013) describe that these efforts should be supported by constant surveying of students, school staff and the community, as well as regular evaluations to keep track of the improvement efforts. Similarly, to what Ding et al. (2011) mention in their dimension of school norms and rules, Bradshaw et al. (2014) outline how the absence of violence, bullying and aggression and drug use indicates a positive school climate.

**Table 33**

Physical and social environment							
Dimension	School physical environment, school social environment		School environment	School safety	Perceived safety, bullying and aggression, general drug use, physical comfort		Safety at school
Author	Zullig et al., 2010		Cicccone et al., 2013	Bear et al., 2011	Bradshaw, 2014	Ding et al., 2011	
	Dimension			Dimension			
Indicators	<b>School social environment</b>	Students are happy with the kinds of students that go to the school	School leaders promote comprehensive and evidence-based instructional and school-wide improvement efforts designed to support students, school personnel and community members feeling welcomed, supported and safe in school: socially, emotionally, intellectually and physically	Teachers believe that students feel safe in the school	<b>Perceived safety</b>	Students feel safe at the school	Students feel safe in all areas of the school building
		Students are generally happy about the other students that go to their school	Students, their families, school staff and community stakeholders are regularly surveyed and are asked to indicate what the school should do to further enhance a welcoming, supportive and safe environment	The school is safe		Students feel safe going to the school	Students feel safe on the school grounds
	<b>School physical environment</b>	The school grounds are kept clean	School leaders monitor and evaluate the prevention and intervention strategies designed to support people feeling welcomed, supported and safe and use that data to improve relevant policies, practices, facilities, staff competencies and accountability	Students feel safe in the school		There are programs for violence and conflict	
		The school is usually clean and tidy				Students do not carry knives or guns	
	The school is neat and clean				<b>Bullying and aggression</b>	No physical fighting between students	

**Table 33 (continued)**

	School buildings are generally pleasant and well maintained		No harassment or bullying of students
			Students have not seen someone else being bullied
			Students at this school try to stop bullying
		<b>General drug use</b>	Students do not consume hard drugs
			Students do not consume tobacco
			Students do not consume alcohol
		<b>Physical comfort</b>	The bathrooms are clean
			The school is usually clean and well maintained
			The temperature in the school is comfortable all year
			The school has a bright and pleasant appearance

- Clean and maintained physical environment
- General safety
- Healthy social environment
- Violence and drug consumption

## Fairness

While Zullig et al. (2010) call it perceived exclusion/privilege, Ciccone et al. (2013) describe it as barriers to learning and teaching, as well as support, Bear et al. (2011) refer to the fairness of rules and Bradshaw et al. (2014) towards a culture of equality, all of these researchers include one dimension connected to equality or fairness for students.

When reviewing the dimensions named in the last paragraph, which can be seen in Table 34, it becomes evident that there is great consensus regarding the equal treatment of students being an indicator for a positive school climate. While exclusion is characterised by certain students getting preferred treatment (Zullig et al., 2010), inclusion reflects equal opportunities for students of any race, gender or family's socio-economic background (Bradshaw et al., 2014). The absence of exclusion of students, as well as a strong inclusion of all students represents a positive school climate (Bradshaw et al., 2014; Zullig et al., 2010). In the US National School Standards (Ciccone et al., 2013) equality is characterised through every student getting support when they need it, creating policies and practices in the classroom together, as well as reengaging disconnected students.


Bear et al. (2011) takes an approach solely focused on rules and describes, opposing to the other researchers, how school rules, the code of conduct and consequences for breaking rules need to be fair to create a positive school climate.


**Table 34**


Fairness					
Dimension	Perceived Exclusion/Privilege	Barriers to learning and teaching, support		Fairness of rules	Culture of equity
Author	Zullig et al., 2010	Cicccone et al., 2013		Bear et al., 2011	Bradshaw, 2014
	Dimension				
Indicators	At school, the same person always gets to help the teacher	Barriers to learning and teaching	Classroom and school wide policies and practices promote engagement and address barriers to learning and teaching while reengaging disconnected students through an intervention framework that generates a system of learning supports	School rules are fair	Students of all races are treated the same
	At school, the same kids get chosen every time to take part in after-school or special activities		Policies ensure continuing development and sustainability of a comprehensive and cohesive system of learning supports	The school's Code of Conduct is fair	All students are treated the same, regardless of whether their parents are rich or poor
	The same kids always get to use things, like a computer, a ball or a piano, when students play		Accountability measures, data and monitoring are used that directly demonstrate the impact of efforts to address barriers to learning and teaching and reengaging students who have become disengaged	Consequences of breaking rules are fair	Boys and girls are treated equally well
			Classroom practices are designed to promote healthy development and prevent negative problems		The school provides instructional materials that reflects the students' different culture, ethnicity, and identity
			Classroom practices are designed to respond as early after problem onset as is feasible		
			Classroom practices are designed to provide for those whose negative problems require more intensive assistance and accommodation		

**Table 34** (continued)

	<b>Support</b>	Teachers at the school help students with their problems
		Students who need help with their problems are able to get it through school
		There is someone at school that students can talk to about personal problems

 Fairness of school rules and policies

 Equal treatment

 Policies and practices that provide equality

### School connectedness





Another dimension, which indicates a positive school climate is school connectedness, which is described by both Zullig et al. (2010) and Bradshaw et al. (2014). Bear et al. (2011) presents similar indicators but calls the dimension the liking of the school.

As presented in Table 35, Bear et al. (2011) and Bradshaw et al. (2014) agree on both the students' satisfaction with the school in general and the students' pride regarding the school being essential for a positive school climate. Bear et al. (2011) outline that a positive school climate is characterised by students choosing their school over other schools. The students' satisfaction with the learning and schoolwork is pointed out as an additional indicator and according to the literature reflects in students finding schoolwork exciting, enjoying their learning (Bradshaw et al., 2014; Zullig et al., 2010), and students wanting to take additional academic classes at the school (Zullig et al., 2010).

Zullig et al. (2010) are the only out of the identified researchers who point towards student rewards for good performance and recognition for achievement, as well as the involvement of students in the decision-making, regarding future course offerings, being additional indicators.

