

# PROFESSIONAL DEVELOPMENT FRAMEWORK FOR DIGITAL LEARNING



**basic education**  
Department:  
Basic Education  
REPUBLIC OF SOUTH AFRICA





# Professional Development Framework for Digital Learning

Building educator competencies in facilitating  
learning with digital tools and resources.

## Contents

Glossary.....	5
Acronyms.....	8
Introduction.....	9
Purpose of the Framework.....	9
Global and South African policy context.....	9
Socio-economic context.....	10
Digital learning.....	11
Premises.....	12
The Framework for digital learning competencies and digital literacy skills.....	12
The Context and Scope for Digital Literacy Skills.....	12
Educator digital learning competencies.....	14
Knowledge framework for curriculum integration of digital tools and resources.....	20
Teaching Change Frame for Digital Learning.....	21
Factors influencing competence in digital learning.....	22
Pedagogical factors.....	22
Awareness and use of digital tools and resources.....	23
Teaching Change Frame.....	24
Measuring progress on the change frame.....	25
Diagnostic self-assessment tools and progress.....	28
Recognition of professional development activities.....	28
Recommendations for designing professional development activities.....	29
Implementing the Framework.....	30
A. Activities to be led by the Department of Basic Education.....	30
B. Activities to be led by the Provincial Education Departments (PEDs).....	31
C. Activities to be led by the Department of Higher Education and Training.....	31
D. Activities to be led by DBE partners.....	31
Education Faculties and Teacher Training Institutions.....	31
The South African Council for Educators (SACE).....	31
Teacher Unions.....	32
Schools.....	32
Other providers of teacher professional development activities.....	32
Action Plan for the Achievement of the Framework Outcomes.....	33
References.....	37
Appendix A – Minimum requirements supported by digital tools and resources.....	39
Appendix B - Lesson analysis checklist.....	40
Appendix C – Examples of teaching and learning activities based on the change frame.....	42
Appendix D – Examples of competence in digital Learning.....	46
A. Professional Growth.....	46
B. Curriculum Focus.....	51
C. Leadership.....	54
Appendix E – Diagnostic Self-assessment Tool for Teachers.....	56
Appendix F - Digital Learning Progress Rubric - Schools.....	61

# Glossary

<b>Acceptable Use policies</b>	Acceptable use policies define the required behaviour of users of the digital resources at a school. These policies are often written passively (sometimes as a list of rules) and there is little or no information offered that might aid users in determining responsible behaviours in a given scenario. See <i>Responsible Use Policies</i>
<b>CAPS</b>	Curriculum and Assessment Policy Statement in South Africa.
<b>Collaboration</b>	Collaboration takes place when teachers facilitate learning in which learners: <ul style="list-style-type: none"> <li>• demonstrate the ability to work effectively and respectfully with diverse teams;</li> <li>• exercise flexibility and a willingness to be helpful in making the necessary compromises to accomplish a common goal;</li> <li>• assume shared responsibility for collaborative work;</li> <li>• and value the individual contributions made by each team member (<i>adapted from p21.org</i>)</li> </ul>
<b>Collective roles of the educator</b>	The <i>Policy on the Minimum Requirements for Teacher Education Qualifications (2011)</i> identifies 7 collective roles of teachers in a school: <ol style="list-style-type: none"> <li>1. Specialist in a phase, subject discipline or practice</li> <li>2. Learning mediator</li> <li>3. Interpreter and designer of learning programmes and materials</li> <li>4. Leader, administrator and manager</li> <li>5. Scholar, researcher and lifelong learner</li> <li>6. Assessor</li> <li>7. Community, citizenship and pastoral role</li> </ol>
<b>Communication</b>	Teachers facilitate learning in which learners communicate when they: <ul style="list-style-type: none"> <li>• articulate thoughts and ideas effectively using oral, written, and nonverbal communication skills in a variety of forms and contexts;</li> <li>• listen effectively to decipher meaning, including knowledge, values, attitudes and intentions;</li> <li>• use communication skills and tools for a range of purposes (e.g. to inform, instruct, motivate and persuade);</li> <li>• know how to judge the effectiveness of digital communication tools and assess their impact;</li> <li>• communicate effectively in diverse environments (<i>adapted from p21.org</i>)</li> </ul>
<b>Competencies for digital learning</b>	Thirteen competencies are defined in this <i>Professional Development Framework for Digital Learning</i> . These represent skills to which teachers using digital tools and content resources can aspire. This <i>Framework</i> offers a number of indicators for each competency as a guideline for teachers.
<b>Creativity</b>	Teachers facilitate learning in which learners are creative when they: <ul style="list-style-type: none"> <li>• think creatively, using a wide range of idea creation techniques like brainstorming, creating new and worthwhile ideas, and elaborating, evaluating and refining their ideas;</li> <li>• work creatively with others by developing and communicating new ideas with others, are open to diverse perspectives, incorporate feedback, view failure as an opportunity to learn, and understanding creativity as a cyclical process;</li> <li>• implement innovations by acting on creative ideas to make a tangible and useful contribution (<i>adapted from p21.org</i>)</li> </ul>
<b>Critical thinking</b>	Teachers facilitate learning in which learners think critically when they: <ul style="list-style-type: none"> <li>• use various types of reasoning – e.g. inductive, deductive, etc. that are appropriate to the situation;</li> <li>• use systems thinking by analysing how parts of a whole interact with each other to produce overall outcomes;</li> <li>• make judgements and decisions by: <ul style="list-style-type: none"> <li>○ effectively analysing and evaluating evidence, arguments, claims and beliefs;</li> <li>○ synthesizing and making connections between information and arguments;</li> <li>○ reflecting critically on learning experiences;</li> </ul> </li> <li>• solve different kinds of non-familiar problems in both conventional and innovative ways, by asking significant questions that clarify various points of view and lead to better solutions (<i>adapted from p21.org</i>)</li> </ul>

<b>Deep learning</b>	<p>Deep learning includes the characteristic behaviours of critical thinking, communication, collaboration and creativity that are implied in many of the cross-curricular aims in the CAPS. These are:</p> <ul style="list-style-type: none"> <li>• identify and solve problems and make decisions using critical and creative thinking;</li> <li>• work effectively as individuals and with others as members of a team;</li> <li>• organise and manage themselves and their activities responsibly and effectively;</li> <li>• collect, analyse, organise and critically evaluate information;</li> <li>• communicate effectively using visual, symbolic and/or language skills in various modes;</li> <li>• use science and technology effectively and critically showing responsibility towards the environment and the health of others; and</li> <li>• demonstrate an understanding of the world as a set of related systems by recognising that problem solving contexts do not exist in isolation.</li> </ul>
<b>Digital citizenship</b>	The act of behaving safely, legally and ethically when using digital information resources and social media platforms.
<b>Digital content</b>	Static or interactive learning and teaching resources stored in a digital format on the Internet or on digital devices, and used for teaching and learning and viewed/listened to on these devices.
<b>Digital literacies</b>	A collective term referring to the various types of literacy associated with learning in a digital society. These include digital or ICT literacy, information literacy, media literacy and digital citizenship.
<b>Digital literacy</b>	This is a more up-to-date term for “IT Literacy” or “ICT Literacy”. It refers to the ability to appreciate the potential of digital tools and resources to support living in a digital society. Digital literacy is seen as a “life skill”, as is literacy and numeracy and it is identified as one of the basic teacher competences in the <i>Policy on Minimum Requirements for Teacher Education Qualifications</i> (2015).
<b>Digital Learning</b>	<p>Any learning or teaching activity that effectively uses digital tools and resources to strengthen a learner’s learning experience; it focuses on the following characteristics of learning:</p> <ul style="list-style-type: none"> <li>• opportunities for personalized learning;</li> <li>• opportunities for learning in and beyond the classroom;</li> <li>• student-centred learning;</li> <li>• digital content;</li> <li>• assessments that are integrated into learning activities;</li> <li>• project-based learning activities.</li> </ul>
<b>Digital tools and resources</b>	Includes any devices and accompanying resources that may be used to support teaching and learning. This includes computers, laptops, tablets, cell phones, document cameras, interactive-whiteboards, digital cameras, gaming consoles, response systems and digital microscopes. “Resources” refers to all digital content and information sources.
<b>ICT</b>	Information and communication technologies including mainly computers, laptops, tablets and cell phones but, at times, including a wider spectrum of devices for gathering, storing and communicating information. Note that learning with technology involves more than information and communication, and the term “digital tools and resources” is therefore preferred in the Framework.
<b>ICT Literacy</b>	At times this is referred to as “IT Literacy” or “Computer Literacy”, both of which are becoming outdated terms. ICT literacy includes a wider range of technology devices and refers to the ability of individuals to appropriately use digital technology in any context. “Technology literacy” has the same meaning. “Digital literacy” is the preferred term in this framework.
<b>Information Literacy</b>	The ability to locate, evaluate, manipulate, manage and communicate information from different sources through the use of technology devices.
<b>Pedagogy</b>	The way in which learners are led to learning. The term “teaching/learning approach” has a similar meaning. The approach the teacher adopts and the digital resources the teacher uses, will be the result of an analysis of the teacher’s context and the learners’ context.
<b>Pedagogical content</b>	The learning activity that is added by the teacher to static digital content so that the activity guides the learner to make meaning of (better understand) the digital content.

<b>Professional development</b>	<p>High quality professional learning, in its most ideal form, is personalized, job-embedded, ongoing and interactive;</p> <p><i>Learning Forward (learningforward.org)</i> has outlined 7 standards for professional learning that increases educator effectiveness and learner attainment:</p> <ul style="list-style-type: none"> <li>• occurs within learning communities committed to continuous improvement, collective responsibility, and goal alignment;</li> <li>• requires skilful leaders who develop capacity, advocate, and create support systems for professional learning;</li> <li>• requires prioritizing, monitoring, and coordinating resources for teacher learning;</li> <li>• uses a variety of sources and types of learning and teaching data to plan, assess, and evaluate professional learning;</li> <li>• integrates theories, research, and models of human learning to achieve its intended outcomes;</li> <li>• sustains support for the implementation of professional learning for long-term change; and</li> <li>• aligns its outcomes with learning and teaching that is focused on curriculum goals and improved learner attainment.</li> </ul>
<b>Project-based learning (PBL)</b>	<p>A teaching method in which learners gain knowledge and skills by working for an extended period of time to investigate and respond to a complex question, problem, or challenge; <i>The Buck Institute (bie.org)</i> outlines the following 7 Essential Project Design Elements for PBL:</p> <ul style="list-style-type: none"> <li>• challenging problem or question</li> <li>• sustained inquiry</li> <li>• authenticity</li> <li>• learner voice and choice</li> <li>• reflection</li> <li>• critique and revision</li> <li>• public product</li> </ul>
<b>Responsible Use policies</b>	<p>The primary difference from acceptable use policies is that a responsible use policy acts as a point of reference for technology use, encouraging users to think beyond the bare minimum behaviours (rules) stated in the policies and to contemplate what true, responsible use of a given technology might entail.</p>
<b>SAMR</b>	<p>An observational taxonomy, developed by Dr Ruben Puentedura, for classifying the role of technology use with a learning activity from “substitution” (technology acting as a substitute for traditional tools) to “augmentation” to “modification” to “redefinition” (technology allowing learning and teaching activities that would not otherwise be possible). For more details consult the supporting resource: <i>FS2-Understanding the SAMR model</i></p>
<b>Shared vision</b>	<p>Educational leaders bring together stakeholders - teachers, learners, parents, community members, etc. – to form a collective, clear picture of what the school aspires to be in the future; the leaders also set in motion a process to assess progress toward achieving that vision; the vision will be shared and valued when a process of assessment is in place to provide feedback about the degree to which the vision is being achieved.</p>
<b>TPACK</b>	<p>A framework for understanding the kinds of technological, pedagogical, and content knowledge applied by educators in a digital learning environment. The framework was created by Punya Mishra and Matthew J. Koehler at Michigan State University, and was based on the Pedagogical Content Knowledge Framework created by Lee Shulman. For more details consult the supporting resource: <i>FS1-Understanding the TPACK model</i></p>
<b>Transformative pedagogies</b>	<p>Teaching and learning approaches that engage learners in activities :</p> <ul style="list-style-type: none"> <li>• are learner centred</li> <li>• challenge higher order thinking skills</li> <li>• intend knowledge building</li> <li>• encourage learner-independence and self-regulation</li> <li>• encourage multiple modes of interaction between learners, teachers and content</li> <li>• integrate assessment as a learning strategy</li> </ul> <p>(Note: this list is not fully definitive)</p>

## Acronyms

CAPS	Curriculum and Assessment Policy Statement
CPD	Continuing Professional Development
CPTD	Continuing Professional Teacher Development
DBE	Department of Basic Education
DHET	Department of Higher Education and Training
DTDC	District Teacher Development Centre
ICT	Information and Communication Technology
ISPFTED	Integrated Strategic Planning Framework for Teacher Education and Development
IT	Information Technology
LTSM	Learner Teacher Support Materials
NCS	National Curriculum Statement
NICPD	National Institute for Curriculum and Professional Development
NSLA	National Strategy for Learner Attainment
PBL	Project-based learning
PDP	Professional Development Portfolio
PED	Provincial Education Departments
PLC	Professional Learning Community
PTDI	Provincial Teacher Development Institute
SACE	South African Council for Educators
SAMR	Substitution, Augmentation, Modification, and Redefinition
SMT	Senior Management Team
TPACK	Technological Pedagogical Content Knowledge
UN	United Nations
UNICEF	United Nations International Children's Emergency Fund (known as United Nations Children's Fund)

# Introduction

## Background

Goal 16 of the DBE Action Plan to 2019 commits the Department of Basic Education and its partners, to improve the professionalism, teaching skills, subject knowledge and computer literacy of teachers throughout their careers.

Consistent with the DBE Action Plan to 2019, the Integrated Strategic Planning Framework for Teacher Education and Development (ISPFTED) commits us to investing in digital technologies to support the delivery of the strategy. Here the ISPFTED makes specific reference to:

- the need for specific teacher knowledge and practice standards for each subject area or area of teacher expertise;
- the establishment of Professional Learning Communities (PLCs) to strengthen teacher professionalism;

The *White Paper on e-Education* (2004) outlined the elements of transformed learning and teaching through information and communication technologies (ICT).<sup>1</sup> It was supported by the publication of *Guidelines for Teacher Training and Professional Development in ICT* (2007), which provided guidelines for teacher professional development in ICT and educator competencies within a developmental framework.<sup>2</sup>

The Professional Development Framework for Digital Learning (hereafter referred to as “the Framework”) provides a fresh approach to the professional development of teachers and all stakeholders using digital tools and content resources to support improved learning outcomes and higher learner attainment in the curriculum.

## Purpose of the Framework

The purpose of this Framework is to provide guidelines for professional development, specifically in order to ensure competent educators who “use ICTs to enhance teaching and learning” and leaders and support staff who are able to facilitate the development of educator digital learning competencies. The primary target audience of this Framework is therefore teacher trainers, school leaders and teachers, e-learning specialists and curriculum subject specialists. However, role players at all levels will be implicated in the implementation of this Framework.

The main aim of the Framework is to:

*Define professional development for digital learning in an education system that seeks to improve access, quality, equity, redress and efficiency.*

Achieving this aim will give rise to the following outcomes in the system:

1. Education leaders (nationally, provincially and at district and institutional level) that have a clear plan for professional development in terms of digital learning;
2. Teachers in schools have a clear plan for their individual needs for professional development in terms of digital learning;
3. Learners achieve curriculum goals with the support of appropriate teaching and learning approaches, and the use of digital tools and content resources;
4. A wide variety of endorsed professional development activities aligned to the educator competencies and key considerations of the framework are available; and
5. Teachers entering the profession have a working knowledge of digital learning competencies.

The Framework’s purpose and aims are embedded in the current global and South African policy context and makes use of working definitions that take account of the emergent and changing nature of digital technologies and their influence on the practice of learning and teaching.

## Global and South African policy context

The United Nations adopted *the Sustainable Development Goals (SDGs)* in September 2015 which provides a map for sustainable improvement in living conditions, especially of people in poorer countries. Goal Four of the SDGs commits the international community to “Ensure inclusive and quality education for all and promote lifelong learning”.<sup>3</sup> This is consistent with the education goals set in the National Development Plan (see Chapter 9).

1 Department of Education, RSA, E-Education White Paper, 2003

2 Department of Education, RSA, Guidelines for Teacher Training and Professional Development in ICT (2007)

3 Global Sustainable Development Goals, UN, 2015

The Department of Basic Education's (DBE) [Action Plan to 2019: Towards the Realisation of Schooling](#) has several goals related to improving performance in key subjects. Professional development in terms of digital learning can play a big role in achieving these through Goal 16: "Improve the professionalism, teaching skills, subject knowledge and computer literacy of teachers throughout their entire careers".<sup>4</sup> Two priorities noted are:

- "To create a stronger enabling framework for teacher-initiated professional development activities, in particular, professional learning communities"<sup>5</sup>;
- "Externally provided in-service training must become better and more readily available".<sup>6</sup>

The [Integrated Strategic Planning Framework for Teacher Education and Development in South Africa 2011-2025](#) (ISPFTED) has as its primary outcome: "To improve the quality of teacher education and development in order to improve the quality of teachers and teaching".<sup>7</sup> The thirteen educator digital learning competencies presented in this Framework are a formulation of the knowledge and practice standards for the digital learning area of expertise in teaching and teacher education.

The ISPFTED identifies lead implementation agencies at national and provincial education department levels, including the Provincial Teacher Development Institute (PTDI) and District Teacher Development Centre (DTDC).

The [National Strategy for Learner Attainment](#) (2015) (NSLA) makes reference to seven objectives, two of which are especially relevant to this Framework, i.e.:

- Objective 1: Sustained improvement of learner performance;
- Objective 5: Improved support for teaching and learning.

The NSLA (2015) supports the South African Council for Educators (SACE) Continuing Professional Teacher Development (CPTD) system of earning professional development points through endorsed professional development activities.<sup>8</sup>

With reference to "ICT Support to Curriculum", the goals that could be achieved through the Framework include:

- Goal 16: Improve the professionalism, teaching skills, subject knowledge and computer literacy of teachers.
- Goal 20: Increase access amongst learners to a wide range of media, including computers, which enrich their education.

The national *Curriculum and Assessment Policy Statements* (CAPS) all include a preamble that, in alignment with the e-Education White Paper, identify several principles and aims in which digital tools and resources either play a direct role or have the potential to play a significant supporting role.

Through learning with digital tools and content resources to support the curriculum aims, learners will become more independent and confident users of these tools and resources, thus relieving some of the pressure on teachers to be the sole influence in the classroom in improving learning objectives and learner attainment.

## Socio-economic context

It is necessary for teacher professional development to specifically address how digital tools and resources can support teaching and enhance learning in different subjects in a wide range of socio-economic contexts that teachers encounter in South Africa. While some research concludes that socio-economic factors can be debilitating for teaching, research such as that undertaken in terms of the Pan African Agenda<sup>9</sup> and by Ndlovu<sup>10</sup> concludes that if one addresses the teachers' ability to teach using digital tools and resources, a scarcity of such digital tools and resources does not have to be a significantly incapacitating factor. This Framework will show that adopting a range of pedagogical approaches will improve the potential of limited digital tools and resources to support and enhance learning.

The aims of teacher professional development for digital learning is for teachers to grow from a pedagogical foundation while integrating digital tools and resources in teaching and learning and to see the value in the use of digital tools and resources. Value is perceived if teachers are able to gain a clear understanding of how digital tools and resources will be used to meet specific outcomes in subjects of the curriculum to improve learners' attainment. (Moseley et al., 1999) This perception of value is influenced by, amongst other things, the socio-economic context and the availability of resources. It is even possible

4 Action Plan to 2019: Towards the Realisation of Schooling, 2030, p37

5 Ibid, p35

6 Ibid, p36

7 ISPFTED 2011-2025, p1

8 2015 NSLA, p75

9 Thierry, K. et al, *The PanAfrican Research Agenda on the Pedagogical Integration of ICTs*. OECD World Forum (2009)

10 Ndlovu, N.S. (2015)

that fewer resources may be better valued than many resources, because the amount of technology is not the key factor in determining its successful implementation, provided that teachers are aware of the opportunities offered by digital tools and resources in their specific context.

## Digital learning

**Digital learning** (which encompasses e-learning and mobile learning) describes learning that uses appropriate digital tools and resources to strengthen a teacher's teaching and a learner's learning experience resulting in more effective achievement of curriculum learning objectives. This Framework views digital learning as a more modern expression of "ICT integration", which is itself a broader concept than "IT skills".

The *White Paper on e-Education* (2004) refers to e-learning taking place in "an environment where teaching is transformed and where learning is an ongoing, creative process. This requires a changing teaching and learning methodology, where teachers and learners will have access to:

- high quality, relevant and diverse resources, beyond what school libraries are currently providing,
- a means of communicating and collaborating with other learners and teachers, and
- opportunities for creating and presenting new knowledge".<sup>11</sup>

This requires a transition in learning that fully harnesses the power of digital tools and resources to impact all aspects of learning, including how teachers mediate learning, how learners use digital tools and content resources, and how that learning is assessed.

