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Evaluation of the Primary Teacher Education (PrimTEd) Project

Report

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Submitted by:

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Executive summary – First phase of an evaluation of the Primary Teacher Education (PrimTEd) Project

Background

The teaching and learning of Mathematics in South African schools is not yielding the intended outcomes of South Africa's education policies and curricula. Similarly, South African learners tested by the end of grade four struggle to read fluently and make sense of the texts used for teaching and learning. There are low learner achievement levels in the national assessments such as Annual National Assessments (ANA), in regional assessments such as Southern and Eastern Consortium for Monitoring Education Quality (SACMEQ) and international assessments such as Trends in Mathematics and Science Study (TIMSS). Much has to do with existing economic and linguistic inequalities in South Africa - as a 2011 study showed that children whose language of learning and teaching was Xitsonga, Tshivenda or Sepedi, one in two (50%) could not read by the end of grade 4 compared to one in 10 (11%) English and Afrikaans children[1]. Although South Africa's achievement levels in recent SACMEQ and TIMSS studies have shown some improvements (there has been a decrease in the percentages of learners who achieve at the lower mathematics levels of the SACMEQ hierarchies and an increase in the percentages that achieve higher levels) the scores are not yet adequate across the entire school system. It is evident that the numerous interventions implemented by the Education Sector such as developing and providing learners and teachers with good quality textbooks, the radical 1+4 Intervention Model that advocates professional learning communities, and self-study guides are not changing the country's mathematics performance significantly.[2]

The Initial Teacher Education Research Programme (ITERP -2014) identified the strengthening of initial teacher education as a priority as in-service interventions have had limited results. The study also provided a summary of research programmes reflecting the conditions endemic in schools across the country:

1. Low levels of English proficiency among both teachers and learners. This places a fundamental limit on academic progress, since English is the medium of teaching and learning in around 90% of schools.
2. Lack of adequate reading pedagogies, resulting in large numbers of learners reaching Grade 5 essentially illiterate.
3. Lack of adequate pedagogies for basic numeracy, resulting in learners up to and beyond Grade 7 using 'stick counting' methods to perform relatively complex arithmetic operations.
4. Low levels of subject knowledge among teachers.
5. The tendency for schools not to recruit and deploy primary school teachers according to subject specialisation, but to assume that all qualified educators are capable of teaching all subjects. Thus, at some stage of their careers, most primary school teachers will be required

[1] Spaull, N. 2015. Schooling in South Africa: How low-quality education becomes a poverty trap, in Child Gauge, PART 2 Youth and the intergenerational transmission of poverty

[2] Department of Basic Education. 2018. Teaching Mathematics For Understanding, Mathematics Teaching And Learning Framework For South Africa

to teach maths and English. Across all phases, there are too many teachers teaching subjects in which they did not specialise. [3]

These research findings, other research on initial Teacher Education and reports like the National Education Evaluation and Development Unit (NEEDU – 2012) observed that a major problem inhibiting school and learner performance is lack of knowledge on the part of teachers. The Primary Teacher Education Project (PrimTEd) was established to work with all public universities which offer ITE for prospective primary school teachers.

The aim of the PrimTEd project is to provide standards intended to guide the restructuring of the theory and practice components of the language and mathematics curricula for prospective primary school teachers. The programme theory identifies poor teaching by teachers at primary schools level as the reason for learners' poor performance. It takes its lead from the revised policy on the minimum requirements for teacher education qualifications. The policy wants the higher education system to produce teachers of high quality, in line with the needs of the country. This informs the basis for the development of core curricula for Initial Teacher Education (ITE), as well as Continuing Professional Development (CPD) programmes for teachers.

The PrimTEd project is a component of the Department of Higher Education and Training's (DHET) Teaching and Learning Development Capacity Improvement Programme (TLDCIP), and is under the overall authority of the DHET's Director-General. It is managed by the Chief-Directorate for Teaching and Learning Development, located in the University Education branch of the DHET. The project is supported financially by the European Union and the Zenex Foundation.

Seven collaborative Working Groups of primary teacher education academics have been established for Literacy, Mathematics (Number Sense; Mathematical Thinking and Geometry and Measure) and three cross-cutting groups; Assessment; Knowledge Management and Work Integrated Learning, each with a Coordinator based at a university. Criteria for participation in the working groups include a mixture of proven experts and relative novices in the respective academic field, and collaboration among at least three universities, which as a collective reflect the experiences of both historically advantaged and disadvantaged institutions. A National Working Committee (NWC) consisting of representatives from DHET, the Working Groups and the National Programme Coordination and Management Body was set up to provide intellectual leadership and technical support. The responsibility for the overall programme management and coordination of the PrimTEd Programmes falls under the National Coordination and Management Body. The JET Education Services to play this role and are separately funded by the Zenex Foundation.

The seven working groups have reported on their activities for the periods 2017/2018 and 2018/2019 through annual reports submitted to the National Coordination and Management Body. The findings related to these annual reports and the design of the project are provided in this report.

The Evaluation

The evaluation of the PrimTEd project was conceptualised as occurring in three phases. This formative phase that focused on the design elements of the project, a second phase focusing on the implementation strategies of the project and thirdly a results or outcomes phase that will assess the

[3] Taylor, N. 2014. Initial Teacher Education Research Project: An examination of aspects of initial teacher education curricula at five higher education institutions. Summary Report. Johannesburg: JET Education Services.

outcomes of the project at the end of the current project funding cycle. The design of the PrimTEd project was assessed for appropriateness and relevance in relation to the programme objectives and as conceptualised in the documented programme theory. Progress towards expected outputs was also assessed using available documents, project reports, information from Working Group coordinators and teacher educators at, at least five higher education institutions. The following key evaluation questions informed the line of inquiry and the instruments used to collect data.

- Is the design of PrimTEd appropriate to its aims?
- What are the strengths and weaknesses of the design?

Since several of the informants were not part of the design process of the programme, implementation evaluation related questions were used to gather evidence of experiences with the implementation of the programme. The following sub-questions were utilised.

- Is PrimTEd being implemented as planned?
- Where not, what are the reasons for non-implementation?
- What are the strengths and weaknesses of the PrimTEd project implementation?

A total of 24 interviews were planned to include the range of stakeholders - National Working Committee Members, Working Group Coordinators, Working Group Members and Teacher Educators that had participated in PrimTEd activities - but also to ensure that five different types of universities were included in the overall sample.

Findings

The programme design refers to the overall framework, the plans, the policies, structures and mechanisms put in place to manage the programme and to execute the plans. The PrimTEd project is based on a common agreement that primary schooling in South Africa is in a crisis and the extent of the crisis has been highlighted by the poor results in core subjects such as mathematics and literacy. The poor performance of the learners in the national assessments such as Annual National Assessments (ANA), in regional assessments such as Southern and Eastern African Consortium for Monitoring Education Quality (SACMEQ) and international assessments such as Trends in Mathematics and Science Study (TIMSS) stimulated and informed further research studies such as the Initial Teacher Education Research Project. The PrimTEd project is based on systematic research and research results that indicate a main cause – the main cause – for the learners' poor results, is the inability of the primary school teachers to adequately convey the content knowledge and skills of the subjects they are teaching. The PrimTEd intervention is directed at establishing standards intended to guide the improvement/ redevelopment/re-creation of the curricula (content and processes) for primary school teacher preparation at universities with special emphasis on mathematics and literacy. Adding to the relevance of the design is the involvement of university based practitioners and academics as the architects of the curriculum change process. This will enhance ownership of the outputs, understanding of the content, and streamline wider application and implementation at the universities. The Working Groups also developed 'organically' with three literacy focused working groups morphing into one Consolidated Literacy Working Group.

The overall project design was found to be relevant and appropriate for the objective it wants to achieve but there have been some challenges. For example, the availability of financial resources contributed to the design success but the delay in payment caused considerable frustration. The incompatible financial administrative systems at some universities also challenged the overall

project design. There is an assumption about the uptake by universities (of PrimTEd initiatives) as an 'event or occasion' rather than a process. As a process, the uptake may involve various steps and may require guidelines based on diverse experiences. There exists broad agreement about the necessity for common standards for Teacher Development Practices but there is also a concern that minimum standards will be interpreted within a compliance regime. The diversity of institutions - the staff and students - in terms of academic knowledge, experience and background is another challenge that is reflected in the level of engagement by the various institutions. The first four recommendations below are aimed at addressing the design challenges observed.