**Table 35**

School connectedness			
Dimension	School connectedness	Liking of school	Whole-school connectedness
Author	Zullig et al., 2010	Bear et al., 2011	Bradshaw et al., 2014
Indicators	Students' schoolwork is exciting	Students choose the school over other schools	Students and staff feel pride in this school
	Students can make suggestions on courses that are offered	Students like the school	Students enjoy learning at the school
	Students are publicly recognized for their outstanding performances in speech, drama, art, music, etc.	Students are proud of the school	Students like the school
	If the school had an extra period during the day, students would take an additional academic class	This school gives students enough freedom	Students like coming to school
	The school makes students enthusiastic about learning		
	Students are frequently rewarded or praised by faculty and staff for following school rules		

 Student satisfaction with school in general
  Student satisfaction with the learning and schoolwork
  Student pride
  Rewards and recognition

**Parents' and community influence**




While the indicators related to parents exerting pressure to improve and maintain high school standards have been presented before as part of the dimensions of achievement press (Hoy et al., 2002) in Table 36, there are two dimensions in the identified instruments solely describing indicators related to parents' and community influence. Both dimensions take different directions and share no similar indicators.

Hoy et al. (2002) point towards the influence of institutional vulnerability on school climate and claim that while the involvement of parents is desirable, an unstable school climate is characterised by a few vocal parents being able to change the whole school policy. They describe that in a school with a healthy school climate the principal responds to the pressure from parents and finds a solution for all parties involved (Hoy et al., 2002). According to Hoy et al. (2002), a school climate where teachers and principals are unprotected and put on the defensive is characterized by being vulnerable to outside pressure, citizens having influence with the board, and teachers feeling pressured by the community.

Bradshaw et al. (2014) describe an opposing approach in the MDS3 Student Survey, where efforts to integrate parents, in the form of how welcome they feel at school, how involved they are and how often they visit the school, are measured. The higher these indicators score the more positive the school climate is in the area of parents’ and community involvement according to Bradshaw et al. (2014).

**Table 36**

Parents’ and community influence		
Dimension	Institutional vulnerability	Parent engagement
Author	Hoy et al., 2002	Bradshaw et al., 2014
Indicators	A few vocal parents can change school policy	Students’ parent(s) or guardian(s) feel(s) welcome at the school
	The school is vulnerable to outside pressure	If students do something bad at the school, their parent(s) or guardian(s) hear(s) about it
	Select citizen groups are influential with the board	When students do something good at school, their parent(s) or guardian(s) usually hear(s) about it
	Teachers feel pressure from the community	The school tries to involve parents or guardians
	The principal responds to pressure from parents	Parents or guardians often come to my school to help out

 Parents' influence  
  Community's influence  
  Efforts to integrate parents

## Principal behaviour




While dimensions related to principal behaviour were one of the main components of earlier school climate surveys like the OCDQ (Halpin & Croft, 1963), recent instruments seem to neglect the importance of principal behaviour on school climate. Out of the identified instruments only the US National School Standards (Ciccone et al., 2013) and the OCI (Hoy et al., 2002) incorporate dimensions related to principal behaviour, as is shown in Table 37. These are presented in the form of school community practices by Ciccone et al. (2013) and collegial leadership by Hoy et al. (2002), which show little commonalities.

The only consensus across the two instruments could be identified in the importance of maintaining high school standards through efforts like consistent planning and evaluating (Ciccone et al., 2013; Hoy et al., 2002) to keep the school climate positive. As a prerequisite for these evaluating efforts being worthwhile, the US National School Standards include indicators related to the principal's dedication to school improvement in the form of enhancing engagement in teaching-learning and school-wide activities, the development of practices addressing learning and teaching barriers, as well as the development of an appropriate systemic infrastructure and capacity (Ciccone et al., 2013).

The OCI (Hoy et al., 2002) takes a different direction and points out how the openness of the principal to new ideas and their approachability is key to a sustained positive school climate.

**Table 37**

Principal behaviour		
Dimension	School community practices	Collegial Leadership
Author	Cicccone et al., 2013	Hoy et al., 2002
Indicators	The school has administrative leaders who are responsible for the development, operation and sustainability of high quality practices related to enhancing engagement in teaching, learning and school-wide activities	The principal explores all sides of the topics and admits that other opinions exist
	The school has administrative leaders who are responsible for the development, operation and sustainability of high quality practices related to addressing barriers to learning and teaching and reengage those who have become disengaged	The principal treats all faculty members as his or her equal
	The school has administrative leaders who are responsible for the development, operation and sustainability of high quality practices related to developing and sustaining an appropriate systemic infrastructure and capacity building mechanisms for meeting this standard	The principal puts suggestions made by faculty into operation
	Sufficient staff are assigned to developing and sustaining such high quality practices	The principal is friendly and approachable
	Leadership and staff are provided continuous professional development in order to develop and sustain these practices	The principal is willing to make changes
	An effective school family community operational infrastructure is in place for weaving school and community resources together and for ongoing planning, implementing and evaluating the comprehensive system of learning supports	The principal lets faculty know what is expected of them
	The operational and capacity building systems related to this third standard are fully integrated with the school's mechanisms for improving instruction, management and overall governance	The principal maintains definite standards of performance

-  Principal's dedication to school development
-  Principal's openness and approachability
-  Principal's efforts to evaluate and keep standards of performance

## Outliers

While a lot of consensus could be identified across the identified school climate instruments the US National School Standards (Ciccone et al., 2013) present two outlier dimensions, which are not supported by any other instruments that could be identified: A shared vision and plan, as well as development and sustainability policies. The outliers are displayed in Table 38.

The dimension of a shared vision and plan is diverse and includes indicators related to capacity building to enable the school community to meet school climate standards, establishing policies and practices that provide a safe and productive environment (Ciccone et al., 2013). It is also the only dimension that points toward the gathering of reliable data about the school climate being essential to continuously improve upon the current school climate (Ciccone et al., 2013).

The indicators grouped under the dimension concerned with the development of sustainability policies are focused on the establishment of social, emotional, ethical, civic and intellectual skills, dispositions and behaviours. Two indicators are included that point towards the importance of measuring data related to and building capacity for the development of these skills, dispositions and behaviours (Ciccone et al., 2013).

The reason for these being outliers is most probably related to all other identified literature being surveys. The US National School Standards are concerned with outlining detailed standards on a national level and therefore have a broader focus than some of the instruments (Ciccone et al., 2013).