The aims of the *National Curriculum Statements* Grades R-12 are "to produce learners who are able to:

- identify and solve problems and make decisions using critical and creative thinking;
- work effectively as individuals and with others as members of a team;
- organise and manage themselves and their activities responsibly and effectively;
- collect, analyse, organise and critically evaluate information;
- communicate effectively using visual, symbolic and/or language skills in various modes;
- use science and technology effectively and critically while showing responsibility towards the environment and the health of others; and
- demonstrate an understanding of the world as a set of related systems by recognising that problem solving contexts do not exist in isolation".<sup>12</sup>

These aims align with the pedagogical factors of the change frame presented in this Framework and represent learning activities that could embrace a wide variety of opportunities to use digital tools and resources.

---

11 Ibid, p13

12 Curriculum Assessment and Policy Statements (CAPS)

## Premises

The Framework is based upon the following premises regarding transformation of practice towards digital learning:

1. Mere access to or skills in the use of digital tools and resources does not translate into effective teaching and learning (OECD, 2015).
2. As access to a greater range and quality of digital tools and resources increases, so do the range of opportunities that they offer to a learning experience.
3. More transformative pedagogies (more learner-centred, with knowledge-building and higher order thinking skills) magnify the range of opportunities offered by digital tools and resources to support and have an impact on learning (Ng'ambi, 2013).
4. The effectiveness of digital tools and resources in supporting pedagogies depends on teachers and learners being aware of the opportunities that these tools and resources offer (Bower, 2008).
5. An effective blend of pedagogies and interactions that are supported by digital tools and resources may lead to deep learning (Koehler et al., 2011; Anderson, 2003).
6. Change in digital learning competence can be achieved by context-rich exposure to pedagogy and/or potential use of resources in order to understand their value and impact when applied to learning (Ng'ambi, 2013).
7. How digital tools and resources are used in the learning environment will depend on the teachers' analysis of the accessible resources, the learners and their various contexts.
8. Teachers' individual evaluation of their digital learning competencies informs their professional development needs and learning pathways.
9. Developing digital learning competencies is the responsibility of role players at all levels of the system.

## The Framework for digital learning competencies and digital literacy skills

Figure 1 illustrates the alignment between digital literacy skills and the digital learning competencies that are mandated in Activity 4.1 of [The Integrated Strategic Planning Framework for Teacher Education and Development in South Africa 2011-2025](#) (ISPFTED). Digital learning competencies represent the full scope of activity for learning supported by digital tools and resources, including:

- Professional growth activities;
- Activities with a curriculum focus (curriculum integration of digital tools and resources);
- Leadership in planning and the implementing digital learning.

### The Context and Scope for Digital Literacy Skills

The *Revised Policy on the Minimum Requirements for Teacher Education Qualifications, 2015* identifies a minimum set of competencies required of newly-qualified teachers.

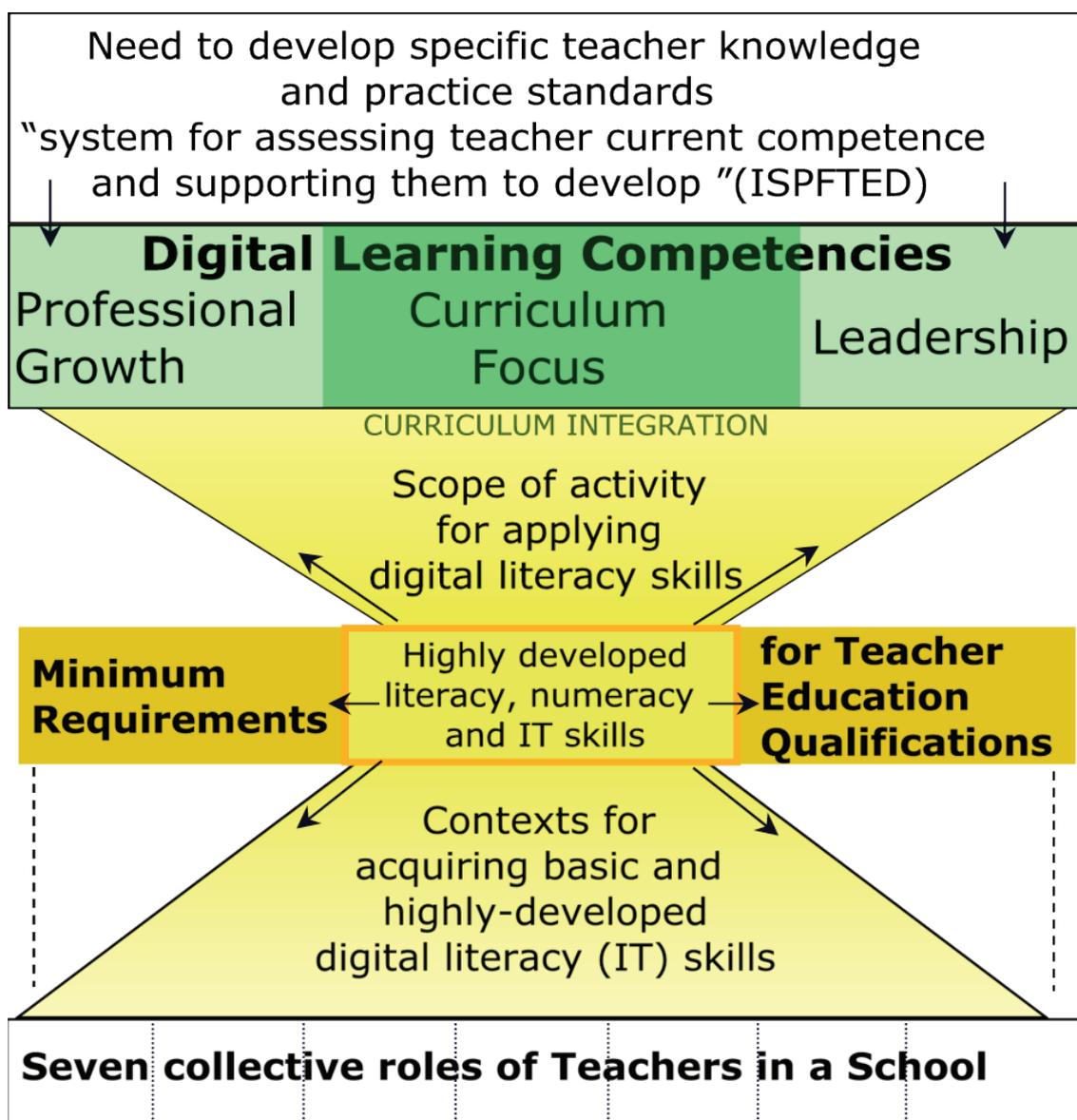
The ten competencies required of a beginner teacher do not assume access to or support of digital tools and resources, but one competence (No.5) requires “highly developed literacy, numeracy and information technology (IT) skills”. These competencies are:

**Table 1: Basic competencies of a beginner teacher**

1.	Have sound subject knowledge.
2.	Know how to teach their subject(s) and how to select, and determine the sequence and pace of the content in accordance with both subject and learner needs.
3.	Know who their learners are and how they learn - they must understand the learners' individual needs and tailor their teaching accordingly.

4.	Know how to communicate effectively in general, as well as in relation to their subject(s), in order to mediate learning.
5.	Have highly developed literacy, numeracy and Information Technology (IT) skills.
6.	Be knowledgeable about the school curriculum and be able to unpack its specialised content, as well as being able to use available resources appropriately, so as to plan and design suitable learning programmes.
7.	Understand diversity in the South African context in order to teach in a manner that includes all learners. They must also be able to identify learning or social problems and work in partnership with professional service providers to address these.
8.	Be able to manage learning effectively across diverse contexts in order to ensure a conducive learning environment.
9.	Be able to assess learners in reliable and varied ways, as well as being able to use the results of assessment to improve teaching and learning.
10.	Be able to reflect critically on their own practice, in theoretically informed ways and in conjunction with their professional community of colleagues in order to constantly improve and adapt to evolving circumstances.

Figure 1: The contexts and scope of digital literacy (IT/ICT) skills



In the context of this Framework, and in the contexts of teaching and learning, "highly developed IT skills" cannot be interpreted as isolated technology-related skills, but must be seen in the various contexts in which these skills are implemented. Two such contexts are:

1. The basic competencies of a beginner teacher
2. The seven collective roles of the educator

Appendix A of this Framework briefly outlines how digital tools and resources can be used to support these competencies.

Teacher education lecturers at teacher training institutions are encouraged to model these digital literacy (IT) skills in learning activities, in addition to requiring their students to develop these skills when planning learning activities (where access to resources makes this possible). Similarly, school management teams are encouraged to model the use of digital tools and resources and to encourage teachers to do the same.

The seven collective roles of teachers in a school are:

**Table 2: Seven collective roles of teachers in a school**

1.	Specialist in a phase, subject discipline or practice
2.	Learning mediator
3.	Interpreter and designer of learning programmes and materials
4.	Leader, administrator and manager
5.	Scholar, researcher and lifelong learner
6.	Assessor
7.	Community, citizenship and pastoral role

Providers of digital literacy (IT/ICT) skills training for educators are required to integrate these competencies and roles as contexts within their course content so that teachers may simultaneously:

- Acquire the skills that meet their needs and interests as educators;
- become more efficient in their basic competences;
- become more productive in their roles as both pre-service teachers and in-service educators.

## Educator digital learning competencies

Key to achieving the goals of this Framework are educator competencies of planning and facilitating digital learning, which will form the basis of a teacher’s needs analysis and planning for professional development in terms of digital learning. This serves to provide a “non-punitive system for assessing teacher current competence and supporting them to develop in areas of their individual need”.<sup>13</sup>

Stating competencies that teachers who use digital tools and resources for learning could aspire to, serves the following purposes:

- They provide a national reference point for role players who support teacher professional development at all levels;
- They represent goals/objectives that teachers may want to aspire to throughout their careers;
- They set clear expectations of effective teaching practice using digital tools and resources;
- They clearly inform the design of professional development activities and enhance confidence in endorsed materials.

Teachers seeking to more effectively achieve the curriculum aims and objectives will seek competence in three key areas of digital learning:

- A Professional Growth and Knowledge** – having the disposition to inquire and the willingness to explore how digital tools and resources can facilitate their own professional growth and deepen their fundamental understanding of the value of these resources to support learners and enhance learning.

<sup>13</sup> Integrated Strategic Planning Framework for Teacher Education and Development, Output1, p4

- B Curriculum Focus** – maintaining focus on using digital tools and resources appropriately and to their full potential for learning and for attaining curriculum objectives.
- C Leadership** – demonstrating the vision for digital learning and accepting responsibility for its implementation and growth.

Teachers are encouraged to become proficient in these areas and more effective in mediating learning by aspiring to the following competencies:

**Table 3: Indicators for the educator digital learning proficiencies**

<b>A PROFESSIONAL GROWTH and KNOWLEDGE</b>	
<b>DIGITAL LEARNING COMPETENCY 1:</b> <b>Adopt the habit of an enquiring mind regarding the educational value of using digital tools and resources.</b>	
<b>INDICATORS</b>	
1.1	Conduct self-initiated research on how technologies could help you enhance your roles as an educator.
1.2	Conduct self-initiated research on how digital tools and resources can impact on teaching and learning in your subject/phase.
1.3	Be willing to explore opportunities, independently or with others, and not feel threatened by the use of digital tools and resources.
1.4	Develop an informed opinion on the value of digital tools and resources for enhancing achievement of learning/lesson objectives.
Applicability to educators in <b>different contexts</b> .	Applicable to all educators, because this competency does not pre-suppose the existence of digital tools and resources.
<b>Knowledge, skills and attitudes</b> that could be acquired.	<ul style="list-style-type: none"> <li>• The attitude of being a lifelong learner;</li> <li>• Knowledge based on your individual professional learning requirements;</li> <li>• Digital literacy;</li> <li>• Information skills – finding and evaluating digital content resources; and</li> <li>• The use of social media for educators.</li> </ul>
<b>DIGITAL LEARNING COMPETENCY 2:</b> <b>Be reflective about challenging current digital learning and teaching practice.</b>	
<b>INDICATORS</b>	
2.1	Pause for thought about the effectiveness of learning after each session in which you have used digital tools and resources.
2.2	Share the outcomes of your lesson reflections (successes and challenges) with others and consider their feedback.
2.3	Evaluate your options if you have identified a need for a different approach.
2.4	Implement ideas about new approaches to teaching and learning using digital tools and resources that you have selected.
2.5	Use a variety of techniques to identify your developmental needs.
Applicability for educators in <b>different contexts</b> .	Applicable to all educators because this competency does not pre-suppose the existence of digital tools and resources.
<b>Knowledge, skills and attitudes</b> that could be acquired.	<ul style="list-style-type: none"> <li>• The attitude of being a reflective practitioner (thinking about the quality of learning in your learning environment);</li> <li>• Challenging the boundaries of your teaching;</li> <li>• Considering the <i>impact</i> of digital tools and resources on learning tasks and learner engagement (the SAMR model); and</li> <li>• Considering the <i>appropriate</i> use of digital tools and resources to support learning.</li> </ul>

<b>DIGITAL LEARNING COMPETENCY 3</b>	
<b>Understand the role of the teacher, the learner and the digital resources during digital learning.</b>	
<b>INDICATORS</b>	
3.1 Be aware of different approaches to teaching and learning that you could use strategically to facilitate learning.	
3.2 Set curriculum learning objectives before identifying media and resources, digital or not.	
3.3 Identifying appropriate digital tools and resources, and knowing when their use would be distracting or ineffective.	
3.4 Planning learner engagement that will be enhanced by the use of digital tools and resources.	
Applicability for educators in <b>different contexts</b> .	Applicable if you are using a digital tool for learning, especially a device that can access digital resources online and which can be used by one or more learners.
<b>Knowledge, skills and attitudes</b> that could be acquired.	<ul style="list-style-type: none"> <li>• How and when to integrate digital subject content with learning;</li> <li>• Knowing when the integration of digital tools and resources would be most appropriate;</li> <li>• New approaches to teaching and learning, such as the project-based approach, or different methods of group work;</li> <li>• Collaborative learning approaches;</li> <li>• Lesson planning focusing on curriculum learning objectives and supported by digital resources.</li> </ul>
<b>DIGITAL LEARNING COMPETENCY 4</b>	
<b>Participate in local and global professional learning communities.</b>	
<b>INDICATORS</b>	
4.1 Attend workshops and conferences as much as your circumstances allow.	
4.2 Engage in dialogue with colleagues at your institution about the integration of digital tools and resources.	
4.3 Develop an online professional learning community (PLC) of people with similar educational interests.	
Applicability for educators in <b>different contexts</b> .	Applicable to all educators because this competency does not pre-suppose the existence of digital tools and resources. Digital tools (even a smartphone) will simply broaden the scope and opportunities for joining professional learning communities.
<b>Knowledge, skills and attitudes</b> that could be acquired.	<ul style="list-style-type: none"> <li>• The attitude of being a lifelong learner, and being intrinsically motivated to engage in professional learning;</li> <li>• Collaborative professional learning;</li> <li>• Social media skills; and</li> <li>• Use of various social media tools to share your knowledge and that of others.</li> </ul>
<b>DIGITAL LEARNING COMPETENCY 5</b>	
<b>Select appropriate digital tools and resources when fulfilling the roles of the educator.</b>	
<b>INDICATORS</b>	
5.1 Produce written documents.	
5.2 Process numerical data.	
5.3 Deliver presentations using multimedia.	
5.4 Communicate and collaborate.	
5.5 Create, publish and share content.	
5.6 Design graphics.	
5.7 Design interactive learning activities.	
Applicability for educators in <b>different contexts</b> .	Applicable to all educators who have access to digital tools that could support their work as educators.

<b>Knowledge, skills and attitudes</b> that could be acquired.	<ul style="list-style-type: none"> <li>• Digital literacy;</li> <li>• Basic troubleshooting for device use; and</li> <li>• Knowing what digital tools and resources can assist you in your roles as an educator.</li> </ul>
--	---

## B CURRICULUM FOCUS

### DIGITAL LEARNING COMPETENCY 6

**Integrate digital tools and resources to enhance learning objectives in various learning environments.**

INDICATORS	
6.1	Plan the strategic use of digital content resources before, during and/or after the lesson.
6.2	Plan learner-centred access to digital tools and resources as and when appropriate.
6.3	Address the diverse needs of all learners and providing equitable access to appropriate digital tools and resources.
6.4	Afford learners the opportunity to share knowledge and skills using digital platforms.
Applicability for educators in <b>different contexts</b> .	Applicable to various degrees to any teacher who has access to digital tools and resources for learning, depending on the nature of the digital tools and resources at their disposal.
<b>Knowledge, skills and attitudes</b> that could be acquired.	<ul style="list-style-type: none"> <li>• Planning curriculum integration of digital tools and resources;</li> <li>• How digital tools and resources support inclusive learning; and</li> <li>• Teaching and learning approaches that harness the potential of digital tools and resources.</li> </ul>

### DIGITAL LEARNING COMPETENCY 7

**Develop learners' global awareness and understanding using digital communication and collaboration tools.**

INDICATORS	
7.1	Design learning that addresses real-life issues aligned to the curriculum.
7.2	Design learning activities that require interaction or collaboration between your learners and a local or global community.
7.3	Design learning in your class in which learners use digital communication and collaboration tools.
Applicability for educators in <b>different contexts</b> .	Applicable to various degrees to any teacher with access to digital tools for learning and Internet access, depending on the nature of the digital tools and resources at their disposal.
<b>Knowledge, skills and attitudes</b> that could be acquired.	<ul style="list-style-type: none"> <li>• Design learning in which learners are engaged in real-life issues; and</li> <li>• Design strong communication and collaboration learning activities.</li> </ul>

### DIGITAL LEARNING COMPETENCY 8

**Transform learning through the innovative use of digital tools and resources.**

INDICATORS	
8.1	Explore new uses for established digital tools and resources;
8.2	Explore opportunities offered by new digital tools and resources;
8.3	Facilitate learning that was not possible before the introduction of digital tools and resources;
8.4	Understand the impact of digital tools and resources on the nature of learning.
Applicability for educators in <b>different contexts</b> .	Applicable to various degrees to any teacher with access to digital tools and resources for learning, depending on the nature of the digital tools and resources at their disposal.
<b>Knowledge, skills and attitudes</b> that could be acquired.	<ul style="list-style-type: none"> <li>• The spirit of being innovative;</li> <li>• Exploring the potential value of new digital tools for learning; and</li> <li>• New approaches to learning.</li> </ul>

<b>DIGITAL LEARNING COMPETENCY 9</b>	
<b>Enhance class management, assessment and feedback processes through the use of digital resources.</b>	
<b>INDICATORS</b>	
9.1	Use digital productivity tools to create and administer tests, exams and assessment tools.
9.2	Use digital communication and collaboration tools, where appropriate, to support dialogue between learners and their teacher.
9.3	Use digital tools and resources to design diagnostic assessment tools.
9.4	Organise and monitor learning activities using online resources similar to a blog or learning management system.
Applicability for educators in <b>different contexts</b> .	Applicable to various degrees to any teacher with access to digital tools and resources for learning, depending on the nature of the digital tools and resources at their disposal.
<b>Knowledge, skills and attitudes</b> that could be acquired.	<ul style="list-style-type: none"> <li>• Designing assessment strategies using digital tools and resources;</li> <li>• Using digital tools to enhance communication between learners and teachers;</li> <li>• Using a Learning Management System or other classroom management systems; and</li> <li>• Using a school administration system for data capture and analysis.</li> </ul>
<b>DIGITAL LEARNING COMPETENCY 10</b>	
<b>Integrate learners' skills development in terms of digital literacies with curriculum-based learning.</b>	
<b>INDICATORS</b>	
10.1	Design integrated activities that develop learners' information skills while pursuing curriculum goals.
10.2	Design integrated activities that develop learners' digital literacy skills while pursuing curriculum goals.
10.3	Design integrated activities that develop learners' media literacy skills while pursuing curriculum goals.
10.4	Promote and model safe, legal and ethical use of digital information resources.
Applicability for educators in <b>different contexts</b> .	Applicable to teachers in environments where learners have access to digital tools and resources for learning, depending on the nature of the digital tools and resources at their disposal.
<b>Knowledge, skills and attitudes</b> that could be acquired.	<ul style="list-style-type: none"> <li>• Ability to support learners in terms of digital literacy by integrating these skills with the curriculum;</li> <li>• Information literacy integrated with the curriculum;</li> <li>• Media literacy integrated with the curriculum; and</li> <li>• Digital citizenship integrated with the curriculum.</li> </ul>
<b>C LEADERSHIP</b>	
<b>DIGITAL LEARNING COMPETENCY 11</b>	
<b>Demonstrate commitment to the vision for digital learning in the province, district and school.</b>	
<b>INDICATORS</b>	
11.1	Implement the key ideas of the <i>Professional Development Framework for Digital Learning</i> .
11.2	Apply the provincial digital learning guidelines to your planning.
11.3	Implement the school's strategy for digital learning.
Applicability for educators in <b>different contexts</b> .	Applicable to all educators who work in an environment in which there is access to digital tools and resources for digital learning.
<b>Knowledge, skills and attitudes</b> that could be acquired.	<ul style="list-style-type: none"> <li>• Understanding what digital learning is and what your role and responsibility is in achieving the vision at your institution.</li> </ul>

**DIGITAL LEARNING COMPETENCY 12****Accept responsibility for planning and implementing digital learning at the school.**

INDICATORS	
12.1	Participate in the formulation of school digital learning planning at your institution.
12.2	Evaluate your role in implementing digital learning strategies at your institution.
12.3	Be a leader in managing change related to learning using technologies.
12.4	Build on capacity in colleagues to accept responsibility and implement digital learning.
Applicability for educators in <b>different contexts</b> .	Applicable to all educators who work in an environment in which there is access to digital tools and resources for digital learning.
<b>Knowledge, skills and attitudes</b> which could be acquired.	<ul style="list-style-type: none"> <li>• Ability to participate in digital learning planning at your institution; and</li> <li>• Change leadership for digital learning.</li> </ul>

**DIGITAL LEARNING COMPETENCY 13****Initiate peer support and collaborative, work-place learning.**

INDICATORS	
13.1	Engage peers in exploratory conversations about using digital tools and resources.
13.2	Support peers in their implementation of new ideas and approaches to using digital tools and resources.
13.3	Share knowledge and experiences of using digital tools and resources your peers.
Applicability for educators in <b>different contexts</b> .	Applicable to all educators who work in an environment in which there is access to digital tools and resources for digital learning.
<b>Knowledge, skills and attitudes</b> which could be acquired.	<ul style="list-style-type: none"> <li>• Peer support;</li> <li>• Peer coaching;</li> <li>• Communication skills; and</li> <li>• Lesson improvement skills.</li> </ul>

Teachers may conduct a self-assessment of their perceived digital learning competence using the online self-assessment tool at <https://dbe-tpd.org>. The tool also links competencies to SACE-endorsed professional development activities.