The evaluation also looked at initial implementation, the strategies employed, the processes used to engage with stakeholders, and the types and number of projects established. A National Working Committee (NWC), consisting of representatives from DHET, the Working Groups and the National Programme Coordination and Management Body provided intellectual leadership and technical support at a national level. Overall programme management and coordination and day-to-day intellectual and technical guidance to the subject-based working groups (WGs) and cross-cutting working groups (CCWGs) is provided by JET that also acts as secretariat to the National Working Committee. The management and support functions performed by JET are funded separately by the Zenex Foundation. This was found to be a 'successful' design and implementation strategy that avoided the complication of this necessary support service competing for the same pool of resources and freed up additional funding for the work of the Working Groups.

The Working Groups have managed to involve a diverse range of people – novices/ experts from different universities and capacity building of academics and the development of communities of practice have been mentioned as outcomes of the design of PrimTEd. While the project has succeeded in involving more and more participants from different institutions, there is still limited active engagement across all universities in South Africa. Additional recommendations are provided to strengthen implementation

Recommendations

It has been recommended that external financial administrative support is sought to combat the unwieldy university financial administrative systems. Alternately, university financial administrative systems should be streamlined to accommodate the work of the Working Groups.

The theory of change – involving the uptake by universities - can be fleshed out to include factors which contribute to producing outcomes, such as (university/ departmental/geographic/ linguistic) contexts and other related projects and programmes. This is a designing for implementation exercise that critically reflects on the adoption of innovation in higher education.

To address the concern that common standards will be interpreted as 'minimum standards' within a compliance regime a 'common high standards' narrative needs to be reinforced. The narrative should enable individuals to engage colleagues at department and faculty level. The project needs vigorous advocacy, both during the development of the standards, which is where PrimTEd ends, and then during the implementation of the standards.

There must be clear policies and strategies that will support the curriculum change efforts of the PrimTEd project. The entry requirement for teacher education programmes is one such policy.

It is recommended that each Working Group develops its own theory of change. A programme theory can be a very useful way of bringing together existing evidence about a project/ strategy, and

clarifying where there is agreement and disagreement about how the project is understood to work, and where there are gaps in the evidence.

The programme theory should include the successes 'professional development'; 'sustained momentum'; 'collegiality' and 'consensus building' observed by the respondents and linked to the outcomes and outputs planned by the working groups.

The Working Groups must also consider the use of time, the effects of time and the consequences of time as a factor for personal and organisational development and moreover, the time-bound nature of projects in the curriculum innovation process.

As suggested by most respondents, PrimTEd should make more use (continue to) of national workshops and conferences as advocacy mechanisms.

While much of the focus of this evaluation has been on assessing design and implementation elements for reasons of accountability – the monitoring mechanisms are in place to continue with this – there is also space to consider the authenticity of the designs, frameworks, and artefacts emerging from PrimTEd. This is where the research element comes in and a more reflective stance is required

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List of Abbreviations

AMESA	Association for Mathematics Education if South Africa
ANA	Annual National Assessments
B Ed	Bachelor of Education
CPUT	Cape Peninsula University of Technology
DBE	Department of Basic Education
DHET	Department of Higher Education and Training's
DVC	Deputy Vice Chancellor
EDF	Education Deans Forum
EFAL	English First Additional Language
HOD	Head of Department
HL	Home language
ITE	Initial Teacher Education
ITERP	Initial Teacher Education Research Project
JET	Joint Educational Services
KM	Knowledge Management
LOLT	Language of learning and teaching
MDG	Millennium Development Goal
NMU	Nelson Mandela University
NQTS	Newly qualified teachers
NWG	National Working Group
NWU	North West University
PrimTEd	Primary Teacher Education
RU	Rhodes University
SAARMSTE	S A Association Research Mathematics, Science and Technology Education
SAERA	South African Education Research Association
SARCHI	South African Research Chairs Initiative
SACMEQ	Southern and Eastern Consortium for Monitoring Education Quality
SACE	South African Council of Educators
SAMF	South African Mathematics Foundation
SPU	Sol Plaatjie University
SSI	Semi-Structured Interview
TLDCIP	Teaching and Learning Development Capacity Improvement Programme

TIMSS	Trends in Mathematics and Science Study
TOC	Theory of change
UCT	University of Cape Town
UJ	University of Johannesburg
UNISA	University of South Africa
UNIZULU	University of Zululand
UP	University of Pretoria
UWC	University of the Western Cape
WG	Working Group
WGC	Working Group Coordinator
WGM	Working Group Member
WIL	Work Integrated Learning
WITS	Wits University
WSU	Walter Sisulu University

1 Introduction and background to the PrimTEd Project

A strong and stable educational foundation is a good predictor of future success. This has informed a global commitment to achieve universal primary education for all by 2015 through the Millennium Development Goal (MDG). The policies and activities linked to the MDGs resulted in a significant expansion of primary education provision in many countries with a consequent rapid increase in teacher numbers.[4] It is also widely acknowledged that a key ingredient in that foundation is the instructional knowledge, motivation and emotional support provided by effective teachers from pre-primary school to secondary school. It is also assumed that teachers, and the actions they take in the classroom, have fundamental impacts on student learning; and that teachers are the most important resource at the school level for improving the quality of teaching and learning.[5]

Teacher competencies and preparation are recurring themes as countries, including South Africa, struggle with recruiting, training and retaining good teachers. The low standards in performance at school level have also 'infiltrated' universities. A learner only needs to get above 50% in four of seven subjects in order to pass well enough to gain university entrance. Teacher education programmes have lower entrance requirements in comparison with most other disciplines and students are accepted without any reference to their motivation to become teachers.[6] These and other factors, such as a dearth in research outlining primary school teachers' reading literacy and teaching practices especially in the Intermediate Phase[7], informed the Initial Teacher Education Research Project (ITERP) to investigate the quality of the English and mathematics curricula offered to B Ed students. This study opined that in-service interventions over the last two decades have had limited impact and that the greatest opportunity for improving the quality of schooling lies in strengthening initial teacher education at Universities. The Primary Teacher Education (PrimTEd) Project is the embodiment of this proposal.

The aim of the PrimTEd project is to provide standards intended to guide the restructuring of the theory and practice components of the language and mathematics curricula for prospective primary school teachers. The programme theory identifies poor teaching by teachers at primary schools level as the reason for learners' poor performance. It takes its lead from the revised policy on the minimum requirements for teacher education qualifications[8]. The policy wants the higher education system to produce teachers of high quality, in line with the needs of the country. This informs the basis for the development of core curricula for Initial Teacher Education (ITE), as well as Continuing Professional Development (CPD) programmes for teachers.

The PrimTEd project is a component of the Department of Higher Education and Training's (DHET) Teaching and Learning Development Capacity Improvement Programme (TLDCIP), and as such is under the overall authority of the DHET's Director-General. It is managed by the Chief-Directorate

[4] Moon, B., (ed.) 2013. Teacher Education and the Challenge of Development. A global analysis. Routledge. London
[5] Nordstrum, L.E., 2015. Effective teaching and education policy in sub-Saharan Africa: A conceptual study of effective teaching and review of educational policies in 11 Sub-Saharan African countries. USAID.
[6] Centre for Development and Enterprise (CDE). 2015. Teachers in South Africa. Supply and Demand 2013 – 2025. Johannesburg, South Africa.
[7] Taylor, N. 2014. Thinking, Language and Learning in Initial Teacher Education. Presentation to the Seminar: Academic Depth and Rigour in ITE. 30-31 October 2014, University of the Witwatersrand.
[8] Department of Higher Education and Training. 2015. National Qualifications Framework Act, 2008 Revised Policy on Minimum requirements for Teacher Education Qualifications. South Africa

for Teaching and Learning Development, located in the University Education branch of the DHET. The project is supported financially by the European Union and the Zenex Foundation.

The Working Groups were proposed at a national symposium called by DHET in 2016. All universities and relevant departments were invited and almost everyone sent at least two people to this event. A call for volunteers was made at this meeting where Maths, Literacy, Assessment and WIL (Work Integrated Learning) were initially identified. The Maths Group split into three groups (Number Sense, Shape and Space, and Mathematical Thinking) and three literacy groups (Literacy in African languages, Literacy in English, and Multilingual Literacy) amalgamated into one. Coordinators were elected and tasked to work collaboratively on founding principles and project plans for each group.