**Table 38**

Outliers in the identification of dimensions of a positive school climate		
<b>Dimension</b>	Shared vision and plan	Development and sustainability policies
<b>Author</b>	Ciccone et al., 2013	Ciccone et al., 2013
<b>Indicators</b>	School policies and practices support school, family, youth and community members working together to establish a safe and productive learning community	Policies and mission and vision statements that promote social, emotional, ethical and civic, as well as intellectual, skills and dispositions are developed and institutionalized
	Schools gather accurate and reliable data about school climate from students, school personnel and parents/guardians for continuous improvement and share it regularly with the school community	Policies promote use and monitoring of natural and informal opportunities (e.g., recreational and extracurricular aspects of classroom and school life) to ensure they support the helpful norms of learning and teaching that foster mutual respect and caring; engagement; safety and wellbeing; civil, pro social, responsible behaviour; and a psychological sense of community
	Capacity building is developed over time to enable all school community members to meet school climate standards	Policies ensure the operational and capacity building mechanisms (including staff and student development) related to this standard are fully integrated into a school's infrastructure and are effectively implemented and sustained

## Appendix F - Comparison of leadership dimensions

**Table 39**

Comparison of leadership dimensions					
Author	Cotton, 2003	Marzano et al., 2001	Robinson et al., 2008	Pont, 2013	Dinham, 2005
Dimensions	Safe and orderly school environment	Order	Ensuring an orderly and supportive environment		Vision, expectations and a culture of success
	Vision and goals focused on high levels of student learning	Focus Optimiser	Establishing goals and expectations	Establish a guiding mission	Vision, expectations and a culture of success
	High expectations for student learning	Focus	Establishing goals and expectations	Establish a guiding mission	Student support, common purpose and collaboration
	Self-confidence, responsibility, and perseverance	Ideals/Beliefs Optimiser		Flexible management for change	Bias towards innovation and action
	Visibility and accessibility	Input Visibility			Personal qualities and relationships

**Table 39** (continued)

	Positive and supportive school climate	Culture	Ensuring an orderly and supportive environment	Generate organisational conditions Create harmony within the school	Personal qualities and relationships Vision, expectations and a culture of success
	Communication and interaction	Communication Relationship	Establishing goals and expectations	Communication	External awareness and engagement Personal qualities and relationships
	Emotional and interpersonal support	Relationship Visibility	Ensuring an orderly and supportive environment	Values	Personal qualities and relationships
	Parent and community outreach and involvement	Outreach		Generate organisational conditions Create harmony within the school	External awareness and engagement
	Rituals, ceremonies, and other symbolic actions	Contingent rewards Affirmation			
	Shared leadership, decision-making, and staff empowerment	Input Communication	Establishing goals and expectations	Generate organisational conditions Communication	External awareness and engagement

**Table 39** (continued)

	Collaboration	Culture	Promoting and participating in teacher learning and development	Generate organisational conditions	Student support, common purpose and collaboration
	Instructional leadership	Knowledge of curriculum, instruction & assessment Involvement in curriculum, instruction & assessment	Promoting and participating in teacher learning and development	Flexible management for change	
	Ongoing pursuit of high levels of student learning	Focus Optimiser		Establish a guiding mission	Student support, common purpose and collaboration
	Norm of continuous improvement	Focus Intellectual stimulation	Establishing goals and expectations	Establish a guiding mission	Bias towards innovation and action
	Discussion of instructional issues	Intellectual stimulation	Promoting and participating in teacher learning and development	Do pedagogical management	

**Table 39** (continued)

	Classroom observation and feedback to teachers	Monitoring/evaluation Involvement in curriculum, instruction & assessment	Promoting and participating in teacher learning and development	Develop self and others	Vision, expectations and a culture of success
	Support of teacher autonomy	Flexibility		Generate organisational conditions	Bias towards innovation and action Personal qualities and relationships
	Support of risk taking	Change Agent			Bias towards innovation and action
	Professional development opportunities and resources	Resources	Strategic resourcing	Develop self and others	Bias towards innovation and action Teacher learning, responsibility and trust
	Protecting instructional time	Discipline			

**Table 39** (continued)

	Monitoring student progress and sharing findings	Monitoring/Evaluation Focus	Planning, coordinating, and evaluating teaching and the curriculum	Do pedagogical management
	Use of student progress data for program improvement	Monitoring/Evaluation	Planning, coordinating, and evaluating teaching and the curriculum	Do pedagogical management
	Recognition of student and staff achievement	Contingent rewards Affirmation		Develop self and others Personal qualities and relationships Vision, expectations and a culture of success
	Role modelling	Knowledge of curriculum, instruction & assessment Involvement in curriculum, instruction & assessment		Personal qualities and relationships
	Links theory to practice			

Appendix G - School culture survey and focus group outcomes

Table 40

Dimensions and indicators of a positive school culture					
Dimension	Sub-dimension	Indicator	I believe that my engagement with the principal positively impacts this indicator/dimension	I believe that my engagement with the principal does not positively impact this indicator/dimension	Extent of impact on sub-dimensions, as expected by the principal mentors
Please use an "x" in the cells below to indicate your answer					
Leadership	<i>Share power with teachers</i>	Leaders engage teachers in decision making	9	0	high
		Leaders seek input from teachers	9	0	
		Leaders trust teachers' professional judgment	7	2	
		Leaders value teacher's ideas	9	0	
		Leaders share power with teachers	8	1	
	<i>Establish positive school development through encouraging commitment</i>	Leaders support and reward risk taking, and innovative ideas designed to improve student achievement	6	2	high
		Leaders reinforce the sharing of ideas and effective practices among all staff	9	0	
		Leaders facilitate a school development process that engages the human potential and commitment of teachers	8	1	
Collegiality and relationships	<i>Trust and respect</i>	The leader empowers teachers to exercise professional judgements through the development of supportive interpersonal relationships	7	2	high
		Teachers trust each other	6	3	
		Students and teachers trust each other	5	4	
		Students trust each other	5	4	