More detailed examples of the indicators are provided in Appendix D.

Guidelines for professional development in terms of digital learning are provided for teachers and schools in the following accompanying resources: which can be found at <http://bit.ly/DBEFramework>

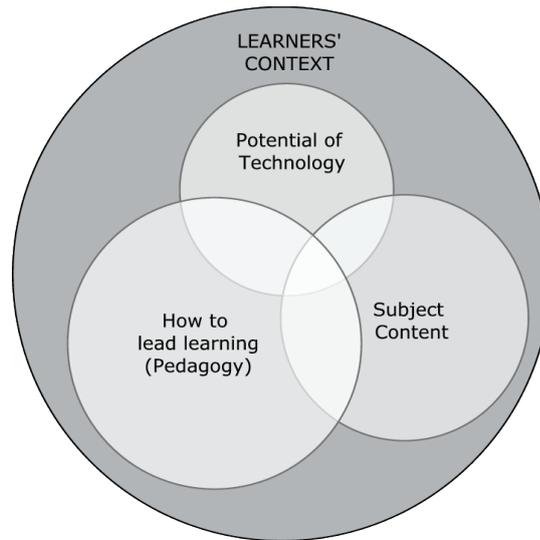
- School Toolkit for Professional Development in Digital Learning
- Teacher Toolkit for Professional Development in Digital Learning
- District Toolkit for Professional Development in Digital Learning
- HEI Toolkit for Professional Development in Digital Learning

# Knowledge framework for curriculum integration of digital tools and resources

The goal of improved learner attainment depends on many factors. These can be enhanced through effective teaching and learning approaches supported by digital tools and resources. The three professional development knowledge areas are:

- Knowledge of the potential of technologies for learning (Technological Knowledge)
- Knowledge of how to teach in their given context (Pedagogical Knowledge)
- Knowledge of subject content (Content Knowledge)

Figure 2 illustrates the Technological Pedagogical Content Knowledge (TPCK) framework which helps illustrate and describe the kinds of knowledge needed by a teacher for effective pedagogical practice in a technology-enhanced learning environment.



*Figure 2: Knowledge framework for teacher professional development with integration of digital tools and resources.*

The relatively larger size of the pedagogy circle represents the comparatively greater importance of pedagogical knowledge in the lesson planning process and with decisions taken regarding the use of digital tools and content resources.

The confluence of pedagogical and content knowledge (how to teach subject content) is usually covered during initial teacher education and by curriculum subject specialists during ongoing in-service workshops.

The convergence of the three shaded knowledge areas in the centre of Figure 3 produces a unique type of knowledge required by teachers to effectively enhance teaching and learning (Koehler & Mishra, 2009).

The Framework encourages teachers to design pedagogically sound learning activities that maximise the impact of both digital tools and content resources on teaching and learning in a given context. In accordance with the TPACK framework, this covers the confluence area of *all three* knowledge areas in the centre of Figure 3.

To read more about the TPACK model consult the support resource *FS1-Understanding the TPACK Model* which can be found at <http://bit.ly/DBEFramework..>

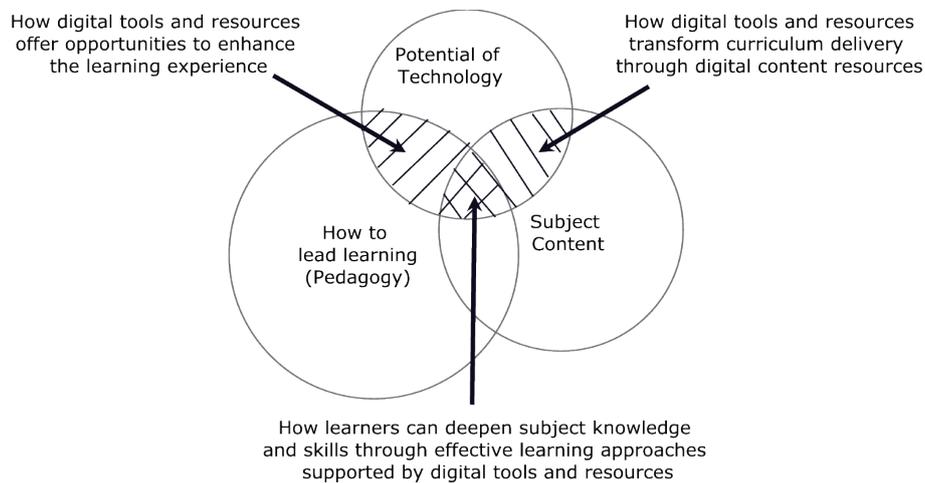


Figure 3: Focus areas for professional development in digital learning

Appendix B is a lesson analysis tool that is based on TPACK, which can be used by educators as a checklist to align a lesson with TPACK principles.

## Teaching Change Frame for Digital Learning

The purpose of the change frame is to provide:

- a) a reference point for a teacher's current application of the TPACK knowledge areas in his/her current practice,
- b) a decision-making grid for planning professional development and
- c) a range of options to grow professionally in one or more of the TPACK knowledge areas.

Consult the supporting elearning application for a more detailed explanation. (See <http://bit.ly/TeachCF>)

The change frame identifies two major factors that influence an educator's competency in digital learning. Professional development for digital learning assumes that a teacher will seek to:

1. explore and develop new *pedagogical* approaches (pedagogical knowledge) and/or
2. *be aware of* the opportunities that access to digital tools and content resources offer to enhance her/his current practice in his/her context (technological knowledge).

The change frame aligns with the TPACK framework in identifying these two dimensions. In practice, the three areas of TPACK knowledge should always be present in professional development activities but with a different emphasis, depending on the nature of the activity. Acquisition of content knowledge is the ultimate aim of the activity.

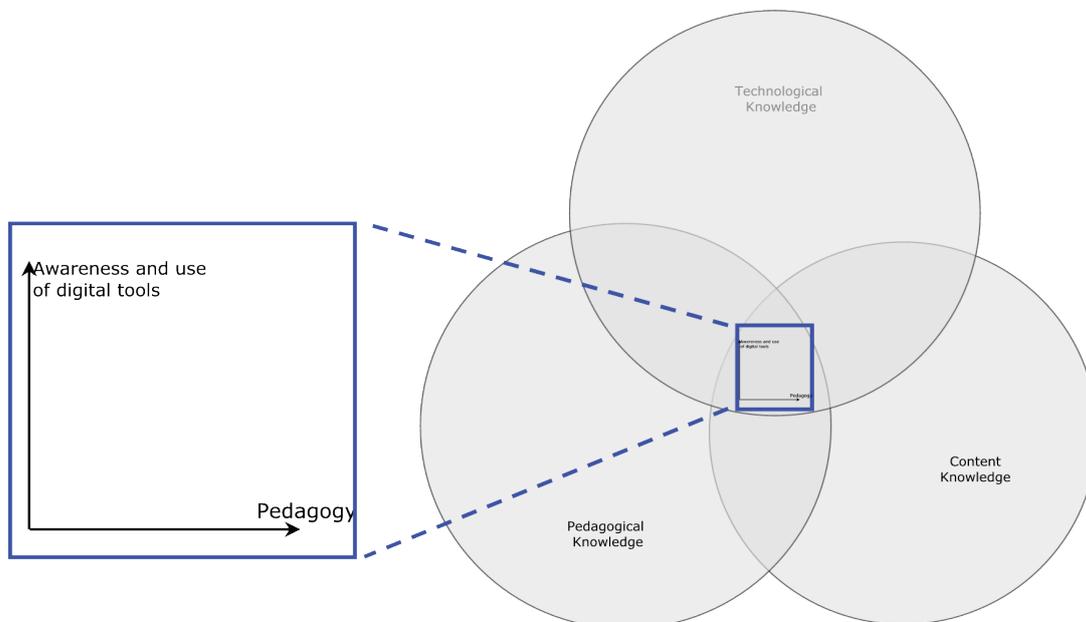


Figure 4: Illustrating the focus of TPACK knowledge areas in relation to the 2-dimensional change frame.

The teaching change frame is a way of analysing the focus of professional development activity in the TPACK (central) area of the TPACK knowledge framework (Figure 4). In other words, professional development activity should always reflect some combination of pedagogical, content and technological knowledge. The teaching frame is a way of plotting one's position on the change frame grid in order to plan a learning pathway towards digital learning.

## Factors influencing competence in digital learning

### Pedagogical factors

The rationale for pedagogical change is to facilitate more effective learning even if digital tools and resources are not used to a greater extent. *Transformative pedagogies* include higher levels of pedagogical practice, are learner-centred, engage higher order thinking skills and include a variety of interactions between learners, content and teachers. Transformative pedagogies offer more opportunities for learners to seek the support of digital tools and resources to enhance deep learning.

Among many factors to be taken into account when assessing the pedagogical context are:

- Thinking skills
- Information management
- Interactions between learners, teachers and content

**Table 4: The horizontal axis of the change frame: Four broad categories of increasingly transformative pedagogy**

Degrees of transformative pedagogy			
A	B	C	D
<b>Order of Thinking Skills (Bloom)</b>			
Teacher-led activities focusing mainly on remembering and understanding	Learner-centred activities including remembering, understanding and application	Learner-centred activities such as synthesis, analysis and evaluation	Learner-driven creation and publication of their work based on complex thinking skills.

<b>Regulation</b>			
Teacher dominates; Learners are passive (e.g. not interacting, writing notes).	Less than 50% of lesson time is learner-centred activity. Mix of individual and group work.	Learners are engaged in individual and/or group work for more than 50% of time. Activities are learner-centred.	Learners mostly engage in collaborative, self-directed and self-regulated activities; teacher facilitates learning.
<b>Information transformation</b>			
Information is presented only by the teacher verbally or in writing.	Information is gathered and processed in simple ways by learners. It is sometimes copied and pasted and not always re-stated in original words.	Information is gathered and transformed – used for skills such as analysis and evaluation and as the basis for drawing conclusions. Activities are confined to the classroom.	Knowledge is constructed by learners and applied in real life scenarios, often in collaboration with the community. Content is created/published for authentic audiences.
<b>Interactions and deep learning (Anderson)</b>			
Limited interaction – mostly one-way transfer of information by the teacher. Some teacher feedback to learners and possible learner self-study of digital content.	Teacher-class, teacher-learner (feedback and discussion) interaction. Some learner-learner interaction.	Learner-learner interaction (communication/feedback)  Learner(s) and teacher in dialogue. Learners engage independently with content.	Full range of interactions at deep level. Learner-learner interaction (collaboration dominant). Learner(s) – teacher in dialogue with each other.

### TRANSFORMATIVE PEDAGOGY



Teachers may plot their position regarding pedagogical and technological awareness using the online self-assessment tool at <https://dbe-tpd.org>.

### Awareness and use of digital tools and resources

As access to a greater range and quality of digital tools and resources increases, so does the range of opportunities that they offer. However, this should not discourage teachers with limited access to digital tools and resources. Mere access to digital tools and resources does not necessarily result in enhanced classroom learning. It is up to the teacher to design learning experiences that make effective use of pedagogy supported by the digital tools and resources. While limited access to digital tools and resources could be regarded as offering a lesser range of opportunities for learning, a class led by strong pedagogical practice and the use of one device by the teacher is likely to be more effective than a class with many devices and a teacher using poor pedagogical methods.

“Awareness” takes place when:

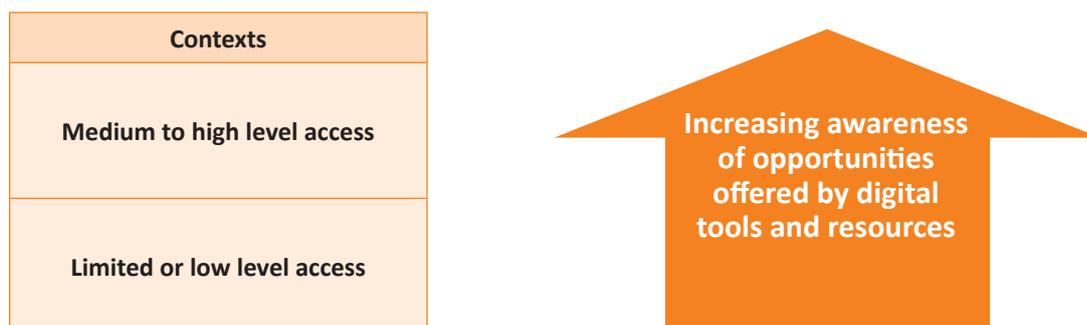
- The teacher is aware of the opportunities that digital tools and resources offer and is able to exploit these opportunities appropriately for his/her context;

“Effective use” takes place when:

- The way in which digital tools and resources are used adds value to the learning process, student engagement and the achievement of curriculum objectives.

Effective use is not always measured in terms of more use of digital tools. Just as more teacher-centred pedagogies are more appropriate in certain contexts which require more teacher direction, so too it may be more appropriate in some contexts for teachers to use resources other than digital tools and resources.

**Table 5: The vertical axis of the change frame represents increasingly awareness of opportunities and use of digital tools and resources given the teacher’s specific context.**

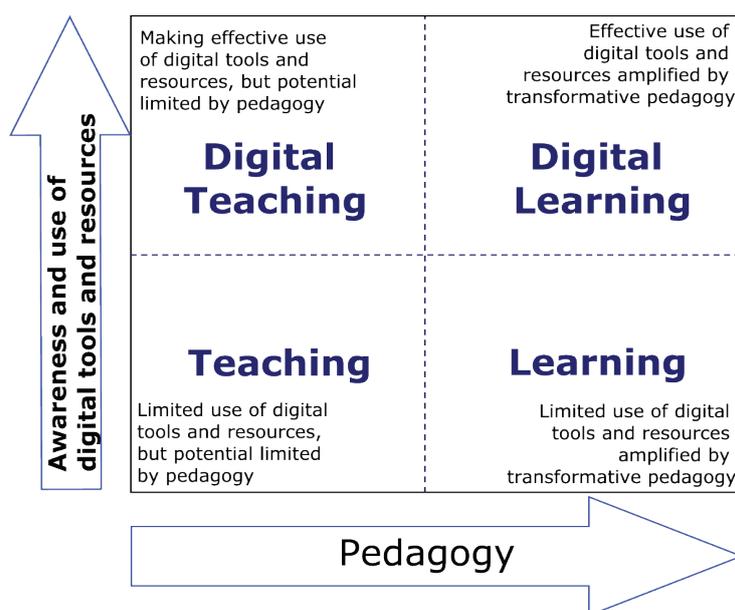


## Teaching Change Frame

Through analysis of their contexts and current practice teachers can plan change in practice by adopting different pedagogical approaches and/or embracing the opportunities that digital tools and resource offer learning and learners. Simpler pedagogy and lesser access to and use of digital tools is not regarded as undesirable practice. All learning scenarios are a reflection of the available access to digital tools and resources and an analysis of learners’ learning abilities. The change frame assists with decision-making about professional development as deemed appropriate in these contexts.

Figure 5 plots the above-mentioned pedagogical and effective use spectra on a grid, which labels four main extremes:

1. **Teaching** – Teacher-centred approaches dominate in a classroom with limited digital tools and resources, but at least one device (a feature phone, smartphone or tablet) or a combination, such as an interactive whiteboard or laptop and data projector.
2. **Learning** – Learner-centred and transformative approaches dominate in a learning environment with limited digital tools and resources, but at least one device (a feature phone, smartphone or tablet) or a combinations of devices such as an interactive whiteboard or laptop and data projector.
3. **Digital Teaching** – Digital tools remain in the hands of the teacher or under the teacher’s control (software-driven activities). The device : learner ratio is near 1:1. The potential of the digital tools and resources is not fully exploited by learners.
4. **Digital Learning** – Learner-centred and transformative approaches dominate in a learning environment where digital tools and resources are permanently in the hands of learners (who could own them). The potential of the resources is being fully exploited by learners.



*Figure 5: Change Frame: Developing competence in terms of digital learning (Adapted from Tarling and Ng’ambi (2016))*

It is important to note that no position on this frame is considered undesirable practice, given that the unique contexts in each learning environment influence the teacher’s decisions about what pedagogical approach is most appropriate or what use of digital tools and resources would be considered most effective.

The Framework advocates teacher choice in decision-making and the change frame encourages teachers to identify individual developmental pathways that are, in general, going to suit their needs in terms of digital learning (Figure 6).

It is possible that some teachers may want to perfect less transformative pedagogies, such as teaching for understanding, and it should therefore be noted that, at times, a teacher could engage in professional development that focuses on moving against the mainstream of professional growth indicated in Figure 6.