There are seven Working Groups; one for literacy and three for mathematics and three cross-cutting groups; Assessment; Knowledge Management and Work Integrated Learning, each with a Coordinator based at a university. They all target new teacher graduates and the Consolidated Literacy Working Group's purpose is to develop their ability to teach African languages and English First Additional Language, with a special focus on reading. The Mathematics Number Sense Working Group wants to develop their ability to teach number sense and early algebra. The Mathematics Geometry and Measurement Working Groups aims to develop the abilities to teach geometry and measurement. The Mathematical Thinking Working Group wants to develop the abilities to think mathematically and to infuse their own teaching with a mathematical thinking approach. The crosscutting working group on Assessment aims to develop assessment instruments to assess developing competence of primary teacher education students and new primary teacher graduates. The Work-Integrated Learning Working group wants to develop models and tools to support and enable effective work-integrated learning in primary teacher education students in the areas of literacy and mathematics teaching. And finally, the Knowledge Management Working Group aims to manage the knowledge developed including the materials, for the purposes of monitoring and evaluation, communication and marketing.

There is a National Working Committee, with representatives, from each working group, the DHET, DBE, and from the National Programme Coordination and Management Body. It meets biannually to coordinate and synthesise the work of the working groups and make recommendations on Initial Teacher Education (ITE) programmes. Wide participation of academics (teacher educators) in the Working Groups is a key principle of the project. This principle is driven by the assumption that having teacher educators drive the process, promotes ownership of the products and builds both capacity and a sense of community. In addition, national seminars and conferences throughout the life of the project have been targeted to consolidate the advocacy and capacity building components of the programme.

2 Objectives and method of the evaluation

PrimTEd is a national project working with all public universities which offer ITE for prospective primary school teachers. The aim of the project is to restructure the theory and practice components of the language and mathematics curricula for prospective primary school teachers. The assessment of this exercise will be conducted in three phases. The first one is a formative phase to provide evaluative feedback on the design and initial implementation of the PrimTEd programme. The second phase will focus specifically on the relevance, effectiveness and efficiency of the implementation strategies employed and a third phase will assess the outcomes (results) of the programme in terms of the uptake of the learning and resources by all the universities in their ITE programmes.

This report reflects the focus of the first phase of the evaluation study which has a formative purpose aimed at strengthening the design and implementation of PrimTEd. The design will be assessed for appropriateness and relevance in relation to the programme objectives and as conceptualised in the documented programme theory. Progress towards expected outputs will be assessed using available documents, project reports, information from Working Group coordinators and teacher educators at, at least five higher education institutions. The following key **evaluation questions** informed the line of inquiry and the instruments used to collect data.

- Is the design of PrimTEd appropriate to its aims?
- What are the strengths and weaknesses of the design

These questions have been incorporated into semi-structured interview instruments targeting Working Group Coordinators, Working Group Members, National Working Group Members and University Staff that attended one or more PrimTEd event. However, since several of the informants were not part of the design process of the programme, some of the implementation evaluation questions were also used to gather evidence of experiences with the implementation of the programme. The following sub-questions were utilised.

- Is PrimTEd being implemented as planned?
- Where not, what are the reasons for non-implementation?
- What are the strengths and weaknesses of the PrimTEd project implementation?

2.1 Method and sample

A total of 24 interviews were planned to include the range of stakeholders listed above but also to ensure that five different 'types'of universities[9] were included in the overall sample. Two individuals in the National Working Group and one Coordinator could not avail themselves for the interviews and more universities were included in the interviews, see table 1 below.

Table 1: Proposed interviews and completed interviews

Institution	Position	Gender	No. of interviews proposed	No. of interviews completed
UWC	WG coordinator (team leader)	M	1	0
	WGM	M	1	1
Rhodes	WG coordinator (team leader)	M	1	1
CPUT	WGM	F	1	1
	University staff member (reps)	F	1	1
Walter Sisulu	WGM	F	1	1
	University staff member (reps)	M	1	1
WITS	WG coordinator (team leader)	M	2	2

[9] Different 'types' of universities considered urban/rural; historically dis/advantaged; comprehensive/multi-campus etc.

	WGM	F	1	1
	University staff member (reps)	F	1	1
UNISA	WG coordinator (team leader)	F	1	1
	WGM	F	1	1
	University staff member (reps)	F	1	1
NW University	WG coordinator (team leader)	F	1	1
	WGM	F	1	1
	University staff member (reps)	F	1	1
UJ	WG coordinator (team leader)	F	1	1
	WGM	F	1	1
Sol Plaatjie University	WGM	M	0	1
Sol Plaatjie University	WGM	M	0	1
UniZulu	WGM	F	0	1
EDF	NWG	F	1	0
DBE	NWG	M	1	1
DHET	NWG	M	1	1
JET	NWG	M	1	1
SACE	NWG	M	1	0
TOTAL			**24**	**24**

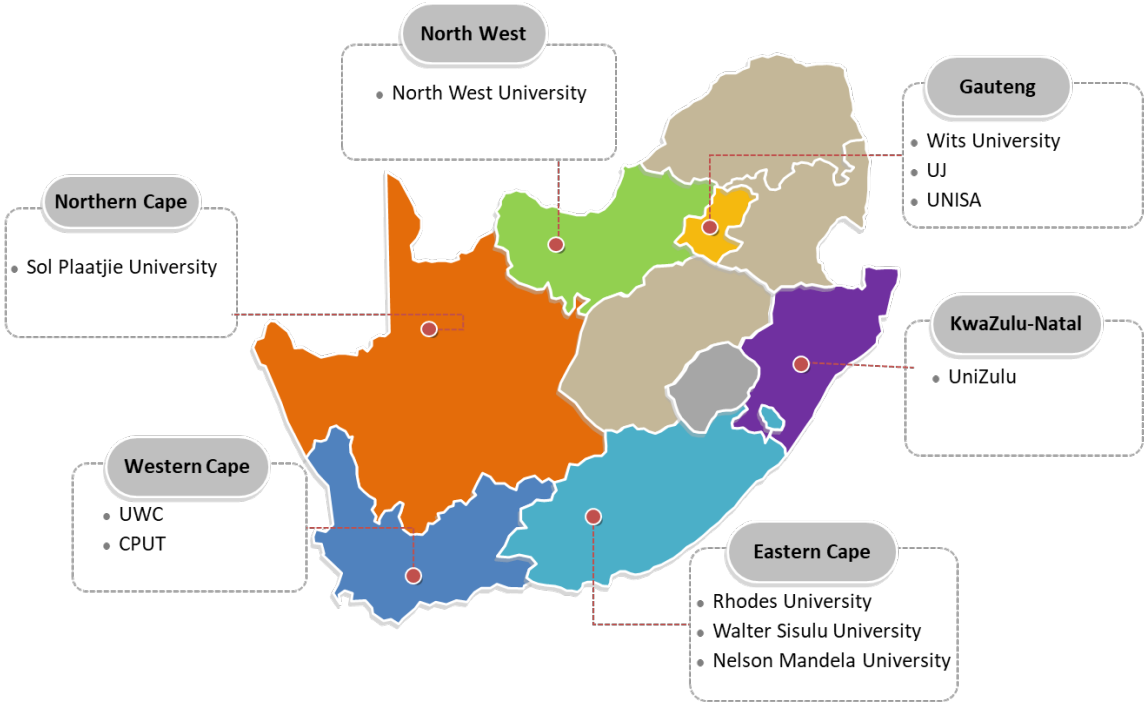

Figure 1: Map of the Universities included in the sample

Limitations

The list and range of universities on the map above may seem expansive but it was not possible to physically visit all the institutions. A total of 9 interviews were conducted telephonically and while all the questions were fully explored, the technology creates a barrier that is not present in a face-to-face interview. Only people directly or indirectly involved with the PrimTEd project were interviewed.

3 Presentation of findings for the design and implementation evaluation

A brief reflection on the theory of change of PrimTEd as provided in the request for proposals (attached as Appendix 1) is followed by feedback from interview respondents about their understanding of what levels of transformation was needed and by whom. The challenges to this and related tasks are shared and some background to the programme design is provided. This is followed by participants' understanding of the purpose(s) of the working groups, their observations of the make-up of the working groups as well as the successes and challenges.

An analysis of the annual reports of each working group allows for an assessment of the effectiveness of the implementation of each group and the budget analysis comments on their efficiency. The outline of the project outcomes and unintended outcomes is followed by a discussion of the findings and recommendations for the design and implementation of PrimTEd.

3.1 Reflections on the current PrimTEd programme theory

The PrimTEd programme theory is explained as follows: First, the problem is defined as poor learner performance in mathematics and literacy in South African schools. The primary school teachers' lack of understanding of and inability to adequately convey the content knowledge of the subjects they are teaching has been identified as the main cause. Based on the evidence, the project designers decided to focus on this cause. The intervention consists of a re-direction of initial teacher education at university level. There is the targeted involvement of teacher educators from the Mathematics and Literacy disciplines and from three cross disciplinary sectors namely Assessment, Knowledge Management and Work Integrated Learning (Teaching Practice). The Working groups also targeted experts and novices from different universities. It is expected that the standards formulated by PrimTEd will guide university faculties to develop curricula which will produce teachers with improved knowledge levels (subject content knowledge) and better teaching practices (pedagogical content knowledge). In turn, these improvements ultimately should lead to enhanced learner performance in mathematics and literacy. In the medium term appropriate uptake of the PrimTEd products ought to lead to an improved ability of newly qualified teachers to teach reading and mathematics more effectively.