**Table 40** (continued)

		Teachers generally treat students with respect and fairness	6	3	
		Teachers respect each other	9	0	
	<b><i>Collaborative planning and creating rules</i></b>	Teachers spend time planning together	9	0	high
		Teachers brainstorm ideas together	8	1	
		Teachers assist each other as they work to further the school's goals	9	0	
		Teachers value each other's ideas	5	3	
		Some rules are made by votes from both students and teachers	0	6	
		Teachers give students a say in decisions about school rules	5	3	
	<b><i>Help and support</i></b>	Teachers are willing to help and support each other with problems	9	0	high
		Teachers are really interested in students and want to help	5	3	
		Students and teachers openly discuss problems	5	3	
		Students help each other even if they are not friends	0	6	
		Students who belong to different groups are friendly	1	5	
	Students generally treat each other with respect and fairness	4	5		
<b>Collaboration</b>	<b><i>Joint planning, discussions and brainstorming</i></b>	There are interactions between teachers in which information is shared on school operational matters including the instructional programme	9	0	high
		There is joint work on developing projects	7	0	
		Teachers support exchanging ideas amongst each other	8	1	
		Teachers encourage each other to bring innovation to the school	6	3	
		Teachers across the school plan together	8	0	
		Teachers observe and discuss teaching practices	6	2	
		Teachers develop an awareness of the practices and programs of other teachers	7	2	
	<b><i>Joint evaluating</i></b>	Teachers' joint work on evaluating projects	5	3	high
	<b><i>Outliers</i></b>	Teachers are well informed	7	1	
		Teachers are concerned with the issues in the school	7	1	
	The school mission is in line with the learning effect	8	0		

**Table 40** (continued)

		Teachers voice their dissent	7	1	
		Teachers are motivated to engage in tutoring other colleagues	6	2	
<b>Learning community</b>	<i>Parents' and teachers' trust</i>	Parents trust teachers	6	3	medium
	<i>Parents' and teachers' communication</i>	There is frequent communication between parents and teachers	8	1	medium
	<i>Parents' and teachers' expectations</i>	Parents and teachers share common learning expectations	5	3	medium
	<i>Students' responsibility</i>	Students feel a sense of responsibility for their own learning outcomes	5	3	medium
	<i>Learning community</i>	There is a learning community with commitment to improved outcomes for students	4	2	medium
		There is a learning community with commitment to growth	5	1	
<b>Shared direction and opportunities for teacher and student development</b>	<i>Vision centred</i>	A shared vision is in place, which has been actualised by logical planning	7	1	high
	<i>Mission centred</i>	Teachers understand the school's mission	6	1	high
		Teachers support the school's mission	6	2	
		Teachers act in accordance with the school's mission	5	0	
<b>Outliers</b>	<i>Personal involvement of teachers</i>	Teachers are willing to be actively involved in school policy	7	1	low
		Teachers work sufficiently with students	4	2	
	<i>Principal-teacher feedback</i>	Teachers have an opportunity to approach the principal in dialogue	9	0	high
		Teachers have a chance to participate in decision-making	7	1	
	<i>Colleagues' compliments</i>	The principal praises the teachers for a job well done	8	0	high
	<i>Evaluation of employees' achievement</i>	There is monitoring taking place in the school	8	0	high
		Teachers' professional development is evaluated by the principal	5	3	
Rewards are given to the teachers by the principal		1	5		

**Table 40** (continued)

	<i>Normative expectations</i>	There is very little physical fighting	4	4	low
		There is very little cutting classes or skipping school	4	4	
		There is very little stealing	4	4	
		There is very little damage done to school property	5	3	
		There is very little use of drugs or alcohol	3	5	
		There is very little verbal abuse or putting people down	3	5	
		There is very little cheating	4	4	

Appendix H - School climate survey and focus group outcomes

Table 41

Dimensions and indicators of a positive school culture					
Dimension	Sub-dimension	Indicator	I believe that my engagement with the principal positively impacts this indicator/dimension	I believe that my engagement with the principal does not positively impact this indicator/dimension	Extent of impact on sub-dimensions, as expected by the principal mentors
Please use an "x" in the cells below to indicate your answer					
Student-teacher relationship	<i>Student problems</i>	Teachers understand student problems	8	1	high
		Teachers at the school help children with their problems	7	2	
	<i>Interest</i>	Teachers and staff seem to take a real interest in the students' future	6	2	high
		There is a teacher or some other adult who notices when a student is not there	5	2	
		Teachers care about students	9	0	
		Every student is connected to a caring and responsible adult in the school	3	4	
		Teachers "go the extra mile" with their students	7	2	
		Teachers accomplish their jobs with enthusiasm	4	4	
	<i>Communication</i>	Teachers are available when students need to talk with them	6	2	high
		Teachers ask students what the class should do	1	8	
		In the classes teachers and students decide together what the rules will be	2	6	
	<i>Support</i>	Teachers make students feel good about themselves	5	4	high
		Teachers listen to students when they have something to say	6	3	

**Table 41** (continued)

	<i>Interpersonal indicators</i>	Students get along well with teachers	6	3	high
		Teachers respect the students	8	0	
		Students trust the teachers	5	3	
<b>Student-student relationship</b>	<i>Support</i>	Students help one another	5	2	low
		Students cheer up other students who are feeling sad	2	6	
		Students share with each other	6	3	
		Students help each other clean up	3	5	
		Students help other students that are being picked on	5	2	
		Students in my class help each other learn	3	4	
		Students at this school are willing to go out of their way to help someone	3	5	
	<i>Respect</i>	Students in my class work together to solve problems	5	3	
		Students treat each other with respect	6	2	low
		Students are friendly towards most other students	7	1	
	<i>Friendship</i>	Students play fair during games	4	3	
		Students really care about each other	2	4	low
		Students get along with one another	5	2	
		Students feel like they belong	6	2	
		Students like one another	4	3	
	<i>Honesty</i>	Students trust one another	2	4	
Students do what they say they would		3	3	low	
Students tell the truth about doing something wrong		2	3		
<b>Rules, norms and order</b>	<i>Fair and clear rules</i>	There are clear rules about student behavior	9	0	low
		The school has rules against teasing, name-calling, or saying bad things about other people	8	1	
		There are rules against shoving, hitting, or tripping people at my school	8	1	
		Everyone knows what the school rules are	7	2	
		The rules of the school are fair	9	0	
		Classroom rules are applied equally	5	3	