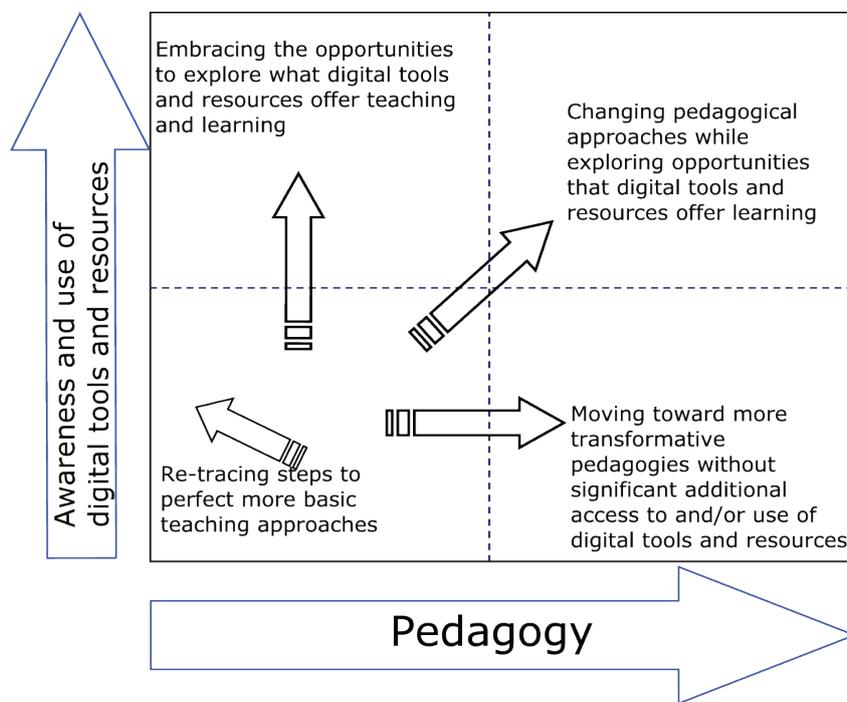


Figure 6: Possible decisions that could be taken by a teacher to explore new scenarios of use during professional development

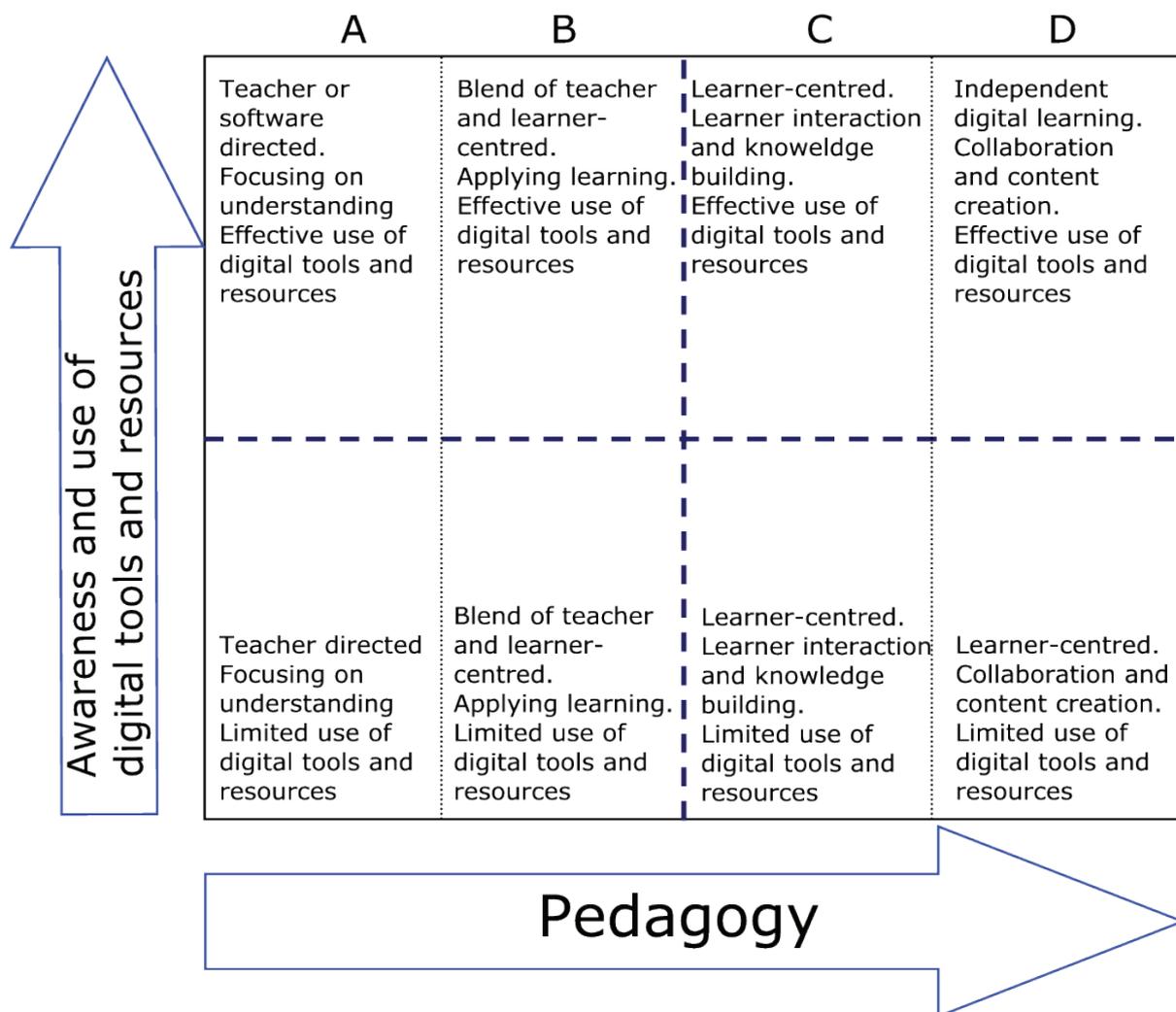
As teachers begin to explore and develop new approaches to learning or new uses of digital tools and resources (as illustrated in Figure 6) they can identify professional development activities that can be broadly categorised as follows:

1. Primarily embrace the opportunities that digital tools and resources offer teaching and learning without making significant adaptations to pedagogical approaches, or
2. Explore new approaches to learning without making significant changes to how digital tools and resources are used, or
3. Simultaneously explore new approaches to learning while exploring the opportunities that digital tools and resources offer that learning.

### Measuring progress on the change frame

Different sections in the change frame represent different levels of pedagogical transformation and effective use of digital tools and resources. These are illustrated in Appendix C, which shows examples of teaching and learning activities related to the change frame using the cell divisions shown in Figure 7.

“Teachers may plot their position regarding pedagogical and technological awareness on a learning pathway based on the teaching change frame using the online self-assessment tool at <https://dbe-tpd.org>



**Figure 7: Identifying broad levels** of activity related to pedagogy and the effective use of digital tools and resouruces.

The impact of digital tools and resources on learner tasks and engagement

Access to digital tools and resources is meaningless unless the opportunities of that access are known, valued and put into practice. This implies not only an awareness of what those opportunities are, but a realisation that some approaches to teaching and learning will restrict the ability of the teachers and learners to embrace the full potential of the digital tools and resources.

The SAMR model is used in this instance to reflect on how digital tools and resources impact on the nature of the task and, as a result, on learner engagement. This Framework advocates that effective use of digital tools and resources should be learner-driven wherever access to these tools makes this possible.

Table 6 outlines the SAMR model which can be used to gauge the impact that the technology has on the task and on learner engagement. Each higher level of the model not only aligns to more transformative pedagogy, but also offers a greater variety of new ways in which these digital tools and resources can support learning.

**Table 6: Reflecting on the impact of technology on the nature of the task**

Impact on the task (realisation of potential) Based on the SAMR model. See the supporting resource on SAMR	
<b>R</b>	Redefinition. Technology makes it possible to redefine the task.  E.g. video cameras and editing software make it possible to redefine a writing task as a video production including written scripts.

<b>M</b>	Modification. Technology makes it possible to modify the task. E.g. online collaborative documents make it easier to include more learner feedback on writing, or to conduct collaborative writing processes.
<b>A</b>	Augmentation: Technology augments the task. The task is largely unchanged. E.g. word processing tools (such as spell check and thesaurus) are used to augment the writing process.
<b>S</b>	Substitution: Technology substitutes other processes. Task remains unchanged. E.g. using a word processor instead of a pen to write an essay.

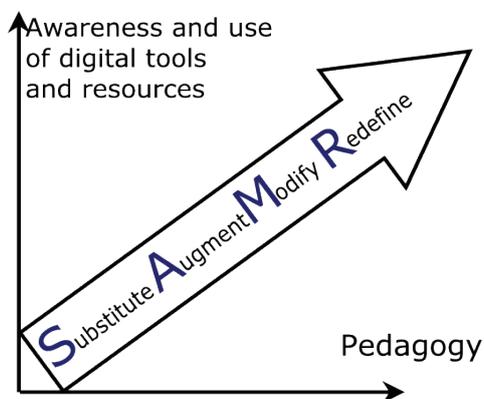


Figure 8: SAMR represent a progression towards digital learning in its more complete form.

Because any increase in student engagement and the nature of the task is likely to be associated with more effective use of the available resources, the progression could be seen as progression towards digital learning in its more complete form, according to SAMR (Figure 8).

For more information on the SAMR model, consult the supporting resource *FS2-Understanding the SAMR model*.

## Diagnostic self-assessment tools and progress

### Determining individual professional development needs

Diagnostic self-assessment tools that are aligned to the above educator competencies, provide the school management team, teachers and curriculum support staff with an opportunity to identify and prioritise professional development needs and receive guidelines on how best to satisfy these needs.

Teachers may conduct a self-assessment of their perceived digital learning competence using the online self-assessment tool at <https://dbe-tpd.org>. The tool also links competencies to SACE-endorsed professional development activities.

### Transition to digital learning

The Digital Learning Progress Rubric supports schools, districts and teacher training institutions in the transition to creating a digital learning environment. The rubrics are strategic planning tools that are intended to help teams:

- reflect on the current stage of their transition;
- plan the next steps;
- track their progress in moving forward.

The rubric can be found in Appendix F.

Once a self-assessment on the rubric has been completed, the users should reflect on the results and identify priority areas for improvement by identifying action steps that can be taken to move closer to achieving the desired goals. A guide for data interpretation and transition planning is included in Appendix F.

Change leadership is key to a widely-supported vision building process as a school progresses on the path to digital learning. There will be change in: the vision for digital learning, management responsibilities, resource management, teaching approaches and learning experiences.

A recommended change management strategy will include:

- managing a process for developing a shared vision for digital learning;
- developing a sense of ownership of the vision and the Framework;
- developing a distributed leadership in communicating and implementing the vision;
- embracing resistance;
- sharing knowledge;
- continuously evaluating the implementation process.

## Recognition of professional development activities

The SACE Continuing Professional Teacher Development (CPTD) Points System recognises three types of activity:

- Type 1 activities are “teacher initiated” and include a wide range of informal activities that cater to the professional development needs of individual teachers.
- Type 2 activities are “initiated by the school” and include meetings, workshops and projects that form part of the school programme.
- Type 3 activities are “initiated externally” and come from providers such as universities, government departments, unions and other independent service providers. SACE approves providers of professional development courses for schools and school-based educators and endorses their professional development activities according to a rigorous evaluation process.

All school-based educators are required to sign up for the SACE CPTD Points System which has been developed to:

- assist educators in developing their Professional Development Portfolio (PDP) during their three-year CPTD cycle;
- assist educators and schools in allocating Professional Development (PD) points to their activities/programmes according to Guidelines provided by the SACE CPTD System Handbook.<sup>14</sup>

The CPTD System Handbook (2013) states:

- Each educator will have a personal PDP developed according to SACE guidelines.
- The PDP will also be a personal record of an educator's professional development journey.

The PDP is a resource document designed to assist each educator's professional growth. It will provide teachers with:

- guidance on identifying and analysing their professional development needs;
- a template to assist in designing their Professional Development Plan (which should be reviewed every year);
- guidance on the kind of professional development activities / programmes they can participate in to address their professional development needs;
- reflection on how the PD activities contributed towards their professional practice and competence;
- a record and evidence of their participation in PD activities and PD points earned.<sup>15</sup>

## Recommendations for designing professional development activities

With reference to the context of professional development in South Africa, the following guidelines are recommended when designing courseware. Courses should strive to include elements of:

- Course content:
  - Course content is defined by what teachers do in teaching and learning contexts and not by what technical experts feel they ought to know about technology.
- Knowledge building and skill acquisition:
  - Participants engage with the content (what they need to know and do) in some way which leads them to draw conclusions for themselves or learn by doing.
- Sharing and collaboration:
  - Participants draw on their own experience and that of their peers (locally or globally) in order to come to conclusions about their own practice.
- Adult learning principles:
  - Participants are engaged in activities that suit their needs and interests, thus learning in a way that suits their circumstances.
- Situational learning:
  - Participants are able to learn in a context that caters to the social, technical and geographical situation in which it occurs.
- Reflective learning:
  - Participants reflect on learning and its application to learning, with a view to evaluating and challenging existing practice, where appropriate.
- Peer coaching / collaborative support:
  - Participants in the workplace adopt a supportive, non-hierarchical and collaborative attitude to exploring ways in which digital resources can enhance their practice.

---

14 SACE, CPTD System Handbook, [www.sace.org.za](http://www.sace.org.za)

15 ibid

- Sustainability:
  - The impact of the facilitator and the participants is sustained over an indefinite period of time beyond the initial training intervention.

Consideration of the above recommendations emphasises the value of:

- facilitators with educational qualifications and experience with schools;
- professional learning communities and, where resources enable this, online learning communities;
- well-facilitated and supported blended-approach courses that provide a way of overcoming:
  - the challenges of learner isolation;
  - the unequal distribution of capacity to facilitate courses;
  - the need for flexibility of content;
  - the need for flexibility of access regarding participation in courses (when participants can engage in course content).
- a learning management system that, in addition to the usual learner administration and monitoring, provides facilities for reflection, communication and collaboration between participants during and beyond the duration of the course.

See Appendix G for a recommended course evaluation tool.

## Implementing the Framework

This framework aligns to the *Integrated Strategic Planning Framework for Teacher Education and Development* (2011), by adopting a two-pronged approach to teacher professional development in digital learning. This makes provision for quality teacher development to happen through activities that may or may not be linked to formal qualifications. Qualification-linked activities will primarily be led by the DHET, while activities that are not directly linked to qualifications will primarily be led by the DBE and PEDs.<sup>16</sup>

The outcomes will be achieved through the following activities, which are grouped in terms of the agency that has prime responsibility for ensuring their achievement:

- A. Activities to be led by the Department of Basic Education.
  - B. Activities to be led by the provincial departments of education.
  - C. Activities to be led by the Department of Higher Education and Training.
  - D. Activities to be led by other role-players.
- A. **Activities to be led by the Department of Basic Education**
    1. Embark on an advocacy and awareness raising campaign about the Framework.
    2. Partner with all relevant stakeholders in adopting the Framework. DBE will work with partners to align their professional development programmes and activities to the Framework.
    3. Work with DBE partners, Provincial Education Departments and their partners to develop processes to assist teachers to identify their development needs and to enable expanded opportunities for access to quality Continuing Professional Development (CPD) activities and programmes to meet these needs.
    4. Coordinate strategic partnerships for the advancement of the Framework outcomes.
    5. Lead and coordinate research and evaluation on the impact of applying the Framework to professional development in digital learning.
    6. Monitor and support Provincial Education Departments and their partners to implement the Framework.

---

<sup>16</sup> Integrated Strategic Planning Framework for Teacher Education and Development, p2.

## B. Activities to be led by the Provincial Education Departments (PEDs)

1. Develop a provincial advocacy and awareness raising campaign about the Framework.
2. Build on existing capacity in Provincial Teacher Development Institutes (PTDIs) and District Teacher Development Centres (DTDCs)<sup>17</sup> to promote professional development for learning with technologies.
3. Plan and implement teacher development programmes for digital learning in the province.
4. Integrate the Framework principles with professional development activities.
5. Monitor and support districts and schools in implementing the Framework.
6. Report to the Department of Basic Education on the implementation of professional development for digital learning.

### District Managers:

1. Support the DTDC and district support staff to integrate the Framework in professional development activities for learning with technologies.

### District Teacher Development Centres:

1. Develop awareness raising and advocacy activities on the Framework at the DTDC.
2. Promote the Framework and its supporting resources.
3. Advocate and support the establishment of PLCs and encouraging teachers to participate actively and meaningfully.

### e-Learning and Curriculum Support Staff:

1. Provide support to teachers in the integration of digital tools and resources for effective learning.
2. Integrate digital content resources when supporting teachers.
3. Provide support to school management teams and teachers in developing and managing their Professional Development Portfolios.

## C. Activities to be led by the Department of Higher Education and Training

1. Promote the development and offering of appropriate qualification-based CPD programmes aligned to the Framework by universities and support them to do so as funds become available.
2. Promote integration of the Framework in the design and delivery of pre-service teacher education programmes and courses.
3. Support the further development of teacher educators at tertiary institutions to integrate digital technologies in their own teaching.
4. Support research on digital learning at tertiary institutions.

## D. Activities to be led by DBE partners.

### Education Faculties and Teacher Training Institutions

1. Integrate digital learning competencies in the teacher education programme.
2. Model digital learning competence during teaching activities.
3. Develop student digital learning competencies during teacher education activities.
4. Conduct research, where the opportunity arises, related to implementation of the Framework and development of digital learning competencies.

### The South African Council for Educators (SACE)

1. Provide a Continuing Professional Teacher Development System that recognises professional development activities that are aligned to the framework.

---

<sup>17</sup> Integrated Strategic Planning Framework for Teacher Education and Development, p2

## Teacher Unions

1. Advocate, support and encourage teachers to access opportunities to identify and address their development needs in terms of digital learning;
2. Plan and implement SACE-endorsed teacher professional development activities in digital learning.<sup>18</sup>

## Schools

### Leaders

1. Promote use of the Framework and its supporting resources.
2. Build on existing capacity to support professional development in digital learning at the school.
3. Encourage teachers to plan continuing professional development and to record these activities on the SACE CPTD system.

### Teachers

1. Aspire to the competencies outlined in the Framework.
2. Plan for effective use of digital tools and resources by learners.
3. Teacher Librarians and school ICT coordinators support teachers in the development of teacher learner support materials that integrate digital tools and content resources.

### Other providers of teacher professional development activities.

1. Integrate the Framework guidelines in the design and delivery of all teacher professional development activities.
2. Seek validation for the SACE-endorsed courses that pre-date the Framework.

---

18 Memorandum of Agreement between DBE and Teacher Unions (2012)

## Action Plan for the Achievement of the Framework Outcomes

	Activities	Lead agencies	Key Tasks	Timeframe
<b>1. Support and alignment</b>				
1.1	Develop support materials for users to understand and apply the competencies	DBE	Identify and develop diagnostic self-assessment tools for teachers, SMT and curriculum support staff.	May-June 2017
1.2	Align CPD activities with educator competencies and the key ideas of the Framework	DBE, SACE	Meet with SACE to explain the key ideas of the Framework and educator competencies;  Seek ways of aligning the SACE evaluation tool for professional development activities with the Framework;  Meet with SACE evaluators of digital learning activities;  Identify existing endorsed PD activities;  Analyse the alignment of existing activities with Framework;  Publish information on activity alignment to the framework;  Identify gaps in the provision of activities in relation to specific competencies.	April-June 2017
1.3	Develop support resources for provincial implementation.	DBE, PDE	Develop one-page information sheets, apps and diagnostic self-assessment tools;  Conduct provincial workshops to introduce support materials.	July – December 2017
1.4	Evaluate and endorse professional development activities in alignment with the key ideas of the Framework.	SACE	Evaluate and endorse PD activities using the revised evaluation tools.	Ongoing
1.5	Adopt the key ideas of the Framework and train evaluators.	SACE, DBE	Run a workshop with SACE evaluators to introduce the key ideas of the Framework;  Adoption of the key ideas of the Framework;  Revision of evaluation tools for evaluating activities for digital learning.	April 2017
1.6	Approve providers of teacher professional development for digital learning.	SACE	Evaluate and approve providers.	Ongoing
1.7	Maintain and publish an updated list of endorsed professional development activities including information on their alignment to the framework.	SACE, DBE	Update and publish the list of endorsed activities;  Publish information about the alignment of activities to the framework.	April 2017 – Dec 2020
<b>2. Strategize</b>				
2.1	Plan a strategy for promoting digital learning.	DBE	Conduct strategy planning meeting	April-June 2017
2.2	Implement the strategy for promoting digital learning.	DBE	Develop workshop/seminar materials for Implementing Digital Learning;  Conduct workshops / seminars.	June 2017 – December 2018
<b>3. Monitoring and evaluation</b>				

3.1	Plan and coordinate an evaluation of the impact of digital learning.		Identify evaluation consultants; Identify key projects for evaluation; Analyse evaluation results; Identify strategies for harnessing best practice; Revise the Framework.	July 2017 – Dec 2020
3.2	Develop parameters for monitoring implementation of the Framework	DBE, PDE, NICPD, ETDP SETA	Conduct a consultation process with the IT Steering Committee, NICPD and ETDP SETA; Negotiate parameters for measuring implementation progress in provinces, districts and schools; Develop rubrics to measure transition in digital learning.	July 2017 – Dec 2020
3.3	Monitor implementation of the Framework.	DBE, PDE	Receive and analyse quarterly reports from PDEs.	July 2017 – Dec 2020
<b>4. Build competence and build on existing capacity building</b>				
4.1	Identify key role-players in terms of professional development for digital learning	DBE, PDE	Create online learning community for provincial role-players; Create a communication forum for key role-players;	April 2017 – Dec 2020
4.2	Build the competence of key role-players to plan, develop and implement PD activities for digital learning	DBE, PDE, PTDI, DTDC, Partners	Design a course for building the competence of provincial role players; Develop online collaborative learning materials for provincial role-players; Develop evaluation tools for transition and implementation; Conduct online courses for key role-players.	April 2017 – Dec 2020
<b>PROVINCIAL LEVEL IMPLEMENTATION</b>				
<b>5. Prepare</b>				
5.1	Plan teacher development programmes for digital learning.	PDE, PTDI, DTDC, Teacher Unions	Conduct planning meetings using the guidelines acquired from capacity building workshops; Set annual targets for the number of teachers and principals engaged in workshops/seminars and PLCs.	By January annually
5.2	Implement teacher development programmes for digital learning.	DTDC, Teacher Unions, Partners	Plan, fund and implement a programme of activities for digital learning.	Ongoing starting Jan 2017
5.3	Monitor and support DTDC and district support staff with the implementation of the Framework in professional development activities for digital learning.	District Managers, DTDC	Coordinate reporting and feedback mechanisms; Identify indicators of success; Seek support from PDE where the needs.	Jan – Dec 2020
5.4	Evaluate the implementation of teacher development programmes for digital learning.	PDE, DTDC, Teacher Unions, Partners	Use the evaluation tools developed by DBE to evaluate the effectiveness of PD activities.	Ongoing post-workshop
5.5	Report to the Department of Basic Education on the implementation of professional development for digital learning.	PDE	Complete an evaluation form and an implementation report template; Submit the documents to the coordinating officer at DBE	Quarterly