To assess the understanding of the theory of change among participants, the following PrimTEd premise was shared with respondents: "Initial primary teacher education for mathematics and literacy teaching requires radical self-reflection and transformation." And the respondents were

asked: 'What levels of transformation (change) are required (and by whom) to improve the teaching of mathematics and literacy in primary schools?; What is the logic of the change process (ToC) of the Working Group that will result in the levels of transformation required?' The following figure reflects the key themes (aspects that needed change) that emerged from the interviews.

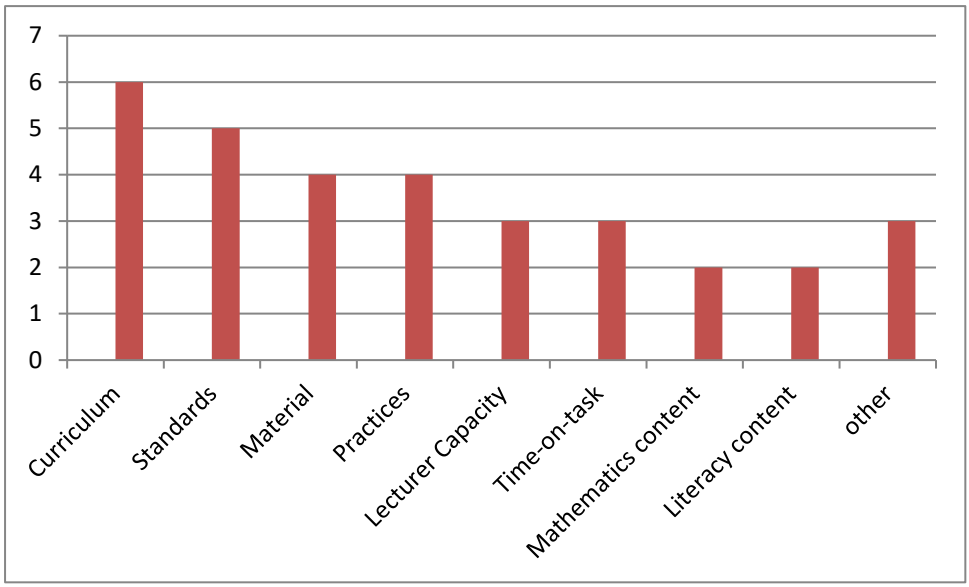

Figure 2: Areas in need of transformation

The responses reveal significant convergence around where transformation is required; that transformation is needed within the curricula, that there should be common standards and that there is a need for the practical application in classrooms though materials, toolkits and other resources. Transformation should be about curriculum change but also about building the competency levels of teacher educators. The key areas of literacy and mathematics are emphasized by the respondents. There is also recognition of the contestation around having common standards and a warning that these 'can be reductionist'.

However, while there seems to be convergence around the levels of transformation required, some respondents (9 people – just under 40%) raised several challenges that need to be factored into the theory of change. One respondent named the diversity of students' background, competence, capacity, experience, even at one institution to be a significant challenge to teacher educators who are unable to differentiate and satisfy the different needs of the student teachers. The bigger class sizes also mitigate against adequate facilitation of concepts in some departments. UNISA for example has to deal with vast numbers of students with minimal experience and competence in mathematics and they must all be prepared as mathematics educators at the primary phase. The diversity of practices of Teaching Practice (Work Integrated Learning) across universities also hampers the adequate preparation of student teachers. Limited mentoring to student teachers is provided by part-time or contract staff or by staff with little or no disciplinary knowledge of the subjects they are observing. The issue of second language learning was singled out as a key challenge.

Different admissions criteria for students some have much higher competency levels than others. We are also aware of the second language situation where students are learning in their 2nd language. SSI_ WGM

These and other challenges somehow need to be considered in terms of how the strategies employed will combat or address the challenges that are clearly stumbling blocks and/or how challenges are dealt with by a more flexible approach to implementation. The implications for the theory of change will be discussed later in the recommendations section.

3.1.1 Key Point summary

- There is an assumption about the uptake by universities (of PrimTEd initiatives) as an 'event or occasion' rather than a process. Having developed standards, there will be a process of working with these standards to create new practices.
- There is general agreement that the PrimTEd process is essentially about developing standards to inform curriculum change.
- A core part of the curriculum change agenda is the development of common standards – the notion of having common standards is not without contestation. This did not come across as resistance but as recognition of existing differences in capabilities and resources.
- Activities, materials, toolkits allow for practical application of ideas and understanding.
- There are huge challenges inherent in the diversity of the students at different universities as well as the policies and practices (recruitment and teaching practice) of the different institutions.

3.2 Programme background and design

Programme documents and feedback from respondents indicate that the PrimTEd project has had engagement with individuals from 23 universities that are participating in at least one of the seven working groups. It is not clear how active these individuals are. There is enough indication that some are more active than others. The Working Group Coordinators interviewed are all senior staff members of the universities, occupying either HoD positions, acting as a dean and a retired academic who had been HoD before retiring. All of the WGCs and National working group members interviewed had some engagement and awareness of the Initial Teacher Education Research Project (ITERP)[10] and joined the PrimTEd project at the start or shortly after the launch in 2016. The other participants interviewed – Working Group Members started with PrimTEd at different times, a few (three) at the start in 2016, five in 2017 and the rest (four) started in 2018. The WG members provided a range of reasons for their participation.

[10] Taylor, N. 2014 The Initial Teacher Education Research Project. An examination of aspects of initial teacher education curricula at five higher education institutions. Summary Report. JET Education Services.

Three indicated 'personal growth/ professional development' as a reason; four stated that a colleague/ the Deputy Vice Chancellor (DVC) encouraged and invited them to attend and two stated that they were asked by the WG Coordinator to attend.

3.3 Purposes of the Working Groups

Each Working Group Member was asked about their understanding of the pupose of the working group they belonged to and below are some of the responses. A majority of the responses to this question reflected agreement about the purpose being the development of consensus about approaches to the teaching and learning for mathematics and literacy in primary schools. Some described these as the development of standards and others spoke about developing conceptual frameworks and suitable activities.

> *To gauge what is happening, what works and what is not working with the teaching of reading and to develop standards. SSI_WG Member*
>
> *It has become the standards task – conceptualising your topic around standards. But also designing tasks and assessments. SSI_WG Member*

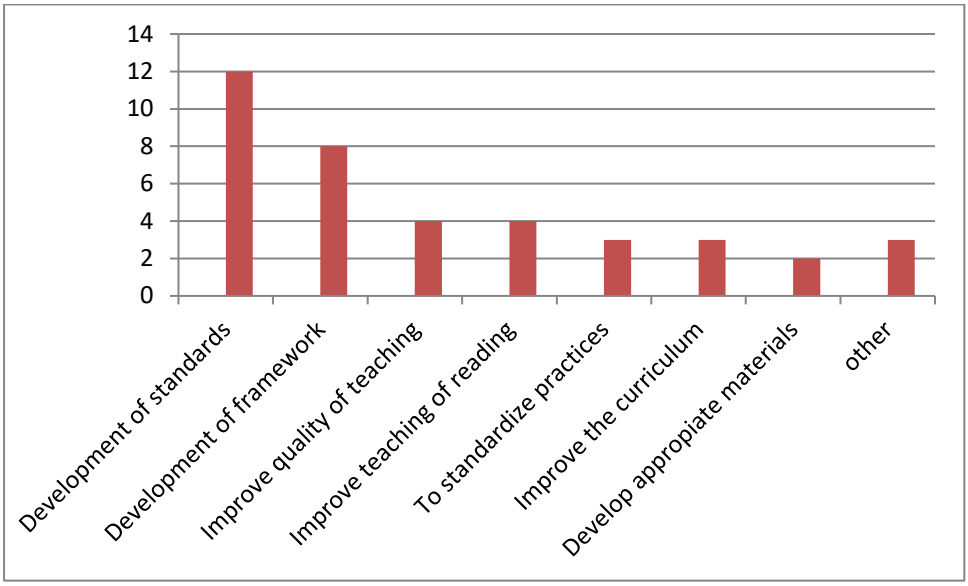

Figure 3 The purpose of the working group

While there may be agreement on the purpose of the working groups, there seems be some contention about the question of standards and standardization. One respondent commented that while there is a need for a standardized approach, it should not be prescriptive. Another warned that standards can also become just a symbolic document. It can be implemented from the top down but never understood. He added however that PrimTEd is a bottom-up approach and that real standards capture consensus by a community of practitioners.