**Table 41** (continued)

	<b>Enforcement and disciplinary actions</b>	Problems in this school are solved by students and staff	5	3	high
		Students get in trouble if they do not follow school rules	8	1	
		School rules are enforced consistently and fairly	5	2	
		My teachers make it clear to students when they misbehave in class	8	1	
		Teachers can handle students who disrupt class	8	1	
		Teachers and other adults make sure that everyone follows the rules against teasing or bullying people at the school	6	3	
		Teachers at the school will stop someone from being teased or bullied if they see it happening	7	2	
	<b>Disruptions and disorder</b>	Students disobey the rules	3	3	high
		Disruptions by other students can get in the way of learning	3	3	
		There are often broken windows, doors, or desks at the school	4	2	
	Vandalism of school property is a problem at the school	3	3		
<b>Academic dimensions</b>	<b>Motivation</b>	Students feel that they can do well in this school	9	0	high
		Students try hard to succeed in their classes	7	2	
		Students try hard to improve on previous work	7	2	
		Students seek extra work so they can get good grades	4	4	
		Students believe that it is important to finish school	7	2	
	<b>Parents' influence</b>	Parents exert pressure to maintain high standards	3	6	low
		Parents press for school improvement	2	5	
	<b>Academic goals</b>	Teachers make it clear what work needs to be done to get the grade students want	7	1	high
		The school sets high standards for academic performance	9	0	
		Students in this school can achieve the goals that have been set for them	5	3	
<b>Recognition</b>	Students respect other students who get good grades	7	1	high	
	Academic achievement is recognized and acknowledged by the school	9	0		

**Table 41** (continued)

	<b>Teachers' believe</b>	Teachers believe that their students can do well in school	9	0	high
		Teachers want students to do their best	7	1	
	<b>Students' academic satisfaction</b>	Students usually understand their homework assignments	7	2	low
		Students are happy about the number of tests they have	1	5	
		Students are happy about the amount of homework they have	1	5	
<b>Physical and social environment</b>	<b>Clean and maintained physical environment</b>	The school grounds are kept clean	8	0	high
		My school is usually clean and tidy	8	0	
		My school buildings are generally pleasant and well maintained	7	1	
		The bathrooms in this school are clean	7	1	
	<b>General safety</b>	Teachers believe that students feel safe in the school	6	0	low
		Students feel safe going to the school	6	1	
		Students feel safe in all areas of the school building	6	2	
		Students feel safe on the school grounds	6	2	
	<b>Healthy social environment</b>	Students are happy with the kinds of students that go to the school	3	5	low
		Students are generally happy about the other students that go to their school	4	4	
		School leaders promote comprehensive and evidence-based instructional and school-wide improvement efforts designed to support students, school personnel and community members feeling welcomed, supported and safe in school: socially, emotionally, intellectually and physically	6	1	
		Students, their families, school staff and community stakeholders are regularly surveyed and are asked to indicate what the school should do to further enhance a welcoming, supportive and safe environment	4	4	
		School leaders monitor and evaluate the prevention and intervention strategies designed to support people feeling welcomed, supported and safe and use that data to improve relevant policies, practices, facilities, staff competencies and accountability	7	1	

**Table 41** (continued)

	<b><i>Violence and drug consumption</i></b>	There are programs for violence and conflict	6	0	low
		Students do not carry knives or guns	4	3	
		No physical fighting between students	4	3	
		No harassment or bullying of students	4	3	
		Students have not seen someone else being bullied	1	5	
		Students at this school try to stop bullying	3	4	
		Students do not consume hard drugs	3	4	
		Students do not consume tobacco	2	4	
		Students do not consume alcohol	3	4	
<b>Fairness</b>	<b><i>Fairness of school rules and policies</i></b>	School rules are fair	7	0	low
		The school's Code of Conduct is fair	8	0	
		Consequences of breaking rules are fair	7	0	
	<b><i>Equal treatment</i></b>	Teachers at the school help students with their problems	8	0	low
		Students who need help for their problems are able to get it through school	6	1	
		There is someone at school that students can talk to about personal problems	6	1	
		Students of all races are treated the same	7	1	
		All students are treated the same, regardless of whether their parents are rich or poor	8	0	
		Boys and girls are treated equally well	8	0	
		At the school, the same person always gets to help the teacher	1	5	
		At the school, the same kids get chosen every time to take part in after-school or special activities	1	5	
		The same kids always get to use things, like a computer, a ball or a piano, when students play	2	4	

**Table 41** (continued)

	<b><i>Policies and practices that provide equality</i></b>	Classroom and school wide policies and practices promote engagement and address barriers to learning and teaching while reengaging disconnected students through an intervention framework that generates a system of learning supports	5	2	high
		Policies ensure continuing development and sustainability of a comprehensive and cohesive system of learning supports	6	1	
		Classroom practices are designed to promote healthy development and prevent negative problems	7	1	
		Classroom practices are designed to respond as early after problem onset as is feasible	5	1	
		Classroom practices are designed to provide for those whose negative problems require more intensive assistance and accommodation	5	2	
	<b><i>Student satisfaction with school in general</i></b>	Students like the school	5	3	high
		This school gives students enough freedom	3	3	
		Students like coming to school	5	1	
	<b><i>Student satisfaction with the learning and schoolwork</i></b>	Students' schoolwork is exciting	3	4	low
		If the school had an extra period during the day, students would take an additional academic class	3	3	
		The school makes students enthusiastic about learning	7	0	
	<b><i>Student pride</i></b>	Students choose the school over other schools	4	3	high
		Students and staff are proud of the school	5	2	
	<b><i>Rewards and recognition</i></b>	Students are publicly recognized for their outstanding performances in speech, drama, art, music, etc.	5	2	high
	Students are frequently rewarded or praised by faculty and staff for following school rules	5	2		

**Table 41** (continued)

<b>Parents' and community influence</b>	<b>Parents' influence</b>	A few vocal parents can change school policy	1	5	medium
		The principal responds to pressure from parents	6	1	
	<b>Community influence</b>	The school is vulnerable to outside pressure	2	4	medium
		Select citizen groups are influential with the board	2	4	
		Teachers feel pressure from the community	2	4	
	<b>Efforts to integrate parents</b>	Students' parent(s) or guardian(s) feel(s) welcome at the school	8	0	high
		If students do something bad at the school, their parent(s) or guardian(s) hear(s) about it	8	0	
		When students do something good at school, their parent(s) or guardian(s) usually hear(s) about it	7	1	
		The school tries to involve parents or guardians	7	0	
	Parents or guardians often come to my school to help out	4	2		
<b>Principal behaviour</b>	<b>Principal's dedication to school development</b>	The school has administrative leaders who are responsible for the development, operation and sustainability of high quality practices related to enhancing engagement in teaching, learning and school-wide activities	8	0	high
		The school has administrative leaders who are responsible for the development, operation and sustainability of high quality practices related to addressing barriers to learning and teaching and reengage those who have become disengaged	7	1	
		The school has administrative leaders who are responsible for the development, operation and sustainability of high quality practices related to developing and sustaining an appropriate systemic infrastructure and capacity building mechanisms for meeting this standard	8	0	
		Sufficient staff are assigned to developing and sustaining such high quality practices	2	5	
		Leadership and staff are provided continuous professional development in order to develop and sustain these practices	6	0	