<b>6. Promote the Framework and its supporting resources.</b>				
6.1	Develop and implement a strategy for digital learning.	PDE, PTDI, DTDC, Teacher Unions, School Leadership	Identify the key objectives for a digital learning plan;  Develop a provincial strategy for enhancing digital learning and learner attainment;  Implement the strategy action items according to a timeline.	Jan 2018 – Dec 2020
6.2	Integrate digital learning resources with teacher development activities that support the NCS.	PDE, DTDC, Curriculum support staff, Partners	Conduct curriculum workshops to explore the opportunities that digital tools and content offer to each subject;  Integrate appropriate digital tools and content resources during all teacher support and development activities.	Jan 2018 – Dec 2020
<b>7. Advocate and support the establishment of PLCs and encourage teachers to participate actively and meaningfully.</b>				
7.1	Coordinate the establishment of PLCs for digital learning.	DTDC, school leadership, teachers	Identify key role players;  Build on the existing capacity of key role players to establish and grow PLCs.	Jan 2018 – Dec 2020
7.2	Support PLCs.	DTDC	Coordinate meetings or online interaction spaces for PLCs for digital learning.	Jan 2018 - Dec 2020
<b>8. Provide on-site support to teachers in terms of the integration of digital tools and resources for effective learning.</b>				
8.1	Support teachers with integration of digital tools and resources according to the TPACK knowledge framework	School and district e-learning and curriculum subject specialists, Teachers	Visit and engage in dialogue with teachers about digital learning;  Participate in PLCs as collaborative learners;  Establish and participate in online PLCs;  Host workshops/seminars for teachers.	Jan 2018 – Dec 2020
<b>9. Provide support to school management teams and teachers in developing and managing their Professional Development Portfolios.</b>				
9.1	Promote the diagnostic self-assessment of individual professional development needs for digital learning	DTDC, Curriculum support staff, school leaders	Promote the use of the diagnostic self-assessment tools that are based on educator competencies;  Identify gaps in competence based on the diagnostic self-assessment;  Discuss options for professional growth.	Jan 2018 – Dec 2020
9.2	Plan professional development pathways and update portfolios.	Principals, Vice-principals, Heads of Department, Teachers	Prioritise professional growth requirements;  Complete the PDP;  Participate in professional development activities for digital learning.	Jan 2018 – Dec 2020
9.3	Support change leadership in schools.	DTDC, School leadership	Identify facilitators of change leadership workshops;  Conduct workshops on change leadership for digital learning.	Jan 2018 - Dec 2020
<b>10. Through higher education institutions, implement qualification-based CPD programmes and accredited short learning programmes that are aligned to the Framework for all types of teachers who work in the schooling system.</b>				
10.1	Evaluate existing programmes' alignment to the key ideas of the Framework	DHET, HEI, Partners	Conduct a Framework introduction workshop for HEI staff responsible for curriculum development and technology integration skill;  Develop/refine tools for evaluating existing programmes' alignment to Framework.	May – Dec 2017

10.2	Adapt existing programmes or develop new programmes for digital learning as needed.	HEI	Develop/adapt courses; Submit courses for approval (if necessary); Include a course on digital learning in teacher education programmes for all pre-service teachers.	Jan 2018 – Dec 2020
10.3	Integrate the educator competencies in the delivery of pre-service teacher education programmes and courses.	HEI	Analyse existing programmes and identify how educator competencies in digital learning could be included where appropriate; Model digital learning during course delivery.	Jan 2018 – Dec 2020
<b>11. Plan for the effective use of digital tools and resources by learners while enhancing curriculum aims.</b>				
11.1	Aspire to the competencies outlined in the Framework.	Teachers	Attend workshops/seminars on digital learning that focus on learner-centred approaches; Reflect on the effectiveness of lessons and evaluate options for new learner-centred approaches including digital tools and content resources; Conduct diagnostic self-assessment of competencies and plan professional growth according to individual needs.	Jan 2018 – Dec 2020
11.2	Support teachers with development of teacher learner support materials that promote learner centred use of digital tools and content resources	District curriculum support staff; Teacher librarian; School-based curriculum support staff; teachers	Conduct workshops/seminars/ meetings and support PLCs that focus on conversations about learners' access to digital tools and resources; Conduct professional development activities that focus on learner-centred use of digital tools and resources; Teachers afford learners opportunities to use digital tools and resources whenever appropriate.	Jan 2018 – Dec 2020
<b>12. Analyse progress in the transition to digital learning.</b>				
12.1	Apply diagnostic self-assessment tools when evaluating progress.	DTDC, schools	Conduct a workshop to determine progress in adopting digital learning; Apply the Digital Learning Progress Rubric; Determine the next action steps.	Jan 2018 – Dec 2020
12.2	Apply diagnostic self-assessment tools to determine individual learning needs	Principals, SMT, teachers	Complete the professional development analysis tools; Identify gaps in learning; Set priorities for professional development in digital learning; Complete the PDP; Participate in PD activities.	Jan 2018 – Dec 2020

## References

- American Association of Colleges for Teacher Education: Committee on Technology and Innovation (Ed.), *Handbook of Technological Pedagogical Content Knowledge (TPCK)*, Routledge, New York, 2008.
- American Association of School Librarians, *Standards for the 21<sup>st</sup> Century Learner*. Retrieved from [http://www.ala.org/aasl/files/guidelinesandstandards/learningstandards/AASL\\_LearningStandards.pdf](http://www.ala.org/aasl/files/guidelinesandstandards/learningstandards/AASL_LearningStandards.pdf)
- Anderson, T. *Getting the mix right again: An updated and theoretical rationale for interaction*, The International Review of Research in Open and Distributed Learning, Vol 4, No 2, 2003. Retrieved from <http://www.irrodl.org/index.php/irrodl/article/view/149/230>
- Anderson, T. *Theory and Practice of Online Learning*, Chapter 2, Toward a Theory of Online Learning. Retrieved from [http://cde.athabasca.ca/online\\_book/ch2.html](http://cde.athabasca.ca/online_book/ch2.html), Athabasca University, 2004.
- Australian Institute for Teaching and School Leadership, *Australian Professional Standards for Teachers*, 2011. Retrieved from <http://www.aitsl.edu.au/australian-professional-standards-for-teachers>
- British Educational Communications and Technology Agency, *What the research says about using ICT in Maths*. Retrieved from <http://webarchive.nationalarchives.gov.uk/20130401151715/http://www.education.gov.uk/publications/eOrderingDownload/15014MIG2799.pdf>
- Bialobrzeska, M. and Cohen S. *Managing ICTs in South African Schools: A Guide for School Principals*. South African Institute for Distance Education (SAIDE), 2005.
- Bower, M. *Affordance analysis – matching learning tasks with learning technologies*. Educational Media International, 45(1), 3–15, 2008. Retrieved from <http://www0.sun.ac.za/ctl/wp-content/uploads/2011/04/bowerarticle.pdf>
- Dede, C. *Comparing Frameworks for “21st Century Skills”*, Harvard Graduate School of Education, July, 2009. Retrieved from [http://watertown.k12.ma.us/dept/ed\\_tech/research/pdf/ChrisDede.pdf](http://watertown.k12.ma.us/dept/ed_tech/research/pdf/ChrisDede.pdf)
- Department of Education, RSA, *White Paper on e-Education*, 2004. Retrieved from <http://www.education.gov.za/Portals/0/Documents/Legislation/White%20paper/DoE%20White%20Paper%207.pdf?ver=2008-03-05-111708-000>
- Department of Education, RSA, *Guidelines for Teacher Training and Professional Development in ICT*, 2007. Retrieved from [www.thutong.doe.gov.za/ResourceDownload.aspx?id=35998](http://www.thutong.doe.gov.za/ResourceDownload.aspx?id=35998)
- Department of Basic Education, RSA. 2015. *National Strategy for Learner Attainment*, 2015. Retrieved from [http://www.education.gov.za/Portals/0/Documents/Publications/2015%20Strengthened%20NSLA\\_03112014.pdf?ver=2014-12-04-145626-000](http://www.education.gov.za/Portals/0/Documents/Publications/2015%20Strengthened%20NSLA_03112014.pdf?ver=2014-12-04-145626-000)
- Department of Basic Education, RSA. *Action Plan to 2019: Towards the Realisation of Schooling 2030 (2015)*. Retrieved from <http://www.education.gov.za/Portals/0/Documents/Publications/Action%20Plan%202019.pdf?ver=2015-11-11-162424-417>
- Department of Basic Education, RSA and Department of Higher Education & Training, RSA. *Integrated Strategic Planning Framework for Teacher Education and Development 2011- 2025 (2011)*. Retrieved from [http://www.gov.za/sites/www.gov.za/files/Integrated%20Strategic%20Plan%20Teacher%20Dev\\_0.pdf](http://www.gov.za/sites/www.gov.za/files/Integrated%20Strategic%20Plan%20Teacher%20Dev_0.pdf)
- Department of Economic Development, RSA, *Basic Education and Partnerships with Schools (2011)*. Retrieved from <http://www.gov.za/documents/new-growth-path-accord-2-basic-education-and-partnerships-schools>
- Department of Higher Education and Training, RSA. *Revised Policy on the minimum requirements for Teacher Education Qualifications, 2015*. Retrieved from [http://www.dhet.gov.za/Teacher%20Education/National%20Qualifications%20Framework%20Act%2067\\_2008%20Revised%20Policy%20for%20Teacher%20Education%20Qualifications.pdf](http://www.dhet.gov.za/Teacher%20Education/National%20Qualifications%20Framework%20Act%2067_2008%20Revised%20Policy%20for%20Teacher%20Education%20Qualifications.pdf)
- Education Queensland. *eLearning for smart classrooms*, August 2008. Retrieved from [www.education.qld.gov.au/smartclassrooms](http://www.education.qld.gov.au/smartclassrooms)
- Education Queensland. *Smart Classrooms*. Retrieved from <http://education.qld.gov.au/smartclassrooms/>
- Friday Institute for Educational Innovation. *North Carolina Digital Learning Plan*, 2015. Retrieved from <http://ncdlplan.fi.ncsu.edu/>
- Friday Institute for Educational Innovation. *Digital Learning Progress Rubric*, 2016. Retrieved from <http://ncdlplan.fi.ncsu.edu/rubric/>
- InfoDev. *Knowledge Maps: ICT in Education*, 2005. Retrieved from <http://www.infodev.org/articles/knowledge-maps-icts-education>
- International Society for Technology in Education. *ISTE Standards Teachers*, 2008. Retrieved from [https://www.iste.org/docs/pdfs/20-14\\_ISTE\\_Standards-T\\_PDF.pdf](https://www.iste.org/docs/pdfs/20-14_ISTE_Standards-T_PDF.pdf)
- Koehler, M. J. & Mishra, P. (2009). What is technological pedagogical content knowledge? *Contemporary Issues in Technology and Teacher Education*, 9(1), 60-70. Retrieved from <http://www.citejournal.org/vol9/iss1/general/article2.cfm>

- Koehler, M. J., Mishra, P., Bouck, E. C., DeSchryver, M., Kereluik, K., Shin, T. S. & Wolf, L.G. (2011). *Deep-play: developing TPACK for 21st century teachers*. *International Journal of Learning Technology*, 6(2), 146–163. Retrieved from <http://creativity.fts.edu.msu.edu/wp-content/uploads/2011/09/IJLT060203-MISHRA1.pdf>
- Memorandum of Agreement between the Department of Basic Education and Teacher Unions on National on Professional Development for Teachers, 2012.
- Mosley, D., Higgins, et.al. Ways forward with ICT: Effective Pedagogy Using Information and Communications Technology for Literacy and Numeracy in Primary Schools. Durham University, Curriculum, Evaluation, and Management Centre, 1999. Retrieved from <http://www.leeds.ac.uk/educol/documents/00001369.htm>
- Ndlovu, N.S. The Pedagogical Integration of ICTs by Seven South African Township Secondary School Teachers. Unpublished doctoral thesis, University of the Witwatersrand, Johannesburg, (2015).
- Ng’ambi D. *Effective and ineffective uses of emerging technologies: Towards a transformative pedagogical model*, *British Journal of Educational Technology*, Vol 44, No.4, 2013. Retrieved from <http://onlinelibrary.wiley.com/doi/10.1111/bjet.12053/full>
- North Carolina Essential Standards for Instructional Technology. North Carolina Department of Public Instruction. 2012. Retrieved from <http://www.dpi.state.nc.us/acre/standards/new-standards/#it>
- North Carolina Learning Technology Initiative (NCLTI) Framework for Planning. Raleigh: Friday Institute for Educational Innovation, 2008. Retrieved from [http://www.fi.ncsu.edu/assets/research\\_papers/nc-11-learning-technology-initiative-planning/nclti-planning-framework.doc](http://www.fi.ncsu.edu/assets/research_papers/nc-11-learning-technology-initiative-planning/nclti-planning-framework.doc)
- North Carolina Professional Teaching Standards. Public Schools of North Carolina. 2012. Retrieved from <http://www.dpi.state.nc.us/docs/profdev/standards/teachingstandards.pdf>
- Organisation for Economic Co-operation and Development. *Students, computers and learning: making the connection* (2015), OECD Publishing, Paris, France. Retrieved from <http://dx.doi.org/10.1787/9789264239555-en>
- Tarling, I. and Ng’ambi, D. *Teachers pedagogical change framework: a diagnostic tool for changing teachers’ uses of emerging technologies*, *British Journal of Educational Technology*, Vol 47, No.3, p. 554–572, 2016. Retrieved from <http://onlinelibrary.wiley.com/wol1/doi/10.1111/bjet.12454/full>
- Tech and Learning. *21st Century Learning and Assessment*, Retrieved from <http://www.techlearning.com/K12/Fundamentals>
- Tech and Learning. *Mobile Learning*, Retrieved from <http://www.techlearning.com/K12/Fundamentals>
- The Education and Training Foundation. *Professional Standards for Teachers and Trainers in Education and Training – England*, 2014. Retrieved from [http://www.et-foundation.co.uk/wp-content/uploads/2014/05/4991-Prof-standards-A4\\_4-2.pdf](http://www.et-foundation.co.uk/wp-content/uploads/2014/05/4991-Prof-standards-A4_4-2.pdf)
- The Education and Training Foundation. *Self-development Using the 2014 Professional Standards*, 2015. Retrieved from [http://www.et-foundation.co.uk/wp-content/uploads/2015/06/5399-Self-Development-Prof-Standards\\_4.pdf](http://www.et-foundation.co.uk/wp-content/uploads/2015/06/5399-Self-Development-Prof-Standards_4.pdf)
- The New Media Consortium. *The NMC Horizon Report: 2011 K-12 Edition*. Retrieved from <https://www.nmc.org/pdf/2011-Horizon-Report-K12.pdf>
- Thierry, K., Harper-Merrett, T., Traorè, D., Mbangwana, M. and Tourè, K. (2009, October 27-30). The Pan-African Research Agenda on the Pedagogical Integration of ICTs. (K. a. The 3rd OECD World Forum on “Statistics, Compiler) Korea: OECD World Forum. Retrieved from <http://www.oecd.org/site/progresskorea/44097541.pdf>
- UNESCO. *ICT Competency Framework for Teachers*, 2011. Retrieved from <http://unesdoc.unesco.org/images/0021/002134/213475E.pdf>
- UNESCO. *Towards Knowledge Societies*, 2005. Retrieved from <http://unesdoc.unesco.org/images/0014/001418/141843e.pdf>
- UNESCO. *Information and Communication Technologies in Teacher Education: A Planning Guide*, 2003. Retrieved from <http://unesdoc.unesco.org/images/0012/001295/129533e.pdf>
- UNESCO. *Case Study: National ICT Competency Standards for Teachers in Tanzania*, Bangkok 2014. Retrieved from <http://unesdoc.unesco.org/images/0023/002348/234822E.pdf>
- Vandeyar, T. (2015). Policy intermediaries and the reform of e-Education in South Africa. *British Journal of Educational Technology*, 46: 344–359. doi: 10.1111/bjet.12130. Retrieved from <http://onlinelibrary.wiley.com/wol1/doi/10.1111/bjet.12130/full>
- Wilson-Strydom, M. A. (2005). Understanding ICT Integration in South African Classrooms. SchoolNet SA research and Evaluation. Retrieved from [http://www.schoolnet.org.za/research/research/Wilson-Strydom\\_Thomson.doc](http://www.schoolnet.org.za/research/research/Wilson-Strydom_Thomson.doc)

## Appendix A – Minimum requirements supported by digital tools and resources

According to the *Revised Policy on the Minimum Requirements for Teacher Education Qualifications, 2015* newly qualified teachers are required to fulfil the requirements listed in the first column below. The second column provides some examples of how all teachers can achieve the same competence with the support of digital tools and resources.

	<b>Newly qualified teachers must:</b>	<b>New and experienced teachers can use digital tools and resources to enhance the competence by:</b>
1	Have sound subject knowledge.	Conducting self-initiated online research using search engines to gain deeper understanding of subject content.
2	Know how to teach their subject(s) and how to select and determine the sequence and pace of content in accordance with both subject and learner needs.	<ul style="list-style-type: none"> <li>Evaluating and selecting digital content resources to fulfil specific functions in the lesson such as enhancement, remedial support and extension of learning.</li> <li>Exploring and using digital tools and resources that improve accessibility to learning for learners with special needs.</li> </ul>
3	Know who their learners are and how they learn; they must understand their individual needs and tailor their teaching accordingly.	Using the school administration package or a word processor to make notes on learners and their individual needs.
4	Know how to communicate effectively in general, as well as in relation to their subject(s), in order to mediate learning.	<p>Using email and/or other appropriate text messaging tools to stay in contact with learners and their parents.</p> <p>Using email and/or other appropriate social media tools to pursue Digital Learning Competency 4: Participate in local and global professional learning communities.</p>
5	Have highly developed literacy, numeracy and Information Technology (IT) skills.	Refer to the digital learning competencies.
6	Be knowledgeable about the school curriculum and be able to unpack its specialised content, as well as being able to use available resources appropriately, so as to plan and design suitable learning programmes.	<p>Exploring how digital tools and content resources may enhance your teaching approach and deepen learner engagement and understanding of the subject.</p> <p>Exploring specialised digital tools and resources for your subject. Some of these are mentioned in the CAPS document for your subject.</p>
7	Understand diversity in the South African context in order to teach in a manner that includes all learners. They must also be able to identify learning or social problems and work in partnership with professional service providers to address these.	Use email and online forums to contact and seek support from other professionals.
8	Be able to manage learning effectively across diverse contexts in order to ensure a conducive learning environment.	<ul style="list-style-type: none"> <li>Using a communication tool such as a Facebook page or a blog to keep learners and their parents informed of class proceedings and learning requirements.</li> <li>Using a class management system such as Edmodo to provide learning resources and guidelines and to monitor learning.</li> </ul>
9	Be able to assess learners in reliable and varied ways, as well as being able to use the results of assessment to improve teaching and learning.	<ul style="list-style-type: none"> <li>Use a word processor and spreadsheet to create and administer assessment tools.</li> <li>Use digital communication and collaboration tools to receive submissions from and provide feedback to learners.</li> <li>Create digital format assessments with self-marking and/or diagnostic abilities.</li> </ul>
10	Be able to reflect critically on their own practice, in theoretically informed ways and in conjunction with their professional community of colleagues in order to constantly improve and adapt to evolving circumstances.	<ul style="list-style-type: none"> <li>Consider using a video camera to record part of your lesson.</li> <li>Use digital communication and collaboration tools to share lesson experiences with your PLC.</li> <li>Use the teacher professional development diagnostic self-assessment tool and the lesson analysis tool to support your reflection about your lesson and your professional competence in delivering digital learning.</li> </ul>

## Appendix B - Lesson analysis checklist

This checklist focuses on the inclusion of digital tools and content resources *over and above* the existing approaches and resources that you already use. It in no way discounts them, especially if they already enable you to facilitate effective learning.

The framing questions for analysing a digital learning lesson are:

1. Did I maintain curriculum focus?
2. Did I actively engage my learners in higher order thinking and interactive activities?
3. Did I make the best use of digital tools?
4. Was I able to find and use effective digital content?
5. Have digital tools and resources facilitated assessment?
6. Are my learners likely to be more skilled and have better understanding of the subject content?