3.3.1 Diversity within the Working groups and broad participation

Initial criteria for participation in the working groups included the involvement of a mixture of proven experts and relative novices in the respective academic fields; there was an aspiration for

collaboration among at least three universities and to bring on board the experiences of both historically advantaged and disadvantaged institutions. Respondents were asked: To what extent has the working groups successfully adhered to the above criteria? All respondents stated that the working groups had successfully adhered to the criteria above, however some Universities have broader participation than others. The figure (4) below represents the names of working group participants from affiliated universities involved in all the working groups. Some are more active than others but they all attended at least one session of a working group. A country map of university linked PrimTEd participation is attached as appendix 3.

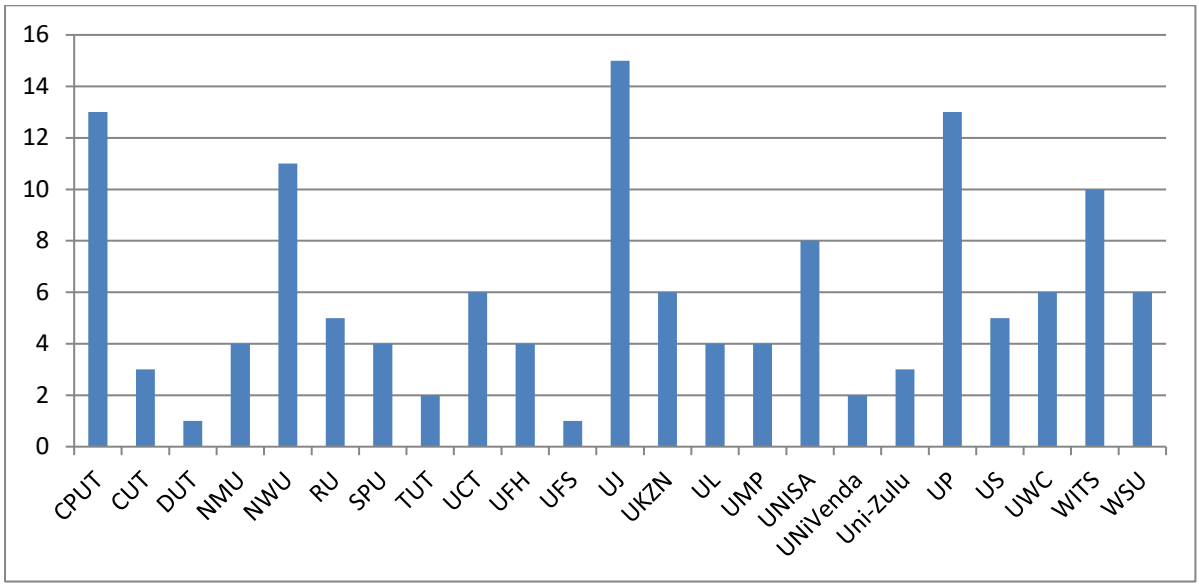

Figure 4: Working Group participants from Universities

There has been Working Group participation from 23, out of a total of 24 Public universities in South Africa. Some institutions are more active with CPUT, NWU, UJ, UP and WITS having 10 or more people involved in the Working Groups. At some institutions there had been limited involvement as expressed in the following response;

> *There are only two of us involved in the Working groups. But we are a very new university with a small staff. SSI_WGM*

Several other respondents explained the limited involvement by staff at their universities. One stated that the Foundation phase had been newly introduced and only a few staff members had a vested interest in PrimTEd. For some there was limited involvement but general awareness because staff-members were kept informed. The Education Deans also get regular updates via the Education Deans Forum. A big component of teacher preparation work is Work Integrated Learning (WIL/teaching practice) and Deans and HoDs are very supportive of efforts to improve this key component of teacher development. Two NWC respondents expressed great satisfaction for the persistent involvement and participation of colleagues from rural universities.

3.3.2 Successes and Challenges related to the design of the working groups

Several respondents indicated that diversity of the working groups was their biggest strength. This allowed diverse HE institutions to work together on teacher preparation for primary school. The working groups have participation from the broad spectrum of universities and experienced researchers are able to mentor and support less experienced researchers. Other successes mentioned include the general capacity building of academic staff, the development of a common understanding of concepts, e.g. standards, conceptual frameworks and WIL. Teacher educators have been provided with an opportunity to work collaboratively on common standards for literacy and numeracy. The work of the working groups also created awareness of the competencies of the students through the assessment of 1st and 4th year students by the Assessment working group. The quote below provides a neat summary of the outcomes of the design.

> *The forming of communities of practice, people working together, Walter Sisulu's involvement in the assessment working group. Working Group participation has grown in number and quality. 14 Universities are showing the way forward. The biggest achievement has been the collegial support experienced across universities. The understanding that this is about how to teach reading for example. This message is being picked up. SSI_NWC*

Respondents were also asked what contributed to the successes listed above. A large proportion indicated that it was the leadership provided by the coordinators, managers and administrators. The coordinators and others suggested that it had to do with the commitment and willingness of the participants. Almost everyone agreed that the availability of financial resources ensured the ability to meet regularly and enabled the research activities that resulted from the meetings and workshops. The financial resources were also incentives that allowed for reasonably comfortable writing retreats, the covering of transport and accommodation costs and the attendance of conferences.

Financial resources (its availability) were also listed as a challenge as the first tranche arrived late and this frustrated planning and activities and or delayed the initial stages for some working groups. Other challenges related to the design of the working groups included a concern that there has not been universal buy-in from all universities or their education faculties or departments; that academic staff already involved have unmanageable workloads and not enough time to do justice to the purposes of the working groups; and education faculties do not get the support required from management at universities. As departments or faculties they remain understaffed and accountable to management regimes dictated solely by 'narrow' teaching and research commitments. For some there is an over reliance on contract staff and a challenge of huge class sizes.

3.3.3 Key point summary

- Individuals from 23 universities are participating in at least one of the seven working groups
- Most respondents were aware of the origins of PrimTEd through involvement with the Initial Teacher Education Research Project (ITERP). Not all participants were involved in this research project
- The purpose of PrimTEd has been articulated as the development of consensus about approaches to the teaching and learning for mathematics and literacy in primary schools

- The Working Groups have managed to involve a diverse range of people – novices/ experts from different universities
- There is still limited involvement within institutions and across all the universities in South Africa
- Capacity building of academics and the development of communities of practice have been mentioned as outcomes of the design of PrimTEd
- The leadership of the Coordinators and Project Management contributed to successes
- The availability of financial resources contributed to design success but the delay in payment caused considerable frustration.
- Incompatible financial administrative systems at some universities challenged the overall project design

3.4 Projects implementation and management

All respondents were asked to comment on the successes and challenges of the working groups. This evaluation also had access to the initial plans and annual reports of each working group. The annual reports for each working group are summarized below with the comments provided by the Management Team (JET) that received these reports. These comments are against the set indicators for the periods 2017/2018 and 2018/2019. It proved tricky to compare indicators between 2017/2018 and 2018/2019 for each WG as indicators and even outputs changed between the years. In many cases, indicators were similar though more detailed in 2018/2019. However, there are cases where they were vastly different. In order to maintain consistency, the comparisons below outline whether indicator targets were met. In cases where the year is not included, it was not included in the annual report. For a full table including outlined targets and indicators please see **appendix 1.** These comparisons are followed by comments about the over/and/or/ underspend of the budgets for each period by the groups.

3.4.1 Effectiveness of the various working groups

Assessment Working Group

Deliverable 1: Collaborative Network and Capacity Building	Assessment for students entering ITE and those in 4th year	OUTPUT 2: Assessment (First year B.Eds)
• 2017/2018: Exceeded expectations • 2018/2019: Met expectations	• 2017/2018: Exceeded expectations	• 2018/2019: Met expectations

OUTPUT 3: Assessment (Fourth year B.Eds)	OUTPUT 4: Report and Share Lessons	OUTPUT 5: Project, Management Communication and Reporting
• 2018/2019: Met expectations	• 2017/2018: Met expectations • 2018/2019: Exceeded expectations	• 2017/2018: Met expectations • 2018/2019: Met expectations

Figure 5 Effectiveness of the assessment working group

The Assessment working group met all its targets and in certain cases, the targets were exceeded. The latter were in the areas of conference presentations and publications planned.