**Table 41** (continued)

	<b><i>Principal's openness and approachability</i></b>	The principal explores all side of the topics and admits that other opinions exist	8	0	high
		The principal puts suggestions made by faculty into operation	8	0	
		The principal is friendly and approachable	8	0	
		The principal is willing to make changes	8	0	
	<b><i>Principal's efforts to evaluate and keep standards of performance</i></b>	An effective school family community operational infrastructure is in place for weaving school and community resources together and for ongoing planning, implementing and evaluating the comprehensive system of learning supports	7	0	high
	The principal maintains definite standards of performance	7	1		
<b>Outliers</b>	<b><i>Shared vision and plan</i></b>	School policies and practices support school, family, youth and community members working together to establish a safe and productive learning community	7	0	high
		Schools gather accurate and reliable data about school climate from students, school personnel and parents/guardians for continuous improvement and share it regularly with the school community	2	4	
		Capacity building is developed over time to enable all school community members to meet school climate standards	5	1	
	<b><i>Development and sustainability policies</i></b>	Policies and mission and vision statements that promote social, emotional, ethical and civic, as well as intellectual, skills and dispositions are developed and institutionalized	7	1	low
		Policies promote use and monitoring of natural and informal opportunities (e.g., recreational and extracurricular aspects of classroom and school life) to ensure they support the helpful norms of learning and teaching that foster mutual respect and caring; engagement; safety and wellbeing; civil, pro social, responsible behavior; and a psychological sense of community	7	1	
		Policies ensure the operational and capacity building mechanisms (including staff and student development) related to this standard are fully integrated into a school's infrastructure and are effectively implemented and sustained	5	2	

## Appendix I - The principal survey

**Table 42**

	Principal survey				
	Strongly disagree	Disagree	Undecided	Agree	Strongly Agree
Teachers are able to engage in decision-making in the school.					
I do trust the teachers' judgment.					
I am approachable for school staff.					
I support and reward risk taking, and innovative ideas developed by the school staff					
I reinforce the sharing of ideas and effective practices among all staff.					
I facilitate a school development process that engages the human potential and commitment of teachers.					
Teachers act in accordance with the school's mission.					
The school's vision statement is actualised by logical planning.					
The school's rules are enforced consistently and fairly by the school staff.					
Teachers make it clear to students when they misbehave.					
Teachers will stop someone from being teased or bullied if they see it happening.					
Students do not vandalise the school.					
Students are recognised for outstanding performances and grades.					
Students are rewarded for outstanding performances and grades.					
Policies and practices to address barriers in learning are in place.					
Learning support systems for those who require intensive assistance are in place.					
Classroom practices are focused on the healthy development of all students.					
Students' parent(s) or guardian(s) feel(s) welcome at the school.					
Students' parent(s) or guardian(s) hear(s) about their children's actions.					
Students' parent(s) or guardian(s) come(s) to help out at the school.					
I maintain definite standards for school performance.					
Accurate and reliable data regarding school performance is gathered regularly.					
Collected data is being evaluated regularly.					
There are practices to enhance engagement in teaching, learning and school-wide activities.					
There are practices to address barriers to learning and teaching, and reengage those who have become disengaged.					
There are sufficient staff assigned to developing and sustaining such practices.					
Leadership and staff are provided continuous professional development in order to develop and sustain these practices.					




## Appendix J - The teacher survey

**Table 43**

	Teacher survey				
	Strongly disagree	Disagree	Undecided	Agree	Strongly Agree
I am able to engage in decision-making.					
The principal trusts in my judgment.					
The principal is approachable.					
The principal supports and rewards risk taking, and innovative ideas.					
The principal reinforces the sharing of ideas and effective practices among all staff.					
The principal facilitates a school development process that engages the human potential and commitment of teachers.					
I trust my colleagues.					
I have developed supportive inter-personal relationships with colleagues.					
I assist other teachers or receive assistance with the aim of furthering the school's goals.					
I value my colleagues' ideas.					
I give my students a say in the creation of classroom rules.					
I show an interest in students and attempt to understand their problems.					
I notice when students are absent.					
I do understand the school's mission.					
I act in accordance with the school's mission.					
The school's vision statement is actualised by logical planning.					
Students do not disrupt the lessons.					
I enforce school rules consistently and fairly.					
I make it clear to students when they misbehave.					
I will stop someone from being teased or bullied if I see it happening.					
Students try to succeed in their classes					
Students have the feeling that they can succeed at the school.					
I am being included in evaluation activities, which are done based on data collected at the school.					

Appendix K - The student survey

Table 44

Student survey			
	 I disagree	 I am not sure	 I agree
I trust my teachers.			
I trust the other students.			
I have made many friends in school.			
My teachers lets us decide the rules.			
Teachers are interested in me and my problems.			
There is an adult at school, who I can talk to about my problems.			
Teachers know when I do not come to school.			
I like my teachers.			
My teachers make me feel good about myself.			
I try to do my best in school.			
My teachers clearly tell me what I need to do to get good grades.			
I like my school.			
The school ground is clean.			
My classroom is clean.			
The bathrooms are clean.			
I have a lot of freedom at school.			

## Appendix L - Informed consent form: principal survey

### **Purpose of the survey**

This is a survey that is conducted with all principals taking part in PAT's programme to collect data concerning the principals' perspective of the development of school culture and climate at schools supported by PAT.

### **What will be done**

You will take a survey which will take 10 minutes to complete. The survey includes statements about your actions as a principal, teachers' actions, student behaviour and others relevant to the school's culture and climate. The survey makes use of the Likert scale. You can indicate if you either strongly disagree, disagree, are undecided, agree or strongly agree with the statement by placing an X in your chosen field next to the statement.

### **Benefits of this survey**

The outcomes of the baseline survey will be compared with those of the 3 follow up surveys, which are to be conducted each year after the onset of the mentoring programme, provided by PAT. The comparison of the survey results will support PAT in identifying the changes in school culture and climate that occurred while PAT was providing mentoring support in the schools. The outcomes of the baseline survey can, furthermore, support the mentor and principal in collaboratively creating objectives related to school culture and climate improvement over the course of the programme.