### 1. Did I maintain curriculum focus?

Your primary lesson objective is to achieve the curriculum objective. In addition to this you should consider the cross-curricular skills that are characteristic of deep learning. Technology skills are a by-product of this (unless your subject is Cat or IT). These are some indicators of curriculum focus:

Curriculum focus		v
1.1	I have stated my objectives in terms of what learners will be able to do, rather than just on what work they will cover.	
1.2	My learners will gain/improve specific content knowledge and skills as described in the CAPS document.	
1.3	I have considered and included elements that are characteristic of deep learning in which learners are engaged in higher order thinking skills in real-life contexts	

### 2. Did I actively engage my learners?

Engaging learners is not unique to digital learning - it is a pedagogically-focused requirement if you want to fulfil the promise of digital tools and resources. The presence of digital tools and resources in the learning environment does excite learners, but this is not the same as engaging them in learning. The technology must offer opportunities for deeper, relevant learning so that the learners are engaged in what they are discovering, rather than in what they are using.

These are some indicators of lesson elements that may engage learners:

Engage learners		v
2.1	I have identified ways in which my learners will actively participate and communicate with each other, other learners or the community (sharing ideas, asking opinions, clarifying facts etc.).	
2.2	I have identified learning strategies that ensure my learners will be actively collaborate with each other, other learners or the community (working towards a common goal).	
2.3	I have created opportunities for the learner to think deeply and discuss issues.	
2.4	I am able to link this lesson to a relevant progression of skills or knowledge.	
2.5	I am able to link this lesson to real life applications of what is being learned.	
2.6	Learners have roles/tasks to perform throughout the lesson.	

### 3. Did I make the best use of digital tools?

Digital tools (all technologies and digital resources that can be used for learning) will not enhance learner attainment by themselves. Their effectiveness depends on the decisions you make when designing the lesson. Digital tools will no always be able to make a positive impact in the lesson. Assess the value of digital tools by looking for these indicators:

Digital tools		v
3.1	The digital tools make the learner's task more authentic.	

3.2	The digital tools make the learner’s task easier to accomplish.	
3.3	The digital tools help the learner complete the task faster than without it.	
3.4	The digital tools are secondary to the content and objectives of the lesson.	
3.5	The digital tools allow the learner to investigate a concept in ways otherwise not feasible.	
3.6	The digital tools help the learner to receive feedback more efficiently.	

**4. Was I able to find and use effective digital content?**

Digital content provides you, the teacher, with an empowering selection of support resources. At times this content may help you find better ways to understand and teach a concept. More importantly, digital content will place learning supporting material at your and your learners’ fingertips, enabling your learners to pursue learning more independently and individually when required. The indicators of effective use of digital content include:

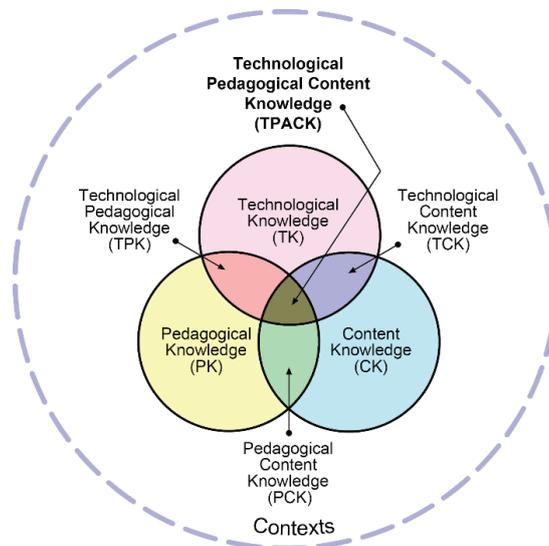
Digital content		√
4.1	The learner has choices of supporting learning materials at different levels.	
4.2	Content is available in a variety of modes (e.g., graphics, sound, text, video) and media (e.g., books, films, photos, apps).	
4.3	I have found digital content that can be used remedially with individual or small groups of learners.	
4.4	I have found digital content that can be used to reinforce individual or small groups of learners.	
4.5	I have found digital content to re-inforce and enhance the teaching that I do in the class.	
4.6	I have found digital content that will enable the learner to work more independently, alone or in small groups, during lesson time.	
4.7	I have found digital content that will enable the learner to further pursue the learning objectives beyond lesson time.	

**5. Are my learners likely to be more skilled and have better understanding of the subject content?**

This question requires a simple, summative YES/NO response, based on your analysis of the lesson. The answer may be “YES”, but then ask yourself the additional question:

“Could I achieve this more effectively if I continued to improve my knowledge of technology’s potential to influence my teaching and my learners’ attainment?”

*Note: This lesson analysis checklist is based on the principles of the TPACK model, which encourages you to make appropriate decisions about your learning and teaching approach, the technology resources that influence this and the content knowledge that these enhance.*



Reproduced with permission of the publisher, © tpack.org (2012)

## Appendix C – Examples of teaching and learning activities based on the change frame

Mathematics Gr 9 Data Handling				
	A	B	C	D
High access	The teacher uses animated tip sheets to show learners how to create a frequency table.	The learners access and gather current earthquake data for homework and create a frequency table in class. The teacher assists with interpretation.	The learners analyse earthquake data that they have presented in a frequency table and email their interpretations to their Geography teacher for feedback.	Learners decide to design an interactive game on data handling using a coding app.
AWARENESS AND USE WITH HIGHER ACCESS	The teacher sends the class to the computer room to do drill-and-practice exercises on data handling.	The teacher diagnoses learner data from the drill-and-practice exercise and finds tutorial videos to give to selected learners for remedial purposes.	Small groups of learners use the laptops issued for the lesson to input and analyse data gathered during a survey of learners in the school.	Learners design data handling games using spreadsheet functions.
	The teacher accesses real life data on the Internet and explains how to create a frequency table using this data.	The teacher accesses a website in class to present real-life data. Learners work in groups to do a stem and leaf plot and interpret the data.	The teacher gains access to a bank of 6 laptops so that learners can use spreadsheets to draw histograms and analyse the data.	Learners design a survey using smartphones while collaborating with classes worldwide and gather the data and publish the resulting analysis.
Limited Use	The teacher introduces data handling using a slide show presentation.	The teacher uses a slide show presentation to facilitate a whole class activity involving applying median and mode to real life examples.	Learner work in small groups and take it in turns to access a spreadsheet on the class computer in order to calculate the median, mode and range of data, then analyse the results.	As part of their investigation into data handling the teacher gives the learners access to the class computer so that they can conduct a Skype session with a class in another country.

Maths Lit Gr 10 Proportion				
	A	B	C	D
High access	The teacher tells learners to access specific Khan Academy videos on proportion for homework before the lesson.	The teacher uses the videos as a basis for deepening discussion and applying the learner's knowledge of proportion to different examples in the man-made and natural environment.	Learners use video conferencing tools to work with other learners across cultural boundaries to deepen their knowledge of proportion in terms of cultural artefacts. Because of time zones, this is done after school hours.	As part of their project requirements, learners decide to design interactive, game-based digital learning activities on proportion using coding apps.
AWARENESS AND USE WITH HIGHER ACCESS	The teacher tells learners to access specific Khan Academy videos on proportion during the lesson.	The teacher uses Khan Academy videos strategically with groups and individuals to provide remedial support on proportion during class time	Learners use asynchronous digital collaboration tools during class time to work with other learners across cultural boundaries to deepen their knowledge of proportion in terms of cultural artefacts.	Working in small groups in a computer room during lesson time, learners design multimedia teaching content in which they critically evaluate the use of proportion in architectural design.
	The teacher plays a video in class in which another teacher explains proportion.	The teacher plays video of an explanation on proportion and pauses the video to ask the learners searching questions.	The teacher gains access to a bank of 6 tablets and sets up class workstations using Geogebra to design interactive and analytical exercises on proportion.	Learners decide to use the class computers to connect with an architect via Skype and they ask questions about proportion in architectural design as part of their project work.
Limited Use	Teacher uses a document camera to teach about proportion.	Teacher uses an interactive whiteboard to do activities related to real life examples of proportion.	Teacher asks groups of learners to access images of buildings from the class computer and to analyse the proportion of architectural features.	Teacher gives learners free access to class computer's spreadsheet to input data and theorise about proportion in nature.

Nat. Science and Technology. Gr 5 Energy and Electricity				
	A	B	C	D
High access	Learners access online videos on energy and electricity for homework.	Learners apply their knowledge and use a drawing app to design circuits.	Learners use story telling apps to tell stories about circuit failure and analyse to the problem in each case.	Learners design interactive educational games that deepen their understanding of the circuit system.
AWARENESS AND USE WITH HIGHER ACCESS	The teacher takes the learners to the computer room to access and view media about energy and electricity.	Learners use a bank of tablets and a drawing app to design and draw scenarios for connecting cell wires and a light bulb.	As part of an investigation, groups of learners collaborate online with learners in other countries to compare and analyse how their system of energy and electricity work.	The learners use Internet resources to research and plan a model of a house with battery operated lighting. They capture the construction process on video, adding commentary to explain their decision making as a group.
	The teacher sets up work stations each of which covers different information sources for energy and electricity. Learners complete missing words in worksheets.	The teacher sets up work stations each of which covers different scenarios for connecting cell wires and a light bulb. Learners apply their knowledge to questions in worksheets.	The teacher sets up work stations each of which covers a different safety scenario for energy and electricity. Learners work in groups and analyse the problem, coming up with suggestions to solve issues.	Groups of learners use publication software to create safety posters for electricity use.
Limited Use	The teacher uses a slide show presentation to explain cells and batteries.	The teacher uses an interactive simulation app to explain cells and batteries.	The teacher uses the interactive simulation app to set up scenarios for analysis by the learners.	The teacher gives learners the opportunity to create and test battery circuits using the interactive simulation app.

Language Literature				
	A	B	C	D
High access	Learners read the digital text for homework and record the sequence of events using a digital timeline.	Learners use a story telling app to tell the story in their own words and identify what they regard as the main themes.	Learners collaborate online with community members who identify with the issue in the set-work and together they develop and publish an insightful exposé on the issue.	Learners create a video dramatisation based on a perspective or character in the set-work book.
AWARENESS AND USE WITH HIGHER ACCESS	The teacher takes the learners to the computer room to view video extracts and websites of the set-work.	The learners use the classroom bank of tablets to cooperate and communicate with each other, and with other classes, while analysing a scene from the novel.	The learners set up and use a Facebook page for free and open conjecture by anyone globally who has read the novel.	Learners create blog or Facebook pages in which they unpack their emotional responses to aspects of the novel.
	Teacher uses a word processor and data projector when identifying the main ideas of the novel.	The teacher sets up work stations in class, posing different questions regarding analysis of the novel for each station.	Teacher shares an online interactive whiteboard space with learners online and together they brainstorm about a character's traits.	Learners use the few devices to set up Skype calls with other classes to discuss their perspective and reactions to the author's use of language in the novel.
Limited Use	Teacher uses a digital copy of the book to read parts of the novel during the lesson.	During the lesson, the teacher uses search functions in a digital copy of the book, to identify occurrences of words and ideas in the novel.	Teacher creates an online collaborative document that learners access over time, in order to contribute perspectives about cause and effect relationships in the novel.	The teacher lets learners use the class computer to create a wiki to which they will contribute their collective ideas on various topics and themes as they progress through the novel.

Life Science Gr 10 History of Life on Earth				
	A	B	C	D
High access	The teacher provides learners with links to YouTube videos to watch at home while completing missing words in a spreadsheet.	Learners research online and create a presentation that responds to a simple open question about the origins of life in a nearby region in South Africa.	Learners each design their own website with the focus on unanswered questions and investigations about key events in fossil formation in their country.	Learners collaborate online to create a predictive study on the introduction of a species.
AWARENESS AND USE WITH HIGHER ACCESS	The teacher takes the class to a computer room in order to access a DVD with information about fossils.	Learners apply what they have learned about fossils from the DVD and identify the geological context of specific South African examples.	Learners design and send surveys to learners in other countries to compare and analyse their responses to local examples of fossil tourism.	Learners design visual and multimedia material to support a local fossil tourism site.
	The teacher creates work stations using the 4 classroom computers. Each workstation gives information on a different topic about the history of life on Earth.	The teacher creates work stations using the 4 classroom computers. At each workstation learners are presented with challenging questions and given access to information that could support a response to the questions.	Learners evaluate evidence of past climate change, identify specific information needs and use their smartphones to find and evaluate information to fuel further discussion.	Learners access four workstations to contribute to four different wiki pages as they collaborate with other classes in the country to conduct an in-depth investigation on key fossil examples in South Africa.
Limited Use	The teacher displays a video to the class to introduce the topic of the History of Life on Earth.	The teacher pauses the video being displayed at strategic moments and the learners have to apply what they have learned to a timeline that they are constructing.	The teacher plays a number of video extracts that were carefully selected to fuel debate about theories of mass extinctions.	The teacher connects the class with a coelacanth expert and the learners pose questions about methods of dating fossils.

Social Science Geography Grade 7 Topic: Volcanoes				
	A	B	C	D
High access	Learners are given a homework task to find and review digital content sources about the impact of volcanoes.	Learners are given a homework task to find a content source about the impact of a current volcanic eruption and to construct open questions about the case. They share this with a class from that country.	The teacher facilitates a session in which learners are engaged online with responding to each other's questions and providing feedback to each other.	Learners independently plan online video-conferencing sessions with citizens and volcanologists of their choice, in order to further their in-depth study of the topic.
AWARENESS AND USE WITH HIGHER ACCESS	Learners use a bank of tablets to access websites that explain the cause of volcanoes.	Learners watch an earthquake scene on YouTube and apply what they know about earthquakes to this occurrence	Learners use real-time data to track and model the earthquake	Learners work in groups using the 6 tablets on loan to view a video on the one computer in the class. They analyse the data and information they gathered from the video and view additional websites as further questions arise.
	The teacher guides groups of learners through a series of websites that explain volcanoes. The teacher does most of the talking.	Learners visit the computer room to find pictures and descriptions of volcanoes and identify their type while they apply what they know about volcanoes	Learners work in groups using the 6 tablets on loan to view and analyse a video. They view additional websites as further questions arise.	The teacher connects the class via Skype to a community that is experiencing a volcanic eruption, including to a volcanologist. Learners ask questions to support their project work.
Limited Use	Teacher uses a presentation with images to tell learners about types of volcano.	Learners work in groups with printed worksheets showing pictures of volcanoes and identify their type while they apply what they know about volcanoes	Learners work in groups and take it in turns to view a video on the one computer in the class. They return to their group table to analyse the data and information they gathered from the video.	Learners work in groups to create interactive digital content on volcanic predictions. Each group is assigned time on the device.

**Foundation Phase Gr 1 Measurement Length**

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>
<b>High access</b>	Learners go to the computer room to do drill-and-practice exercises about measuring.	Learners go to the computer room to find objects online, copy and paste them, resize them and compare their measurement.	Small groups of learners access photos on the Internet and estimate the actual and relative measurements of objects at various distances on the photo. They compile their findings in a slide show presentation.	Learners use their devices to draw objects and create a voki that explains comparative measurements.
<b>AWARENESS AND USE WITH HIGHER ACCESS</b>	The teacher diagnoses learners and sends small groups to the computer room to do remedial drill-and-practice exercises about measuring.	The teacher books the school's bank of tablets and learners work in pairs on an educational app about the length of objects.	The teacher books a bank of tablets so that learners have an opportunity to work collaboratively with a class in another country on comparing their hand and feet sizes using informal units.	Learners use the class tablet bank to draw objects and create a video explaining comparative measurements.
	The teacher uses the interactive whiteboard to facilitate fun exercises with measurement.	The teacher books the 4-computer media room and gives the learners rotational access to an educational software activity on ordering the length of objects.	The teacher arranges a session where learners take turns to play different games about measurement on each learning station.	The teacher asks the learners to work in groups with four class tablets to create a video in which they demonstrate how to measure the length of large objects.
<b>Limited Use</b>	The teacher uses a laptop and data projector to play a song about measurement to the class.	The teacher prepares and gives the learners a printed worksheet on comparing and ordering the length of objects printed on the page.	The teacher asks small groups of learners to estimate and compare object lengths using their own hand span and to take photos of the objects as they do so using their cell phone cameras.	The learners conduct a show-and-tell session about their measurement projects. The teacher uploads the video and posts the link to the teacher of another class.

## Appendix D – Examples of competence in digital Learning

The following indicators paint a picture of what an educator could aspire to when adopting digital tools and learning resources to support his/her personal practice and to enhance learning. Because of the ever-changing and diverse nature of digital tools and resources this picture can never be finished, but hopefully you will be able to fill in some of the missing spaces over time.

Depending on a teacher's personal and work circumstances it may be possible, even preferable, to access online resources and to give learners access to the same digital tools and learning resources.

### A. Professional Growth

#### 1. Adopt the habit of an enquiring mind regarding the educational value of using digital tools and resources.

In order to successfully develop this proficiency, you would typically:

##### 1.1 *Conduct self-initiated online research on how technologies could enhance your roles as an educator.*

Examples:

- Reading web sites and other articles about how teachers use technologies.
- Searching for a video demonstration of a technology skill when you need to learn this skill.
- Reading and posting queries/questions to online discussion facilities when you are unable to find answers to technical issues.

##### 1.2 *Conduct self-initiated online research on how digital tools and resources can impact on teaching and learning in your subject/phase.*

Examples:

- Reading web sites and other articles for teachers, teaching and learning.
- Watching videos of teachers integrating digital tools and resources in the classroom.
- Establishing a professional learning network using social media tools.
- Post queries on the Facebook page of a teacher or educational group, for example the [Teaching Ideas Facebook page](#).
- Participating in an online webinar.
- Attending TeachMeets (meetings held by teachers to share ideas about their teaching).

##### 1.3 *Be willing to explore opportunities, independently or with others, and not feel threatened by the use of digital tools and resources.*

Examples:

- Attending workshops that will help you broaden your understanding of what digital tools and resources can offer you and your learners.
- Being open to new ideas.
- Persisting until you find the value of digital tools and learning resources for your learners' benefit.
- Asking searching questions of your colleagues and professional learning network.
- Being willing to admit when you do not know something, then seeking support from others, including your learners.

##### 1.4 *Develop an informed opinion on the value of digital tools and resources for enhancing learner attainment.*

Examples:

- Avoiding venturing an opinion until you have experienced the use of digital tools and resources.
- Discussing your experiences with knowledgeable people who can help you analyse your successes or challenges.
- Considering what you observe applying your knowledge of digital learning.

## 2. Be reflective about challenging current digital learning and teaching practice.

In order to successfully develop this proficiency, you would typically:

2.1 *Pause for thought about the effectiveness of learning after each session in which you have used digital tools and resources.*

Examples:

- Observing and noting successes and challenges in achieving learning objectives with the use of digital tools and resources during the lesson.
- Making time (within 12 hours of the lesson) to make concrete decisions about what worked well and what you would do differently the next time.
- Asking your learners for feedback about their experience and using this feedback in your evaluation of the lesson.

2.2 *Share the outcomes of your lesson reflections (successes and challenges) with others and consider their feedback.*

Examples:

- Sharing your experiences with colleagues in the subject or school staff meeting.
- Creating a blog and sharing your reflections about your teaching experiences with others.
- Sharing ideas and experiences on social media with your PLC of friends.

2.3 *Evaluate your options if you have identified a need for a different approach to better engage your learners.*

Examples:

- Considering different ways of configuring and assigning accountability to group members after an unsuccessful group work session.
- Searching for digital tools and resources that could support you in a topic that is difficult to teach in an engaging way.
- Re-designing a content-rich lecture-type lesson in a way that requires learners to use digital tools and resources to engage with the content and build new knowledge with it.
- Using the SAMR-based questions (see Addendum C of the Framework) to analyse the impact of digital tools and resources on learner engagement.

2.4 *Implement ideas about new approaches to teaching and learning with digital tools and resources that you have gathered, with a view to enhancing learning.*

Examples:

- Designing a lesson using gamification approaches such as point scoring, competition with others, rules of play.
- Using gaming software and/or consoles to improve literacy and/or numeracy.
- Using cell phone messages to stimulate your learners' interest about a topic.
- Using online whiteboards, polls or survey forms to gain quick responses from the whole class simultaneously.

2.5 *Use a variety of techniques to identify your developmental needs.*

Examples:

- Completing the self-assessment tools and recommendations for learning pathways that accompany the national guidelines.
- Diagnosing your needs based on your regular reflections about your teaching, possibly in conversation with peers.
- Discussing a professional development strategy with subject colleagues, based on curiosity about a specific learning resource that you have heard about.
- Consulting curriculum support staff about the best available professional development options accessible to you.
- Considering feedback from a colleague who has observed a lesson.
- Developing and following a Professional Development Plan with stated needs, priorities and plans for participation in professional development activities.

### 3. Understand the role of the teacher, the learner and the digital learning resources during digital learning.

In order to successfully develop this proficiency, you would typically:

#### 3.1 *Be aware of different approaches to teaching and learning that you could use strategically to facilitate learning.*

Examples:

- Making use of group work as a strategy to engage your learners more during a class activity.
- Using word processing tools instead of pen and paper for a creative writing exercise.
- Using a video with leading questions to deepen understanding of a concept that you previously taught in a teacher-centred way.
- Using digital resources to extend some learners and to support remedial teaching for other learners.
- Requiring learners to express themselves in non-text digital formats, such as animations, video, a comic strip.