Geometry and measurement working group

OUTPUT 1: Core Curriculum Standards	OUTPUT 2: Assessment	OUTPUT 3: Development of learning materials
•2018/2019: Met expectations	•2018/2019: Met expectations	•2018/2019: Met expectations

OUTPUT 4: Work integrated learing	OUTPUT 5: Professional Development and Collaboration	OUTPUT 6: Research
•2018/2019: To be addressed	•2018/2019: Met expectations	•2018/2019: Exceeded expectations

Figure 6 Effectiveness of the Geometry and Measurement working group

There was no 2017/2018 report available for the Geometry WG. However, 2018/2019 was successful as 5/6 outputs had indicators where targets were either met or exceeded. Only Output 4: Work Integrated Learning had items that needed to be addressed.

Knowledge management working group

Output 1: Course materials and multimedia	Output 2: Website for all PrimTEd products accessible to all	OUTPUT 3: Research from PrimTEd WGs communicated and applied for use
•2017/2018: Met expectations or no target •2018/2019: Met expectations	•2017/2018: Some progress but not all expectations met •2018/2019: Met expectations	•2018/2019: Met expectations

OUTPUT 4: Reports and communications
•2017/2018: Met expectations •2018/2019: Met expectations

Figure 7 Effectiveness of the knowledge management working group

Knowledge management kept its outputs consistent. 2017/2018 saw some challenges with regards to output 2, and provided no targets for one of output 1's indicators. However, all targets were met in 2018/2019.

Language and literacy working group

Development of core competency teaching standard for literacy	Research on Literacy Teaching	Assessment items developed and trialled	Materials development
•2017/2018: Met expectation •2018/2019: Exceeded expectations	•2017/2018: Met expectations •2018/2019: Met expectations	•2018/2019: is due to take place during 2019. However, it is being overtaken by larger developments around the assessment field	•2018/2019: Met expectations

Figure 8 Effectiveness of the Language and literacy working group

There were fewer outputs in 2017/2018 than there were in 2018/2019, though both were met. 2018/2019 was inconsistent for the Language and Literacy WG, as expectations were met and exceeded, the output related to Assessment items being developed and trialled did was overtaken by larger developments in the assessment field.

Mathematical Thinking working group

Development of Core curriculum standards	Curriculum standards	Assessment Tools	Development of Learning Materials
•2017/2018: Met expectations	•2018/2019: Met expectations	•2018/2019: Some progress, expectations not met	•2017/2018: Met expectations •2018/20019: Met expectations

Professional Development and Collaboration Activities	Integrated Research
•2017/2018: Met expectations •2018/2019: Met expectations	•2017/2018: Met expectations •2018/2019: This is a continuation of the work reported above and presented at national and international conferences; further outputs are planned for 2019.

Figure 9: Effectiveness of the mathematical thinking working group

Mathematical thinking saw an increase in the number of outputs between 2017/2018 and 2018/2019. In the second year, most of the outputs have met expectations. The only challenges were under Assessment tools and Integrated research.

Number Sense working group

Core curriculum standards for the development of prosepctive teachers competence to develop children's number sense	Core curriculum standards	Professional Development and/or collaboration events and activities for academics
•2017/2018: Ranges from indicator planned in 2019, expectations not met and expectations met •2018/2019: Met expectations	•2018/2019: Met expectations	•2017/2018: Met expectations

Assessment instruments for core standards	Teaching and Learning Materials	Work-Integrated Learning Materials and tools to Assess the teaching of number sense
•2018/2019: Met expectations	•2018/2019: Met expectations	•2018/2019: Some progress but has not met expectations

Professional development and collaboration	Integrated Research
•2018/2019: Some progress but expectations not met	•2018/2019: Some progress but expectations not met

Figure 10: Effectiveness of the number sense working group

This working group started off slowly with plans and intentions in place during the first year. It reached most of the targets set for 2018/19 except for WIL, professional development and integrated research where progress has been made but expectations not fully met.

Work Integrated Learning working group

Framework and innovation configurations for	Output 2: Materials developmment	Output 3: Assessments	Output 4: Research
•2017/2018: NA •2018/2019: Has met expectations	•2017/2018: NA •2018/2019: Met expectations	•2017/2018: NA •2018/2019: Met expectations	•2017/2018: NA •2018/2019: Met expectations

Figure 11: Effectiveness of the work integrated learning working group

Most of the activities for this working groups occurred in the second period. It has met all the targets set.

3.4.2 Working group budgets

WG	2017/2018	2018/2019
Assessments	No overspend or underspend	Overspend
Geometry and Measurement		Overspend
Knowledge Management	Underspend	Overspend
Language and Literacy	Underspend	Underspend
Mathematical Thinking	Underspend	Overspend
Number Sense	Underspend	Overspend
Work Integrated Learning		Underspend

For the Assessment WG there was a 12% over expenditure reported for 2018/2019. Much had to do with the late disbursement of funds during the initial period. The WG is unable to accommodate the growing interest among universities who wish to join in the assessment activities. The team will have to cut back in year 4 to meet only the targets set in the plan (and not exceed them). The Geometry and Measurement had an overspend of 11% overall for 2018/2019 and it has managed to meet all of its deliverables. For the Knowledge Management Group there was a significant underspend on the project for the 2017/2018 period, due to difficulties in setting up the website. It has caught up with it planned activities and will receive the full tranche payment for this period. The literacy Working Group also had significant under spending in previous years. It received only 49% of what is was supposed to have been paid. This was largely due to the university accounting systems not being fully aligned to project requirements. It has received the full amount requested for the next phase.

The Mathematical Thinking project was overspent by 4% overall. The WG has managed to catch up on its outstanding activities. The Number Sense the project was also significantly overspent by about 44%. The WG was accruing a substantial portion of funds to pay for invoices that had been received but not yet paid, or were in the process of being paid. Necessary supporting documentation was provided to substantiate these committed funds. There was a significant underspend on the WIL project for the 2017/2018 period which is why no additional tranches were transferred to this WG in the 2018/2019 period. This was not due to targets not being met, but because the host university is subsidizing the work of the working group coordinator. Over the 2018/2019 period, this WG managed to spend 91% of the total disbursements made.

3.5 Implementation successes and challenges

The interview respondents spoke of remarkable achievements of the different working groups, for example the annotated bibliography for African languages, academic papers presented at conferences, curriculum frameworks, literature reviews, the toolkits, lesson plans, guidelines, assessment results, the website and newsletters and other outputs. The successes of the implementation strategies, according to the respondents can be clustered around four main themes; these are 'professional development'; 'sustained momentum'; 'collegiality' and 'consensus building'.

Table 2: Successes related to implementation

Theme	Example
Professional Development	*Some group members are novices – not anymore. Everybody is now able to contribute at a satisfactory level. SSI_WGM*
Sustained Momentum	*All the deadlines are met. All deliverables are there and now we refine and ensure alignment with DHET requirements. SSI_WGC* *All we need now is to ensure uptake and implementation across universities to bring improvement in primary education. SSI_NWC*
Collegiality	*There is great teamwork and we are slightly ahead because of this. SSI_WGC* *All the voices are heard and given the opportunity. This has been enabling. SSI_WGM*
Consensus building	*Firstly, when we started I was not sure but this WG has taken a definite clear direction. SSI_WGM* *We always have 1 hour discussing our common view of practice. New people are starting to do stuff. SSI_WGM*

Some of the enablers mentioned by the respondents included the leadership provided by the WG Coordinators, the availability of financial resources, the rich experiences of the experts used, the commitment participants had to literacy, maths and teacher development, the opportunities to attend conferences, the collegiality that emerged from this experience and the high level of academic involvement within institutions. Having JET as the implementing partner was listed as an enabler by WG Coordinators, WG Members and the NWG members interviewed.