### **Risks of this survey**

No risks or discomforts are anticipated from taking part in this survey. We encourage all principals participating in our programme to answer all of the provided survey questions. However, if you feel uncomfortable with a question, you can skip that question or discuss it with your mentor.

### **Confidentiality**

Your responses will be kept completely confidential. While reports will be created on the basis of the survey outcomes, all principals' names will be removed from the survey sheets.

I \_\_\_\_\_ (participant's name) acknowledge that I have read and understood this information and agree to participate in this survey.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## Appendix M - Informed consent form: teacher survey

### **Purpose of the survey**

This is a survey that is conducted with teachers employed at the schools taking part in PAT's programme to collect data concerning the teachers' perspective of the development of school culture and climate at schools supported by PAT.

### **What will be done**

You will take a survey which will take 10 minutes to complete. The survey includes statements about your actions as a teacher, the principal's actions, student behaviour and others relevant to the school's culture and climate. The survey makes use of the Likert scale. You can indicate if you either strongly disagree, disagree, are undecided, agree or strongly agree with the statement by placing an X in your chosen field next to the statement.

### **Benefits of this survey**

The outcomes of the baseline survey will be compared with a follow up survey, which will be conducted at the end of the mentoring programme (after 3 years). The comparison of the survey results will support PAT in identifying the changes in school culture and climate that occurred while PAT was providing mentoring support in the schools.

### **Risks of this survey**

No risks or discomforts are anticipated from taking part in this survey. We encourage all teachers to answer all of the provided survey questions. However, if you feel uncomfortable with a question, you can skip it.

### **Confidentiality**

Your responses will be kept completely confidential. While reports will be created on the basis of the survey outcomes, all teachers' names will be removed from the survey sheets.

I \_\_\_\_\_ (participant's name) acknowledge that I have read and understood this information and agree to participate in this survey.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date




## Appendix N - Informed consent form: student survey

### Reason for the survey

We, the Principals Academy Trust, are a group of retired principals that try to help the principal at your school. We want to find out if what we are doing has an effect on how students like their school and their teachers.

### What you need to do

You **DO NOT** have to fill this survey out. It is your choice. You will take a survey which will take 10 minutes to fill out. There are 16 sentences in the survey. You can decide if you disagree with these sentences, are not sure or agree with them. Make a cross next to the sentence under the red, yellow or green smiley for that. Here is an example of how to do it:

	 I disagree	 I am not sure	 I agree
I trust my teachers.		X	
I trust the other students.			X
I have made many friends in school.	X		

### What we will do

We will do one more survey with you in 3 years. We will compare the answers of both surveys. This will show us if students like their school and teachers more than before. **NOBODY** will know that you filled out the survey. No name is needed on the survey.

I \_\_\_\_\_ (your name) have read and understood this information and agree to take part in this survey.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## Appendix O - Informed consent form: principal interview

### **Purpose of the interview**

This is an interview that is conducted with all principals taking part in PAT's programme every year. It is being done to identify in how far the change in the measured school culture and climate indicators can be attributed to PAT's mentoring efforts. It is also done to identify the specific mentoring practices, which led to positive changes in the measured school culture and climate indicators

### **What will be done**

An interview will be conducted by your mentor. The duration depends on the identified changes in the last principal survey in comparison with the results of the baseline principal survey. Your mentor will explore together with you where the positive and negative changes captured in the pre-post surveys originated from. After the establishment of the sources for the change, the mentor in collaboration with the you will then attempt to explore which mentoring practices, if any, contributed to the change.

### **Benefits of the interview**

It will aid PAT in improving its mentoring programme through identifying those mentoring practices, which have the biggest positive impact on the principals and in turn the school's culture and climate. Also, it will assist the mentors in identifying where future mentoring efforts need to be focused on and if any progress is being made.

### **Risks of the interview**

No risks or discomforts are anticipated from taking part in this interview. We encourage all principals participating in our programme to answer all of the provided interview questions. However, if you feel uncomfortable with a question, you can skip that question or discuss it with your mentor.

### **Confidentiality**

Your responses will be kept completely confidential. While reports will be created on the basis of the interview outcomes, all principals' names will be removed from the interview sheets.

I \_\_\_\_\_ (participant's name) acknowledge that I have read and understood this information and agree to participate in this interview.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## Appendix P - Informed consent form: teacher focus group

### **Purpose of the focus group**

This focus group is conducted with teachers employed at the schools taking part in PAT's programme to identify in how far the change in the measured school culture and climate indicators (measured in the surveys) can be attributed to PAT's mentoring efforts.

### **What will be done**

You will take part in a focus group which will take approximately between 30 minutes and 1 hour. The mentor will lead a conversation with you and other teachers about where the changes indicated in the pre-post survey could have originated from. Also, the mentor will try to establish in how far the changes indicated in the pre-post survey are linked to changed principal behaviour. This is where your input will be required.

### **Benefits of this focus group**

The focus group will provide PAT with a deeper understanding of why teachers chose to give different answers in the follow up teacher survey at the end of the mentoring programme in comparison to the baseline teacher survey. It will allow PAT to get the teachers' perspective on changed principal behaviour following the mentoring activities in the school.

### **Risks of this focus group**

No risks or discomforts are anticipated from taking part in this focus group. We encourage all teachers to participate in the focus group, but participation is voluntary. If you feel uncomfortable with any of the topics brought up in the focus group you are free to raise your concerns or leave the focus group.

### **Confidentiality**

The focus group results will be kept completely confidential. While reports will be created on the basis of the focus group outcomes across schools, no names of teachers will be mentioned.

I \_\_\_\_\_ (participant's name) acknowledge that I have read and understood this information and agree to participate in this focus group.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Appendix Q - Data synthesis against evaluation questions with example

Table 45

Data synthesis against evaluation questions				
Evaluation questions	Performance indicators and targets	Monitoring data	Evaluation data	Data Synthesis
To what extent was there an increase in regular school attendance in the community?	<p><b>Indicator:</b> Changes in school attendance from baseline</p> <p><b>Target:</b> No target set due to lack of existing baseline data</p>	<ul style="list-style-type: none"> <li>No changes evident in school attendance since program commencement</li> <li>Participating schools suggest it is still too early to detect trends</li> </ul>	<p><b>Focus group</b></p> <ul style="list-style-type: none"> <li>Key stakeholders believed it was still too early to see firm trends due to lower than expected program participation rates and insufficient elapsed time since program commencement</li> </ul>	<ul style="list-style-type: none"> <li>No trends evident and more time needed to identify trends in attendance rates</li> <li>Lack of improvement in attendance rates attributed in part to lower than expected participant numbers</li> </ul>
...				