#### 3.2 *Set curriculum learning goals before identifying the media and resources - digital or not.*

Examples:

- Writing down the lesson learning objectives first and then considering what resources could best support their achievement.
- Rejecting educational software that does not meet learning objectives, even though it may engage learners in different ways.
- Knowing that if learners search for information on a website and merely copy and paste the contents to a presentation, they will not achieve the depth of understanding, nor thinking skills, that your curriculum requires.
- Challenging your learners with a searching question or complex task before they identify their information needs, look for information on websites and present original conclusions in response to the challenge.
- Analysing CAPS topics in your subject for ways in which digital tools and resources might help to enhance learning outcomes.

#### 3.3 *Identifying appropriate digital tools and resources, and knowing when their use would be distracting or ineffective.*

Examples:

- Using a spreadsheet if the learners are required to present and process numerical data.
- Using a flat database (pivot table) or simple functions such as COUNT in a spreadsheet, instead of a complex relational database, if you only require simple queries of data.
- Assessing the relevance and quality of sound and graphics used in multimedia presentations of work.

#### 3.4 *Planning learner engagement that will be enhanced by the use of the digital tools and resources.*

Examples:

- Using an interactive graphing application in the maths class so that learners may interact with the formulae and predict graph outcomes.
- Using science data-probing equipment linked to a computer so that analysis of the results is possible through visual presentation of data.
- Learners use Google Earth or Microsoft Maps to plan tourist routes in a Tourism class.
- Learners use a spreadsheet to draw up a budget in a Mathematical Literacy or Consumer Studies class.
- Casting learners in real-world roles such as a weather person who has to make predictions about rain, by viewing photos of clouds and researching the associated weather online.
- Designing WebQuests in any subject that involve collaborative group work, real-life scenarios and extensive use by learners of communication, collaboration, information and presentation tools.

#### **4. Participate in local and global professional learning communities.**

In order to successfully develop this proficiency, you would typically:

##### *4.1 Attend workshops and conferences as much as your circumstances allow.*

Examples:

- Seeking sponsorship to attend a national digital learning conference or the AMESA conference for maths teachers.
- Attending international conferences and workshops for digital learning.
- Attending workshops led by curriculum support staff.
- Accepting offers of training from peers which suits your needs and interests.
- Participating in free or sponsored online courses and video conferences.

##### *4.2 Engage in dialogue with colleagues in your institution about the integration of digital tools and resources.*

Examples:

- Talking to colleagues in the staff room after school about your ideas and experiences with digital tools and resources.
- Approaching SMT members to advocate the use of digital tools and resources in your class.
- Convincing colleagues to adopt the use of digital tools and resources.
- Offering to demonstrate a useful feature you discovered on a particular web site.

##### *4.3 Develop an online professional learning community (PLC) of people with similar educational interests.*

Examples:

- Creating a social media account and follow educational thought leaders in your field.
- Joining social bookmarking groups related to your spheres of interest.
- Joining networks for professionals.
- Creating and sharing a blog for your professional reflections.
- Curating and sharing a website for your specific subject interests.
- Sharing good experiences and challenges with the PLC.

#### **5. Select appropriate digital tools and resources when fulfilling the roles of the educator.**

In order to successfully develop this proficiency, you and your learners would typically:

##### *5.1 Produce written communication*

Examples:

- Typing your own worksheets and other documents when preparing lessons.
- Typing your own test and exam papers.
- Writing a report on an excursion or conference that you attended.
- Writing a letter to a parent.
- Learners writing essays.
- Learners recording and presenting documents to accompany project work.
- Learners writing email or letters to members of the community.

##### *5.2 Process numerical data.*

Examples:

- Recording and analysing marks from continuous assessments.
- Recording data from a science experiment and graphing the results.
- Sorting a list of learners alphabetically or in merit order.
- Using a pivot table to create a flat database of your learners and conduct queries on the data that you have entered.
- Keeping the averages for your school cricket team.

- Learners creating a budget for a school excursion.
- Learners processing collected project data.
- Learners drawing graphs based on formulae.
- Learners analysing statistics.

### 5.3 *Support presentations with multimedia.*

Examples:

- Giving an introduction to a unit of work with a multimedia presentation, including images and video clips.
- Sharing your knowledge from a conference with colleagues at a staff meeting.
- Presenting your idea for an after-school care programme to the SMT.
- Learners presenting their findings after a problem solving exercise.

### 5.4 *Communicate and collaborate.*

Examples:

- Using shared Google Drive or Microsoft One Drive documents when collecting proposals for names and comments from staff for a special award.
- Creating a wiki for the subject department's planning, with pages being collaboratively written and online discussion possible on each page.
- Using an online collaborative document to write a proposal collaboratively with your colleagues.
- Learners using a wiki to record their research findings.
- Learners publishing a blog and interacting with its readers.
- Learners using a forum to discuss an issue and give feedback to each other.
- Learners and teachers using a blog or learning management system to communicate with each other and receive feedback.

### 5.5 *Create, publish and share content.*

Examples:

- Sharing a guideline document on DropBox for downloading by your colleagues worldwide.
- Sharing photographs from a school function on Photobucket for parents to download.
- Distributing a test paper for feedback to your subject department colleagues by writing it in Google Drive/Microsoft One Drive or uploading it to DropBox.
- Learners creating a video, uploading it to YouTube and sharing it publicly.
- Learners sharing documents on which they are collaborating using Google Drive/Microsoft One Drive.

### 5.6 *Design graphics.*

Examples:

- Downloading a labelled diagram of a leaf from the Internet, removing the labels and placing the edited image in a class test.
- Downloading an aerial photograph from the Internet and adding labels showing different land use types. Then using this in a presentation during a lesson.
- Learners design animations explaining a concept.
- Learners design a company badge as part of a business plan.

### 5.7 *Design interactive learning activities.*

Examples:

- Create a game-based quiz activity, such as Jeopardy, using a spreadsheet template.
- Use coding apps to design a lesson activity that illustrates a concept.
- Learners use coding apps to design a game that illustrates a concept.
- Learners use coding apps to design an interactive message on a community issue.

## B. Curriculum Focus

### 6. Integrate digital tools and resources to enhance learning objectives in various learning environments.

In order to successfully aspire towards this proficiency you would typically:

#### 6.1 *Plan the strategic use of digital content resources before, during and/or after the lesson.*

Examples:

- Use digital content resources to enhance learner language proficiency needs.
- Assigning learners the task of viewing a video for homework the day before the lesson, then focusing on asking probing questions about the video in class the next day.
- Previewing a list of digital content resources and placing the links on the class blog/Facebook page for learners to view in their own time.
- Using a video as stimulus and giving the learners questions to guide their viewing at the beginning of the lesson.
- Selecting a video to consolidate learning. Learners view the video together at the end of the lesson.
- Identifying videos or other resources suitable for remedial purposes and assigning these as homework to learners who have difficulty understanding the concept being taught.

#### 6.2 *Plan learner-centred access to digital tools and resources as and when appropriate.*

Examples:

- Booking the computer room for a creative writing exercise using a word processor.
- Booking the school's bank of tablets and having learners use these to search for information during a problem-solving project in class.
- Asking learners to present their findings, after a group task, using presentation tools.
- Sharing an online collaborative document with learners so that they can use it simultaneously during a class brainstorming activity.

#### 6.3 *Address the diverse needs of all learners and provide equitable access to appropriate digital tools and resources.*

Examples:

- Using a classroom computer or tablet for remedial activities with individuals or small groups, while the class works on more advanced exercises.
- Ensuring that boys and girls have equal access to technology devices during an activity in which several learners have to share the use of one device.
- Installing accessibility software for a visually-impaired learner.
- Adding subtitles to a video in a class with a hearing-impaired learner.

#### 6.4 *Afford learners the opportunity to share knowledge using digital platforms.*

Examples:

- Learners create blogs to share their findings from a year-long research project.
- Learners use a wiki to collaboratively produce an advocacy website about preventing abuse of women and children.
- Learners creating a YouTube channel and uploading their drama projects.

### 7. Develop learners' global awareness and understanding using communication and collaboration tools.

In order to successfully develop this proficiency, you would typically:

#### 7.1 *Design learning that addresses real-life issues aligned to the curriculum.*

Examples:

- Finding a collaborative project or a class online with which your class can conduct a collaborative project.
- Designing a maths project in which learners have to evaluate the use of proportion in local architecture.

The learners will use cameras, digital measuring of photographs and a spreadsheet to capture data and analyse them. They compare their findings with classes in other countries/cultures.

- Working collaboratively with a class in south-east Asia to jointly develop an awareness strategy about the sale of Rhino horn. Learners use video-conferencing, email and a wiki to produce their final product.

### 7.2 *Design learning activities that require interaction or collaboration between your learners and their community.*

Examples:

- Learners doing a project on water use in which they collaborate with the community to identify issues related to water conservation and, together, develop a strategy to solve challenges.
- Coordinating class visits to old-age homes during which time learners “adopt” an elderly person and attend to that person’s communication needs through the use of digital communication resources.
- Learners working with community leaders to develop strategies to address challenges regarding school safety.

### 7.3 *Design learning in your class in which the learners use digital communication and collaboration tools.*

Examples:

- Inviting a subject expert to address questions from your learners during a Skype video call.
- Learners conducting a Skype phone call in your classroom with the local police commander regarding their approach to incidents of local drug abuse.
- Learners sharing their project findings with a professor from another country. The professor provides feedback and gives guidance.
- Learners work with groups from other classes to collaboratively write a story using email, online chat or a collaborative online document.

## **8. Transform learning through the innovative use of digital tools and resources.**

In order to successfully develop this proficiency, you would typically:

### 8.1 *Explore new uses for established digital tools and resources.*

Examples:

- Using cell phones to access digital content.
- Using a document camera to tell a story with cut-out shapes.
- Using a digital projector with a pale linen sheet for a shadow drama show.
- Reading what teachers share about using digital tools and resources on a blog.

### 8.2 *Explore opportunities offered by new digital tools and resources.*

Examples:

- Using Xbox games to develop literacy skills.
- Using digital eye glasses to record a museum visit.
- Recording the GPS track of an environmental trail and synching this with pictures you have taken on the trip.

### 8.3 *Facilitate learning that was not possible before the introduction of digital tools and resources.*

Examples:

- Using Skype for video calls with other classes.
- Learners creating videos and sharing them online.
- Using video to analyse a music or drama performance.
- Using online collaborative documents where peers can give feedback on learners’ writing.

8.4 *Understand the impact of digital tools and resources on the nature of learning.*

Examples:

- Using the diagnostic self-assessment tool (a support resource for the Professional Development Framework for Digital Learning) to analyse the impact on learning of a lesson idea that you have.
- Asking yourself the questions: "What are my learners doing differently?" and "Are they learning more effectively?"

**9. Enhance class management, assessment and feedback through the use of digital resources.**

In order to successfully develop this proficiency, you would typically:

9.1 *Use digital productivity tools to create and administer tests, exams and assessment tools.*

Examples:

- Using a word processor to type a class test.
- Using a word processor to type a rubric and observation checklist for a class project.
- Using a spreadsheet to capture the marks for a class test and calculate the class average and individual learner averages for the term.
- Entering assessment data on the school administration system.
- Designing and administering self-marking quizzes.
- Creating a mark book using a spreadsheet that calculates running averages and flags learners who need encouragement and those who deserve praise.
- Providing feedback to learners using the "Review" function of the word processor.
- Providing feedback to learners by using the record function on a Microsoft One Note page.
- Setting up a self-marking quiz in a spreadsheet.

9.2 *Use digital communication and collaboration tools, where appropriate, to foster formative dialogue between learners and their teacher.*

Examples:

- Setting up a learning management system (A WordPress site with LMS plugins or a Moodle) to provide resources and manage submissions by student.
- Sharing a Google Drive or Microsoft One Drive folder to receive learner documents and comment online.
- Sharing an online storage folder on a facility such as DropBox to receive documents from learners and comment using the review functions of the word processor.

9.3 *Use digital tools and resources to design diagnostic assessment tools.*

Examples:

- Setting up a Google form questionnaire online and having learners complete it.
- Using the response analysis function in Google forms to analyse the responses.
- Downloading the responses to an online form in a spreadsheet format and adding in self-marking functions.

9.4 *Organise and monitor learning activities using online resources similar to a blog or learning management system.*

Examples:

- Publish work outlines, lesson instructions and support materials on a blog or a learning management system such as Obami or Moodle.
- Communicate with individuals and groups of learners regarding work progress.
- Set up and manage online assessments housed within or linked from the learning management system.
- Facilitate learner submission or publication of their work.

## 10. Integrate learners' skills development in terms of digital literacies with curriculum-based learning.

In order to successfully develop this proficiency, you would typically:

### 10.1 Design integrated activities that develop the learners' information skills, while pursuing curriculum goals.

Examples:

- Posing a challenging question about global warming (or any other topic). The learners have to group and identify their information needs, in order to respond to the question. They assign each other tasks to find specific information. They gather later to evaluate the information and discuss the question using the information they have found. They draw preliminary conclusions.
- Requiring learners to access real-time data about earthquakes and to draw conclusions about the likelihood of a volcanic eruption or tsunami.
- Assigning real-world roles to learners who have to draw up a drought action plan based on actual El Niño data.

### 10.2 Design integrated activities that develop the learners' digital literacy skills, while pursuing curriculum goals.

Examples:

- Learners from different classes worldwide using digital search tools to find information online about rhino poaching, then using online video conferencing to pool their data, then using video camera and video editing software to create a campaign video and, finally, creating a YouTube channel to upload and share the products produced by the different classes.
- Learners in the Life Orientation and/or Business Studies class capturing data and stories about joblessness and then, as a solution that they have discussed, designing an interactive website through which the issue can be addressed, skills advertised, jobs offered, etc.

### 10.3 Design integrated activities that develop the learners' media literacy skills, while pursuing curriculum goals.

Examples:

- Learners using a checklist of media literacy questions when analysing the gender bias in a TV advertisement.

### 10.4 Promote and model safe, legal and ethical use of digital information resources.

Examples:

- Modelling correct copyright procedures by referencing images used in a class worksheet and requiring learners to do the same when submitting work.
- Posting online safety guidelines and reminding learners of their social responsibility to use information ethically when conducting online research.

## C. Leadership

## 11. Demonstrate commitment to the vision for digital learning in the province, district and school.

In order to successfully aspire towards this proficiency, you would typically:

### 11.1 Implement the key ideas of the Professional Development Framework for Digital Learning.

Examples:

- Completing your Professional Development Plan and identifying a specific online course for which you register.
- Analysing your lessons to note the impact on learner engagement when you include digital tools and resources.
- Ensuring that you allow participants to include their own teaching contexts when offering an afternoon training session on Microsoft One Note.

### 11.2 Apply the provincial digital learning guidelines to your planning.

Examples:

- Making specific opportunities for learners to access and gain skills required to use technologies.
- Designing lessons that integrate numeracy skills through the use of digital tools and resources, according to the national and provincial focus on maths.

### 11.3 *Implement the school's strategy for digital learning.*

Example:

- Ensuring that you plan to integrate digital tools and resources at least once a week, which is the minimum target in your school digital learning plan.

## **12. Accept shared responsibility for planning and implementing digital learning at the school.**

In order to successfully develop this proficiency, you would typically:

### 12.1 *Participate in the formulation of school digital learning planning at your institution.*

Examples:

- Volunteering to assist wherever possible in planning for digital learning at your school.
- Participating with positive intent when asked to complete a survey or add feedback to a planning document.
- Offer your ideas to the planning team, even if you are not a member.

### 12.2 *Evaluate your role in implementing digital learning strategies at your institution.*

Examples:

- Consulting the digital learning plan regularly so that you know its contents, as the contents influence the way in which you plan the integration of digital tools and resources.
- Taking an honest look at your attitude towards the use of digital tools and resources, and addressing the areas of uncertainty in your mind with knowledgeable colleagues.
- Accepting responsibility when you are delegated the task of managing the booking sheet for the school's bank of tablets.

### 12.3 *Be a leader in managing change related to learning with technologies.*

Examples:

- Participate in the development and/or managing the implementation of a school vision building process.
- Participate in the development and/or managing the communication strategy underpinning the implementation of the vision.
- Embracing and managing conflict that may result from changing expectations.
- Managing the development of a distributed change leadership.

### 12.4 *Build on existing capacity in others to take on responsibilities and sustain the implementation of digital learning at your institution.*

Examples:

- Offering to support a colleague in his/her class when trying a new approach to using digital resources.
- Providing new users of tablets with an orientation session.
- Making opportunities available for colleagues to have time to meet and plan by time-tabling common free periods.
- Delegating the responsibility of managing an aspect of the digital learning implementation process, for example, communicating ongoing planning decisions to the staff.

## **13. Initiate peer support and collaborative, work-place learning.**

In order to successfully develop this proficiency, you would typically:

### 13.1 *Engage peers in exploratory conversations about using digital tools and resources.*

Examples:

- Developing a peer coaching programme in your institution that focuses on peer-to-peer collaboration and support for teaching with digital tools and resources.
- Initiating informal conversations with colleagues about your experiences with digital tools and resources.
- Meeting with peers to share ideas and planning the use of digital tools and resources in lessons.

13.2 *Support peers in their implementation of new ideas and approaches to using digital tools and resources.*

Examples:

- Showing an interest in ideas expressed by colleagues and finding an opportunity to engage in conversations about the ideas.
- Offering to observe a lesson with a new approach and giving feedback about your experience.
- Offering advice from your own experience or offering your technical expertise when a colleague has a challenge with implementing a new approach using digital tools and resources.

13.3 *Share knowledge and experiences of your use of digital tools and resources with your peers.*

Examples:

- Regularly offering opportunities for colleagues to share their experiences with each other.
- Creating a personal blog or wiki and publishing your successfully implemented lessons and experiences.
- Sharing ideas and experiences by posting to the social media platforms that form part of your Professional Learning Network (PLN).

## **Appendix E – Diagnostic Self-assessment Tool for Teachers**

You can use this tool to rate yourself against the various proficiencies that teachers may aspire to when using digital tools and resources. The broad proficiencies are:

- Professional Growth
- Curriculum Focus
- Leadership

Place an X in the column that most accurately reflects your level of agreement with each of the following statements. If you wish, add comments in order to support your assessment or note priority needs that you may have recognised.

Educators may conduct a self-assessment of their perceived digital learning competency by using the online self-assessment tool at <https://dbe-tpd.org>

<b>PROFESSIONAL GROWTH</b>					
<b>1. Adopt the habit of an enquiring mind regarding the educational value of using digital tools and resources.</b>					
	Strongly Disagree	Disagree	Agree	Strongly Agree	Comment – Use this column to prioritise your professional development needs and interests
1. I try to find ways in which digital tools and resources can improve teaching and learning in my subject/phase.					
2. I have developed an informed opinion on the value of digital tools and resources for enhancing learning outcomes in my subject/phase.					
3. I am open to inputs from various sources about my developmental needs as a teacher using (or not using) digital tools and resources.					
<b>2. Be reflective about challenging digital learning and teaching practice.</b>					
	Strongly Disagree	Disagree	Agree	Strongly Agree	Comment – Use this column to prioritise your professional development needs and interests
4. After each lesson in which I use digital tools and resources I give serious thought to how these tools and resources enhanced the curriculum learning objectives.					
5. If I experience challenges in a lesson I weigh up my options in finding a different approach to better engage learners.					
<b>3. Understand the roles of the teacher, the learners and digital resources during digital learning.</b>					
	Strongly Disagree	Disagree	Agree	Strongly Agree	Comment
6. I am generally aware of different approaches to teaching the same subject topic, with and without technology.					
7. I always define my curriculum learning objectives before considering the digital resources that I could use.					
8. I am able to make good decisions about when the use of digital tools and resources is appropriate and when it is not.					
<b>4. Participate in local and global professional learning communities.</b>					
	Strongly Disagree	Disagree	Agree	Strongly Agree	Comment – Use this column to prioritise your professional development needs and interests
9. I engage my colleagues at school in informal conversations about my use of digital tools and resources.					
10. I attend meetings of a local professional learning community (teachers with similar professional interests to mine).					