The challenges for implementation, related to the management and administration of finances featured strongly for most of the coordinators interviewed, some Working Group members as well as members of the National Working Committee. The first major obstacle was the late payment of the first tranche of project funds. One respondent commented that the Working Group received the first real tranche 15 months into the project and then there was a need to rush the spending within a short space of time. Several respondents mentioned the initial delayed payment as being a challenge for the Working Groups. This challenge was compounded by the by national government financial regulatory schemes that determined that Universities could not spend the available funds on staff salaries as this would be 'double-dipping'. Universities also complained that they did not have dedicated or required staff to manage the funds according to required regulations; some universities (WITS for example) had vastly different financial systems that frustrated financial management and reporting instead of facilitating the process. As a result, Working Groups reported under and/or over- spending that had more to do with the university financial management systems' inability to pay accounts than actual Working Group activities. The unwieldy university financial requirements for inter-university projects were challenging for some. Where the universities were able to management the funds made available – had required administrative personnel, and flexible systems – the financial management was more successful. However some Coordinators commented that the financial reporting template was too tedious and required some time navigate. The requirements of the financial regulatory schemes have meant that university staff could only claim for hardware (laptops), buyouts (time), conference attendance, travel and accommodation. Senior staff find it extremely difficult to employ replacement people on contract. The workload of participating staff was again mentioned as a major challenge and time as a challenge is captured in the quote below:

> *Time is a huge problem. It took a long time to formulate these projects. Change is difficult. You learn maths by doing, not by talking. The time scale was a challenge. It took us two years to get consensus. Time is a constraint. We must plan for slow movement and change. SSI_WGC*

3.5.1 Key point summary:

- All the Working Groups operate on the basis of approved plans and budgets. They report progress against planned outputs and outcomes
- The annual reports reflect that most of the Working Group had met or exceeded their targets for the two periods – 2017/2018 and 2018/2019 – and are on track where targets still need to me met

- The reporting template proved to be challenging at first but coordinators are getting used to the reporting requirements
- A summary of the financial records reflect overspending and underspending by all of the Working Groups. This had to do with delayed payments of tranches, the pressure of this on spending cycles and incompatible financial management systems at some universities
- The successes of project implementation strategies, according to the respondents are centred around 'professional development'; 'sustained momentum'; 'collegiality' and 'consensus building'
- Unwieldy university financial requirements for inter-university projects was cited as a major challenge, as was the workloads of individual staff members
- Time, as a factor for development, should be considered for future planning and change that occur with individuals as well as in institutions.

3.6 Project outcomes, unintended outcomes; coherence, participation and professionalism

The focus on the project outcomes for this first phase of the evaluation was more exploratory as it was clear that some informants would know more about the specific outcomes than others. A list of outcomes – available on the JET website was provided in the questionnaire to assist the respondents.

Assessment Working Group: Collaborative network and capacity building; Common written test assessments; Near-end line Y4 summative assessment; number of universities participating.

Geometry and Measurement Working Group: Minimum (core) curriculum standards; Assessment items; Learning materials?

Knowledge Management Working Group: Courses and materials in multiple media; Website for all PrimTEd products accessible to all; Research from PrimTEd workgroups communicated and applied for use.

Consolidated Literacy Working Group; Annotated bibliography of early reading development in African languages; Full literature review of early reading development in African languages; Overview bibliography; more.

Mathematical Thinking Working Group: Minimum (core) curriculum standards; Assessment items and related rubrics for assessing; Learning materials that can be used.

Number Sense Working Group: Literature review and research informing and used in B Ed Foundation phase; Number Sense guidelines for teachers.

Work Integrated Learning Working Group: The group has developed and piloted an integrated approach to WIL, which includes the production of learning materials and tools relevant to the work stream topic which pertain to how to support, mentor and assess this topic during teaching practice.

These and other outcomes (outputs) will be systematically engaged in the next phase of the evaluation but respondents were also asked about unintended outcomes or unplanned outcomes that emerged. Other, more general outcomes such as coherence and wider participation and professionalism were also explored.

Below are some **unintended outcomes** shared. These are best expressed in the respondents' own words: They refer to research, publications, assessment, access to resources and professional growth.

> *In terms of **research**, quite a lot has happened. Not actually intended. Unexpected but outcomes. We made students write tests in English and IsiXhosa. We can now do proper assessment of skills levels. SSI_WGM*

> *Yes, the **research papers** currently under review weren't planned. They emerged out of the Annotated Bibliography exercise and point to the gaps/ weaknesses in research. The Skinny books also happened and the decoding in African languages. All unplanned. SSI_WGC*

> *This may be nothing for others but I never thought we would gain **access to such valuable resources**. Some of the books and equipment are very expensive; we would never have been able to get them. SSI_WGM*

> *I think a realisation that other universities have bigger problems. The **assessment** marks for our students are incredibly high. Where students are compelled to take the test in their 2nd language, English, they struggle. We are looking at doing the assessment in IsiXhosa as well but our students are doing better than other students, relatively speaking. SSI WGM*

> *It was intriguing to watch the **growth of the group**. This process was desperately needed. What has really been created is a community of maths education people happy to questions things with amazing support. And there are young people coming into the group sucking up the opportunities available. SSI_WGM*

According to one respondent, different perspectives have been allowed to surface and these were all debated. The bubbling debates in Maths for example, were also informed by the input from SAARCHI Chairs[11] and this stimulated interest. Another stated that there is no coherence as yet but the development of standards will contribute to the building of consensus and agreement about approaches to teaching and learning and that this should be considered a work in progress.

The respondents were cautiously optimistic about the principle of wider participation across the universities. One suggested that you need one person per university who is committed and will act as the champion for the project. This person should be supported at local level to drive structures and support ongoing activities and implementation. Most stated that that the huge workload of staff was a stumbling block for wider participation. Much more information sharing was needed, even using local media so that the concerns about reading and maths learning can become part of the discourse of communities and schools. Universities will be forced to 'up their game'. The best advocacy strategies for PrimTEd were, according to the respondents, national workshops and

[11] Research Chairs initiative established in 2006 to strengthen and improve research and innovation capacity of public universities – a strategy to retain and attract excellent researchers and scientists.

national conferences. The very many PrimTEd related presentations at the SAERA conference created interest and awareness but also contributed towards the galvanising of a community of practice.

Professionalism will be enhanced by the creation of common standards for the practices in initial teacher education, according to a respondent. The implementation of common standards across the different institutions will be a problem and this must be carefully monitored. Another respondent warned that having standards can end up in being a tick-box exercise and this is not the ideal. The profession of teacher development should be informed by high standards that are adhered to by all.

Respondents were also asked for recommendations that will support and nurture the strengths of the project as well as recommendations that will address the weaknesses related to the project.

Table 3: Recommendations suggested by respondents

Strengths	**Recommendations**
Willingness of staff to be involved	Provide more time for this work, reimburse staff for efforts and reduce workload of participants. Provide more incentives for senior staff involvement
National and regional workshops and conferences as advocacy strategies	More national or regional workshops should be arranged as they allow for broader participation. We must have a special PrimTEd national conference – present PrimTEd findings like at the AMESA conference.
Research based or research informed	We must make sure that universities work with the assessment data they are getting, these are about their students.
Weaknesses	**Recommendations**
Unwieldy university financial administrative systems	Use external or independent financial administrators as some universities just cannot cope
Lack of wider participation among universities	At the moment university departments are dominated by academics who focus on Senior Phase and Higher Education, they need to be targeted somehow in the debates about Initial Teacher Training – Primary and High School. Multi-layered and multi-sectoral involvement
Project-based focus	Linked to a concern about the next phase and the sustainability of efforts, we must have usable materials/ artefacts/ frameworks that are easily understood by novice academics

3.6.1 Key point summary

- The Mathematics and Literacy working groups have produced common standards for their respective disciplines. In addition, they have produced a variety of support materials:

toolkits, conceptual frameworks as planned and in line with the purpose of the working group.

- The Assessment working group has produced a test in mathematics and adapted a commonly used test for academic literacy. These have been administered to first and fourth year BEd students on a number of campuses across the country.
- There were several unintended outcomes such as the ability to assess for levels of competencies in multiple languages, Research papers and the professional growth of individuals
- Coherence around common standards and practices is emergent and a work in progress
- Universities should be encouraged to participate through external and internal pressure and PrimTEd should make more use of national workshops and conferences as advocacy mechanisms
- The development of standards has the potential to enhance the teacher development profession, it can also result in a tick-box exercise
- Several recommendations were provided for the project strengths: Willingness of staff involvement; National workshops; Research informed practices and Project weaknesses: Financial systems; Lack of broad participation; Project-based focus.

4 Discussion: Findings and recommendations about the relevance of the project design

The discussion sections revert to the evaluation questions for project design and later *implementation*. For design, the questions are: Is the design of PrimTEd appropriate to its aims? and, What are the strengths and weaknesses of the design?