Appendix R - Evaluative judgments and conclusions against evaluation questions with example

**Table 46**

<b>Evaluative judgments and conclusions against evaluation questions</b>			
<b>Evaluation questions</b>	<b>Data synthesis</b>	<b>Evaluative judgments</b>	<b>Evaluative conclusions</b>
To what extent was there an increase in regular school attendance in the community?	<ul style="list-style-type: none"> <li>No trends evident and more time needed to identify trends in attendance rates</li> <li>Lack of improvement in attendance rates attributed in part to lower than expected participant numbers</li> </ul>	<ul style="list-style-type: none"> <li>Evidence of clear trends marred by lower levels of participation and possibly too little time elapsed to see results in this domain</li> <li>Assumption that children attending school regularly will complete their basic education was not able to be tested</li> </ul>	<ul style="list-style-type: none"> <li>Low participation rates and short timeframe limited capacity of program to identify trends since inception</li> </ul>
...			

Appendix S - Examples of turning evaluative conclusions into recommendations and lessons

Table 47

<i>Evaluative Conclusions</i>		<i>Recommendations</i>		<i>Lessons</i>
Program was not culturally appropriate in its design, promotion, and delivery.		Engage, train, and support facilitators from the respective cultural and language groups to deliver the program to these groups.		Engagement of members from specific target communities will be increased when using facilitators drawn from those target communities.
Program content and approach sufficiently met needs of males who participated.	→	Continue current content and approach for male participants.	→	Evidence-based program designs are important when engaging male participants in parenting programs.
Evidence-based content produced intended changes in improving participant knowledge.		Care should be taken to maintain content integrity given the success of the program in improving participant knowledge.		Maintaining content integrity is important to the success of program delivery across different courses and locations.
Cost overruns occurred due to increased travel costs to remote locations.		Agencies in remote locations that indicate an interest and are suitable to deliver the program should be contracted to do so.		When attempting to deliver a program across a wide geographic region, serious consideration should be given to forming partnerships with agencies based in remote locations.
Remote service delivery options were not adequately included as part of the operational strategy.	→	Program guidelines should be reviewed to discourage direct delivery of courses to remote regions.	→	Programs with limited scope and resources and working in remote locations should prioritize partnership development to assist in meeting participant needs.
Low participation rates and short time frames limited the capacity of the program to identify trends since its inception.		Program should conduct an analysis of school enrolment and attendance rates 12 months after implementation of the adjusted program design.		Programs attempting to identify longer term change need to carefully establish realistic time frames within which expected results will become apparent.

## Appendix T - Suggested structure for evaluation report

**Table 48**

<i>Chapter Headings</i>		<i>Considerations</i>
<i>Executive Summary</i>		
1	<b>Program Overview</b> <ul style="list-style-type: none"> <li>• Context and Background to the Program</li> <li>• Approach to Monitoring and Evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Presents the context and history of the program</li> <li>• Identifies the purpose and approach adopted to monitoring and evaluation</li> <li>• Outlines approach to key stakeholder engagement</li> </ul>
2	<b>Foundations</b> <ul style="list-style-type: none"> <li>• Program Theory</li> <li>• Program Logic</li> <li>• Evaluation Questions</li> </ul>	<ul style="list-style-type: none"> <li>• Program Theory outlining expected changes</li> <li>• Program Logic outlining expected results</li> <li>• Evaluation Questions classified under five domains</li> </ul>
3	<b>Methodology</b> <ul style="list-style-type: none"> <li>• Approach to Monitoring</li> <li>• Evaluation Methodology</li> </ul>	<ul style="list-style-type: none"> <li>• Scope of the approach and methodology used</li> <li>• Any limitations or constraints in approach or methodology used</li> <li>• Any ethical issues that arose and how they were handled</li> </ul>
4	<b>Key Results</b> <ul style="list-style-type: none"> <li>• Program Context (Appropriateness)</li> <li>• Progress Toward Objectives (Effectiveness)</li> <li>• Program Implementation and Resourcing (Efficiency)</li> <li>• Program Coordination and Management (Efficiency)</li> <li>• Program Outcomes (Impact)                             <ul style="list-style-type: none"> <li>○ Progress against the program theory and the program logic</li> <li>○ Key assumptions</li> </ul> </li> <li>• Sustainability</li> <li>• Gender and other Cross Cutting Issues</li> <li>• Overall Evaluative Conclusions</li> </ul>	<ul style="list-style-type: none"> <li>• Answers provided to the evaluation questions under each domain</li> <li>• Presents synthesized data, assessment, and findings against each evaluation question</li> <li>• Identifies performance against indicators and targets and criteria and standards</li> <li>• Presents an assessment of program impact</li> <li>• Provides an assessment of progress against the program theory and the program logic</li> <li>• Assessment of validity of key assumptions</li> <li>• Assessment of other areas examined, such as gender and environmental impact</li> <li>• Presents overall evaluation conclusions</li> </ul>
5	<b>Recommendations</b>	<ul style="list-style-type: none"> <li>• Focused on program continuation and/or improvement</li> </ul>

**Table 48** (continued)

<i>Chapter Headings</i>		<i>Considerations</i>
6	Learning	<ul style="list-style-type: none"><li>• Identifies lessons that can be used to review program design and benefit future program development and similar programs and policy contexts</li></ul>
7	Appendices <ul style="list-style-type: none"><li>• Data Collection Tools and Approaches</li><li>• Performance Indicators and Targets, Evaluation Rubrics, and other Analytical Frameworks</li><li>• Other</li></ul>	<ul style="list-style-type: none"><li>• Presents range of data collection tools used</li><li>• Identifies approaches used to sample</li><li>• Lists interviewees</li><li>• Identifies ethical approval processes (where required) and informed consent forms used</li><li>• Presents approaches for data synthesis and assessment, such as use of performance indicators and targets, evaluation rubrics, and other analytical frameworks</li></ul>