The programme design refers to the overall framework, the plans, the policies, structures and mechanisms put in place to manage the programme and to execute the plans. The PrimTEd project is based on a common agreement that primary schooling in South Africa is in a crisis and the extent of the crisis has been highlighted by the poor results in core subjects such as mathematics and literacy. The poor performance of the learners in the national assessments such as Annual National Assessments (ANA), in regional assessments such as Southern and Eastern African Consortium for Monitoring Education Quality (SACMEQ) and international assessments such as Trends in Mathematics and Science Study (TIMSS) stimulated and informed further research studies such as the Initial Teacher Education Research Project. The PrimTEd project is based on systematic research and research results that indicate a main cause – the main cause – for the learners' poor results, is the inability of the primary school teachers to adequately convey the content knowledge and skills of the subjects they are teaching. Additional research (ITERP) found that the initial teacher education curricula, their content of modules varied widely among institutions, with the greatest variation in the amount of time devoted to and the quality of literacy and mathematics, in both their theory and teaching practice components. The PrimTEd intervention is directed at establishing standards intended to guide the improvement/ redevelopment/re-creation of the curricula (content and processes) for primary school teacher preparation at universities with special emphasis on mathematics and literacy. It is expected that such an adjustment to the university teaching programmes will produce teachers with improved knowledge levels (subject content knowledge) and better teaching practices (pedagogical content knowledge). The research informed nature of the intervention makes it relevant (appropriate) to the problem it is attempting to address. Adding to the relevance of the design is the involvement of university based practitioners and academics as the

architects of the curriculum change process. This will enhance ownership of the outputs, understanding of the content, and streamline wider application and implementation at the universities. The Working Groups also developed 'organically' with three literacy focused working groups morphing into one Consolidated Literacy Working Group.

While the focus is about university level change, the engagement with schools, as the centres for Work Integrated Learning (WIL), is essential to ensure that initial teacher education programme can provide adequate preparation for prospective teachers. The close collaboration between the DHET, the Department of Basic Education (DBE), Education Deans Forum (EDF), South African Council of Educators (SACE), South African Mathematics Foundation (SAMF) and the teacher unions as part of the National Advisory Body ensures that the project relevance is maintained and sustained. There is general agreement that the PrimTEd process is essentially about curriculum change. A core part of the curriculum change agenda is the development of common standards – the notion of having common standards is not without contestation. There is good synergy between the Higher Education policy intents, national priorities and the programme framework documents. The purpose of the PrimTEd project has been articulated as the development of consensus about approaches to the teaching and learning for mathematics and literacy in primary schools. Although not all PrimTEd participants were involved in the Initial Teacher Education Research Project (ITERP), most are aware of how these findings informed the current project.

The project design is therefore relevant and appropriate for the objective it wants to achieve but there have been some challenges. For example, the availability of financial resources contributed to the design success but the delay in payment caused considerable frustration. The incompatible financial administrative systems at some universities also challenged the overall project design. There is an assumption about the uptake by universities (of PrimTEd initiatives) as an 'event or occasion' rather than a process. As a process, the uptake may involve various steps and may require guidelines based on diverse experiences. There is broad agreement about the necessity for common standards for Teacher Development Practices but there is also a concern that minimum standards will be interpreted within a compliance regime. The diversity of institutions - the staff and students - in terms of academic knowledge, experience and background is another challenge that is reflected in the level of engagement by the various institutions. The recommendations below are aimed at addressing the design challenges observed.

4.1 Recommendations

It has been recommended that external financial administrative support is sought to combat the unwieldy university financial administrative systems. Alternately, university financial administrative systems should be streamlined to accommodate the work of the Working Groups.

The theory of change – involving the uptake by universities - can be fleshed out to include factors which contribute to producing outcomes, such as (university/ departmental/geographic/ linguistic) contexts and other related projects and programmes. This is a designing for implementation exercise that critically reflects on the adoption of innovation in higher education.

To address the concern that common standards will be interpreted as 'minimum standards' within a compliance regime a 'common high standards' narrative needs to be reinforced. The narrative should enable individuals to engage colleagues at department and faculty level. The project needs vigorous advocacy, both during the development of the standards, which is where PrimTEd ends, and then during the implementation of the standards.

There must be clear policies and strategies that will support the curriculum change efforts of the PrimTEd project. The entry requirement for teacher education programmes is one such policy.

5 Discussion: Findings and recommendation for the effectiveness and efficiency of project implementation

The evaluation questions for implementation are: Is PrimTEd being implemented as planned? Where not, what are the reasons for non-implementation? What are the strengths and weaknesses of the PrimTEd project implementation?

Implementation involves the strategies employed, the processes used to engage with stakeholders, and the types and number of projects established. A National Working Committee (NWC), consisting of representatives from DHET, the Working Groups and the National Programme Coordination and Management Body provides intellectual leadership and technical support at a national level. Overall programme management and coordination and day-to-day intellectual and technical guidance to the subject-based working groups (WGs) and cross-cutting working groups (CCWGs) is provided by JET that also acts as secretariat to the National Working Committee. The management and support functions performed by JET are funded separately by the Zenex Foundation. This is a significant 'successful' design and implementation strategy that avoids the complication of this necessary support service competing for the same pool of resources and frees up additional funding for the work of the Working Groups.

All the Working Groups were required to develop project plans and they operate on the basis of approved plans and budgets. As a commentary on the effectiveness of the project implementation; the annual reports for the Working Groups reflect that most of the Working Groups had met or exceeded their targets for the two periods – 2017/2018 and 2018/2019 – and are on track where targets still need to be met. In terms of efficiency, while no in-depth financial analysis was conducted, a summary of the financial records reflect overspending and underspending by all of the Working Groups. This had to do with delayed payment of tranches, the pressure of this on the spending cycles and incompatible financial management systems at some universities. The late payments of tranches and complex university financial systems have also required some flexibility on the part of JET, in managing the budget requirements, that is, allowing for over-and underspending to accommodate the anomalies external to project implementation.

The successes of project implementation strategies, according to the respondents are centred on 'professional development'; 'sustained momentum'; 'collegiality' and 'consensus building'. Unwieldy university financial requirements for inter-university projects were cited as a major challenge, as was the workloads of individual staff members.

All the working groups have produced either materials, toolkits, conceptual frameworks or common standards as planned and in line with the purpose of the working group. There were several unintended outcomes such as the ability to assess for levels of competencies in multiple languages, research papers and the professional growth of individuals. Most respondents agreed that a common understanding is developing around the conceptual frameworks and common standards. Much of the learning, according to respondents, occurred through engagement in national workshops, presentations at conferences and the use of materials and toolkits developed in some of the Working Groups.

The Working Groups have managed to involve a diverse range of people – novices/ experts from different universities and capacity building of academics and the development of communities of practice have been mentioned as outcomes of the design of PrimTEd. While the project has succeeded in involving more and more participants from different institutions, there is still limited active engagement across all universities in South Africa. The leadership of the Working Group Coordinators and the National Project Management has been cited as contributing factor to the successful outcomes for the working groups. The participation and involvement of senior academic staff is both desirable and commendable. Senior academics however are often called upon to take on other roles at their institutions and are not able to find replacements to 'buy out' their time. Three senior staff members could not make themselves available for this evaluation.

This evaluation highlighted a number of project implementation successes and noted that these happened despite initial financial resource and resource management constraints. The PrimTEd Project is a component of the Department of Higher Education and Training's (DHET) Teaching and Learning Development Capacity Improvement Programme (TLDCIP). It has to comply with the financial framework agreements linked to the S.A. / European Union funding protocols. This does not remove the frustration expressed by participants about streamlined access to funding and what can and cannot be funded. The following recommendations are aimed elevating the project successes to become ongoing implementation strategies and at addressing project implementation challenges.

5.1 Recommendations

It is recommended that each Working Group develops its own theory of change. A programme theory can be a very useful way of bringing together existing evidence about a project/ strategy, and clarifying where there is agreement and disagreement about how the project is understood to work, and where there are gaps in the evidence.

The programme theory should include the successes 'professional development'; 'sustained momentum'; 'collegiality' and 'consensus building' observed by the respondents and linked to the outcomes and outputs planned by the working groups.

The Working Groups must also consider the use of time, the effects of time and the consequences of time as a factor for personal and organisational development and moreover, the time-bound nature of projects in the curriculum innovation process.

As suggested by most respondents, PrimTEd should make more use (continue to) of national workshops and conferences as advocacy mechanisms.

While much of the focus of this evaluation has been on assessing design and implementation elements for reasons of accountability – the monitoring mechanisms are in place to continue with this – there is also space to consider the authenticity of the designs, frameworks, and artefacts emerging from PrimTEd. This is where the research element comes in and a more reflective stance is required.

6 Appendices

6.1 Appendix 1: PrimTEd Theory of Change

PrimTED ToCAppendix 1.docx

6.2 Appendix 2 Table of targets and indicators

JET indicator review Appendix.docx

6.3 Appendix 3 University linked participation in PrimTEd

PrimTEd participation map.docx