11. I have joined an online professional learning community of teachers and experts in my teaching specialties.									
<b>5. Select appropriate digital tools and resources when fulfilling the roles of the educator.</b>									
	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Comment – Use this column to prioritise your professional development needs and interests</b>				
12. I know the difference between a word processor, spreadsheet and presentation tool.									
13. I am able to support my various roles and a teacher through my use of digital tools and resources.									
14. I have given my learners the option of using tools such as coding apps to design learning activities.									
<b>CURRICULUM FOCUS</b>									
<b>6. Integrate digital tools and resources to enhance learning objectives in various learning environments.</b>									
	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Comment</b>				
15. If available, I plan learner access to digital tools and resources as part of learning activities.									
16. If necessary, I plan the use of specialist digital resources for learners with disabilities.									
17. I plan and encourage learner exploration and self-directed digital learning.									
<b>7. Develop learners' global awareness and understanding using communication and collaboration tools.</b>									
	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Comment – Use this column to prioritise your professional development needs and interests</b>				
18. I make use of opportunities to design learning that requires collaboration between learners and their local or global community.									
19. I make use of opportunities to design learning that requires learners to use communication and collaboration tools.									
<b>8. Transform learning through the innovative use of digital tools and resources.</b>									
	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Comment</b>				
20. I have explored new uses for established digital tools and resources.									
21. I have explored the potential of new digital tools and resources for my subject/phase.									
22. I have explored approaches to learning with technology that were previously difficult to achieve without technology.									

<b>9. Enhance class management, assessment and feedback processes through the use of digital resources.</b>					
	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Comment – Use this column to prioritise your professional development needs and interests</b>
23. I regularly use tools such as (but not limited to) a word processor or spreadsheet to create and administer assessment activities.					
24. At times, I use digital tools which facilitate the submission of and feedback to learners' documents.					
25. I have managed learning through the use of social media tools or learning management systems.					
<b>10. Integrate learners' skills development in terms of digital literacies with curriculum-based learning..</b>					
	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Comment</b>
26. I integrate activities that develop the learners' information search and evaluation skills while pursuing curriculum goals.					
27. I always promote safe, legal and ethical use of information during teaching and learning.					

<b>LEADERSHIP</b>					
<b>11. Demonstrate commitment to the vision for digital learning in the province, district and school.</b>					
	Strongly Disagree	Disagree	Agree	Strongly Agree	Comment
28. I have registered on the SACE CPTD points system website and completed a professional development portfolio.					
29. I have read resources that help me understand and apply the <i>Professional Development Framework for Digital Learning</i> .					
30. I have had conversations with colleagues about digital learning.					
<b>12. Accept responsibility for planning and implementing digital learning in the school.</b>					
	Strongly Disagree	Disagree	Agree	Strongly Agree	Comment – Use this column to prioritise your professional development needs and interests
31. I have had a positive input to the school's digital learning planning process.					
32. I consciously try to align my teaching and learning activities to the school's digital learning plan.					
<b>13. Initiate peer support and collaborative, work-place learning.</b>					
	Strongly Disagree	Disagree	Agree	Strongly Agree	Comment
33. I meet with peers and plan curriculum-focused lessons integrating digital tools and resources.					
34. I encourage peers when they express frustration with implementing their ideas for integrating digital tools and resources.					
35. I am in several peer-to-peer collaborative partnerships with colleagues as we plan the integration of digital tools and resources.					

## Appendix F - Digital Learning Progress Rubric - Schools

The Digital Learning Progress Rubric<sup>19</sup> is a strategic planning tool, or “roadmap,” intended to support districts and schools in the transition to digital learning. This rubric is designed to help school teams reflect on the current stage of their transition, plan the next steps, and track their progress moving forward.

This rubric contains three main areas: Leadership; Professional Development and Digital Learning. Each main area is broken down into three to seven key elements (e.g., Shared Vision, Professional Development Format, Access to Digital Content, etc.).

### Guide to Use

Members of a school leadership team can work individually or together to rate their school’s progress on each of the key elements. They may rate the progress as either “Early” (the least advanced ranking), “Developing,” “Advanced,” or “Target” (the most achieved ranking). A school may consider having different individuals or groups determine ratings separately, and then schedule a time for all parties to come together and reach consensus for each key element score. The more data (quantitative or qualitative, formal or informal, etc.) that can be used to inform the ranking process, the more accurate and effective the strategic planning process will be.

To make the scoring system the most effective, the following rule should be used: *all indicators* (sub-bullets) within a particular cell should be ticked for a school to give itself the particular ranking assigned to that cell (Early, Progressing, Advanced, or Achieved). For example, if the school has achieved two of three indicators listed in the Advanced cell, then the school should rank itself as Progressing. The school can rank itself as Advanced once it has achieved *all three* indicators listed. The scoring sheet can be found in Section A.

Once a self-assessment on the rubric has been completed, the users should reflect on the results and identify priority areas for improvement. The users might ask, “What are one to three action steps that can be taken to move closer to achieving the desired goals?” A guide for data interpretation and transition planning can be found in Section B.

---

<sup>19</sup> This rubric is adapted from the *North Carolina Digital Learning Plan: Digital Learning Progress Rubric* and is used with permission from the Friday Institute for Educational Innovation, Education School, North Carolina State University.

LEADERSHIP				
	Early	Progressing	Advanced	Achieved
<b>Shared Vision</b>	<ul style="list-style-type: none"> <li>• A school leadership team is being created for purposes of planning and leading digital learning.</li> <li>• A vision for digital learning has not yet been created.</li> <li>• A planned effort to discuss the eventual vision for digital learning with teachers and other stakeholders has not yet been put in place.</li> <li>• There is no consistent effort to have school leaders consistently communicate about digital learning practices.</li> </ul>	<ul style="list-style-type: none"> <li>• A school leadership team, consisting of a few individuals, collaboratively crafts the vision for digital learning.</li> <li>• A vision for digital learning guides school digital education activities.</li> <li>• The school leadership team promotes the school vision for digital learning to teachers and parents each year.</li> <li>• School leaders communicate about digital learning practices but do not model effective use of digital resources.</li> </ul>	<ul style="list-style-type: none"> <li>• A school leadership team, consisting of many individuals, collaboratively crafts the vision, goals and strategies for digital learning.</li> <li>• The vision, goals, and strategies for digital learning exist as a self-contained initiative.</li> <li>• The school leadership team occasionally promotes the school vision for digital learning to all stakeholders, including teachers, learners, parents, and community members.</li> <li>• School leaders serve as lead learners for digital learning practices, and model the effective use of high quality digital resources.</li> </ul>	<ul style="list-style-type: none"> <li>• A diverse, representative school leadership team, consisting of district and school leaders, teachers, learners, parents, and community members, collaboratively crafts the vision, goals, and strategies for digital learning.</li> <li>• The vision, goals, and strategies for digital learning are integrated as core components of the school's strategic plan for digital learning.</li> <li>• The school leadership team consistently promotes the school vision for digital learning to all stakeholders, including teachers, learners, parents, and community members.</li> <li>• School leaders serve as lead learners for digital learning practices, and model the effective use of high quality digital resources.</li> </ul>
<b>Communication &amp; Collaboration</b>	<ul style="list-style-type: none"> <li>• Digital communication tools are rarely used to provide just-in-time information about important school activities and to connect parents, community members, and other stakeholders to the school using two-way communication.</li> <li>• School leaders do not yet maintain a digital culture within their schools, in which a collaborative, transparent, free-flow exchange of information takes place among individuals and groups in the school.</li> </ul>	<ul style="list-style-type: none"> <li>• Digital communication tools are occasionally used to provide just-in-time information about important school activities and to connect parents, community members, and other stakeholders to the school using two-way communication.</li> <li>• Some school leaders maintain a digital culture within their school, in which a collaborative, transparent, free-flow exchange of information takes place among individuals and groups in the school.</li> </ul>	<ul style="list-style-type: none"> <li>• Digital communication tools are consistently used to provide just-in-time information about important school activities and to connect parents, community members, and other stakeholders to the school using two-way communication.</li> <li>• Most school leaders maintain a digital culture within their school, in which a collaborative, transparent, free-flow exchange of information takes place among individuals and groups in the school.</li> </ul>	<ul style="list-style-type: none"> <li>• Digital communication tools are continuously used to provide just-in-time information about important school activities and to connect parents, community members and other stakeholders to the school using ongoing, two-way communication.</li> <li>• All school leaders maintain a collaborative, transparent digital culture within their school, in which the free-flow exchange of school information takes place among all individuals and groups in the school.</li> </ul>

	Early	Progressing	Advanced	Achieved
<b>Sustainability</b>	<ul style="list-style-type: none"> <li>The school has not yet considered a sustainability and scalability plan for maintaining and expanding digital services for more students in more contexts.</li> <li>The school has not yet developed a long-term funding plan for digital teaching and learning.</li> <li>The school leadership team is not yet considering options for supporting digital teaching and learning through managed services.</li> <li>The school is not yet considering efficiency, effectiveness, or the total cost of ownership of services to be purchased.</li> </ul>	<ul style="list-style-type: none"> <li>The school is considering developing a sustainability and scalability plan for maintaining and expanding digital tools and resources for more learners in more contexts, but has not yet studied financial projections or budget items.</li> <li>The school has a long-term funding plan that provides ongoing funding for digital teaching and learning with discretionary funds and accommodates refresh cycles.</li> <li>The school leadership considers experience in digital learning when appointing some teachers.</li> <li>The school is building on its existing capacity to evaluate efficiency, effectiveness, or the total cost of ownership of digital learning.</li> </ul>	<ul style="list-style-type: none"> <li>The school has a sustainability and scalability plan for maintaining and expanding digital tools and resources for more learners in more contexts, and it is updated with new financial projections, budget items, and priority areas every few years.</li> <li>The school has a long-term funding plan that includes: ongoing funding for digital teaching and learning as a core operating cost; leveraging at least one external funding source; and accommodating refresh cycles.</li> <li>The school leadership considers experience in digital learning a very important factor when appointing teachers.</li> <li>The school occasionally evaluates efficiency, effectiveness, or the total cost of ownership of digital learning.</li> </ul>	<ul style="list-style-type: none"> <li>The school has a sustainability and scalability plan for maintaining and expanding digital tools and resources for more learners in more contexts and it continually updated with new financial projections, budget items, and priority areas and aligned to the school improvement plan.</li> <li>The school has a comprehensive long-term funding plan that includes: ongoing funding to fully fund digital teaching and learning; leveraging multiple external funding sources; and accommodating refresh cycles, product upgrades, and expansion of services.</li> <li>The school leadership has a clear strategy for appointing teachers with an established reputation in digital learning.</li> <li>The school consistently evaluates efficiency, effectiveness, or the total cost of ownership of digital learning.</li> </ul>
<b>Policy</b>	<ul style="list-style-type: none"> <li>Responsible use guidelines are not yet in place.</li> <li>School leaders have not yet adopted a digital learning plan.</li> <li>School and district digital learning policies have not yet been aligned.</li> </ul>	<ul style="list-style-type: none"> <li>Responsible use guidelines are in the process of being created and have not yet been communicated to all stakeholder groups.</li> <li>School leaders are adopting a digital learning plan, but it has not been communicated to all stakeholders.</li> <li>School and district digital technology policies are in the process of being aligned to the district digital learning plan and/or do not mention the role of digital learning in moving the school toward the goals outlined in the school improvement plan.</li> </ul>	<ul style="list-style-type: none"> <li>Responsible use guidelines have been adopted by the school but not communicated to all stakeholder groups.</li> <li>School leaders have adopted a digital learning plan but it has not been clearly communicated to all stakeholders as yet.</li> <li>The school and district digital learning plan have been aligned but do not clearly indicate the role of digital learning in moving the school toward the goals outlined in the school improvement plan.</li> </ul>	<ul style="list-style-type: none"> <li>Responsible use guidelines have been communicated to all stakeholder groups.</li> <li>School leaders have adopted and communicated a digital learning plan.</li> <li>School and district digital learning plans have been aligned and explicitly delineate the role of digital learning in moving the school toward the goals outlined in the school improvement plan.</li> </ul>

	Early	Progressing	Advanced	Achieved
<b>Transition</b>	<ul style="list-style-type: none"> <li>The school is not yet considering continuous improvement plans for digital learning initiatives.</li> <li>Continuous improvement systems have not yet been identified or established.</li> <li>Data related to digital learning initiatives is not yet being used or collected.</li> </ul>	<ul style="list-style-type: none"> <li>School leaders are considering continuous improvement plans for digital learning initiatives.</li> <li>Digital learning initiatives are seen as separate from the rest of the teaching-and-learning process and little effort is made regarding overall evaluation.</li> <li>Limited data are being used to continuously improve the implementation of digital learning.</li> </ul>	<ul style="list-style-type: none"> <li>School leaders have begun to develop continuous improvement plans for digital learning initiatives.</li> <li>Digital learning initiatives are improved every 1-2 years based on summative results of continuous improvement data.</li> <li>Mostly high-level data (e.g. student grades and test scores) are being used to continuously improve the implementation of digital learning, but school leaders are beginning to develop plans for the collection of more informative data.</li> </ul>	<ul style="list-style-type: none"> <li>A team of stakeholders - that includes school leadership and representatives of some other groups such as the district, teachers, parents, learners, and/or community members - have developed continuous improvement plans for digital learning initiatives aligned to the school improvement plan.</li> <li>Digital learning initiatives are continuously improved based on the results of the ongoing data collection process.</li> <li>Multiple and varied sources of data (e.g. learner performance data, classroom observation data, survey data, etc.) are being used to continuously improve the implementation and impact of digital learning.</li> </ul>

<b>PROFESSIONAL DEVELOPMENT</b>				
	Early	Progressing	Advanced	Achieved
<b>Professional Development Focus</b>	<ul style="list-style-type: none"> <li>Professional development focuses on sharing information about digital technology tools and resources.</li> <li>Professional development on pedagogy in a digital learning environment has not yet been provided.</li> <li>Digital learning-focused professional development has not yet been provided on content-specific strategies for integrating digital tools and resources into the curriculum.</li> </ul>	<ul style="list-style-type: none"> <li>Professional development focuses on engaging with digital technology tools and resources.</li> <li>Professional development on pedagogy in a digital learning environment introduces digital learning frameworks (e.g. TPACK, SAMR).</li> <li>Digital learning-focused professional development has been provided on content-specific strategies for integrating digital tools and resources into the curriculum for key subjects (Mathematics, Science and Language).</li> </ul>	<ul style="list-style-type: none"> <li>Professional development focuses on integration of digital tools and content resources with curriculum objectives.</li> <li>Professional development on pedagogy in a digital learning environment explores digital learning frameworks (e.g. TPACK, SAMR) for the effective uses of digital tools and resources to support learning and teaching.</li> <li>Digital learning-focused professional development has been provided on content-specific strategies for integrating digital technology into the curriculum for more than the key subjects (Mathematics, Science and Language).</li> </ul>	<ul style="list-style-type: none"> <li>Professional development focuses on curriculum planning and learning activities integrated with digital tools and content resources.</li> <li>During professional development on pedagogy in a digital learning environment, teachers reflect on and revise their implementation of digital learning frameworks.</li> <li>Digital learning-focused professional development has been provided on content-specific strategies for integrating digital technology into the curriculum for all subject areas.</li> </ul>

	Early	Progressing	Advanced	Achieved
<b>School-Initiated Professional Development</b>	<ul style="list-style-type: none"> <li>Professional development does not yet include ongoing support for digital learning through coaching, mentoring, or learning communities.</li> <li>Teachers do not share ideas about digital learning with their colleagues.</li> <li>Teachers do not have the opportunity to discuss digital learning in professional learning community meetings.</li> </ul> <p>Early</p>	<ul style="list-style-type: none"> <li>Professional development includes ongoing support for digital learning through peer coaching, mentoring, and/or learning communities.</li> <li>Teachers seldom share ideas about digital learning with their colleagues.</li> <li>Teachers occasionally share lessons and activities about digital learning through infrequent professional learning community meetings.</li> </ul> <p>Eloping</p>	<ul style="list-style-type: none"> <li>Professional development includes ongoing support for digital learning with peer coaching, mentoring, and professional learning communities.</li> <li>Teachers share ideas about digital learning with their colleagues in informal ways.</li> <li>Teachers frequently share lessons and activities about digital learning in their regular professional learning communities (including subject meetings at the school).</li> </ul>	<ul style="list-style-type: none"> <li>Professional development includes ongoing support for digital learning through peer observation, self-assessment, peer coaching, professional learning communities and mentoring.</li> <li>Teachers frequently share ideas about digital learning with their colleagues in structured (staff seminar) and informal ways.</li> <li>Teachers frequently share lessons and activities about digital learning in their regular professional learning communities (including subject meetings at the school and outside the school).</li> </ul>
<b>Participation in Professional Development</b>	<ul style="list-style-type: none"> <li>Teachers are responsible for pursuing digital learning-focused professional development independently.</li> <li>School leaders do not attend teacher professional development on digital learning.</li> <li>The school is not fully aware of the CPTD points of teachers and the submission of activity summaries to the SACE CPTD System.</li> </ul>	<ul style="list-style-type: none"> <li>The school provides some digital learning-focused professional development - typically available after school or during planning time.</li> <li>School leaders attend professional development activities on digital learning with their teachers.</li> <li>The school is aware of the accumulation of CPTD points by teachers but does not actively encourage it.</li> </ul>	<ul style="list-style-type: none"> <li>The school provides multiple opportunities to meet the professional development needs of all teachers, including some release time to allow them to participate in professional learning opportunities.</li> <li>School leaders participate in professional development on leading digital learning initiatives.</li> <li>The school encourages, but does not monitor, the accumulation of CPTD points by teachers and the submission of activity summaries to the SACE CPTD System.</li> </ul>	<ul style="list-style-type: none"> <li>The school provides multiple and varied opportunities to meet the individual professional development needs of all teachers, including some release time to participate in professional learning opportunities.</li> <li>School leaders participate in professional development on leading digital learning initiatives, including evaluating authentic digital learning.</li> <li>The school monitors and encourages the accumulation of CPTD Points by teachers and the submission of activity summaries to the SACE CPTD System.</li> </ul>

## DIGITAL LEARNING

	Early	Progressing	Advanced	Achieved
<b>Teacher Role</b>	<ul style="list-style-type: none"> <li>Shifts in the teacher's role in a digital learning environment (in which teachers do more facilitation) are not yet being addressed.</li> <li>Teachers do not demonstrate proficiency with the teacher competencies for digital learning.</li> </ul>	<ul style="list-style-type: none"> <li>Shifts in the teacher role in a digital learning environment, in which teachers do more facilitation, are evident in some teachers.</li> <li>Few teachers demonstrate proficiency with the teacher competencies for digital learning.</li> </ul>	<ul style="list-style-type: none"> <li>Shifts in the teacher role in a digital learning environment, in which teachers do more facilitation, are widely evident but not part of the digital learning plan.</li> <li>Many teachers demonstrate proficiency with the teacher competencies for digital learning.</li> </ul>	<ul style="list-style-type: none"> <li>Shifts in the teacher role in a digital learning environment, in which teachers do more facilitation, are driven at the school level and are part of the digital learning plan.</li> <li>All teachers demonstrate proficiency with the teacher competencies for digital learning.</li> </ul>
<b>Learner-centred Activities</b>	<ul style="list-style-type: none"> <li>Learners do not participate in digital learning activities that develop deep learning skills.</li> <li>Learners do not have the ability to use digital tools and resources and digital content resources to select their own learning paths.</li> </ul>	<ul style="list-style-type: none"> <li>Learners have a few opportunities to participate in digital learning activities that integrate deep learning skills.</li> <li>Learners have a few opportunities to use digital tools and resources and digital content resources to select personalized learning paths, based on their learning differences.</li> </ul>	<ul style="list-style-type: none"> <li>Learners have many opportunities to participate in digital learning activities that integrate deep learning skills.</li> <li>Learners have many opportunities to use digital tools and resources and digital content resources to select personalized learning paths, based on their learning differences.</li> </ul>	<ul style="list-style-type: none"> <li>Learners have consistent opportunities to participate in digital learning activities that integrate deep learning skills.<sup>1</sup></li> <li>Learners have consistent opportunities to use digital tools and resources and digital content resources to select personalized learning paths based on their learning differences.</li> </ul>
<b>Access to Digital Content</b>	<ul style="list-style-type: none"> <li>Learners do not have access to digital content and resources.</li> <li>Teachers do not have access to digital content and resources for instructional use in the learning environment.</li> <li>Parents do not have access to teacher-generated and curated digital content.</li> </ul>	<ul style="list-style-type: none"> <li>Learners have few opportunities to access digital content and resources.</li> <li>Teachers have few opportunities to access digital content and resources for instructional use in the learning environment.</li> <li>Parents have few opportunities to access teacher-generated and curated digital content.</li> </ul>	<ul style="list-style-type: none"> <li>Learners have many opportunities to access digital content and resources.</li> <li>Teachers have consistent opportunities to access digital content and resources for instructional use in the learning environment.</li> <li>Parents have many opportunities to access all teacher-generated and curated digital content.</li> </ul>	<ul style="list-style-type: none"> <li>Learners have anytime/anywhere access to digital content and resources.</li> <li>Teachers have anytime/anywhere access to digital content and resources for instructional use throughout the entire school.</li> <li>Parents have consistent access to all teacher-generated and curated digital content and the work submitted by the learners.</li> </ul>
<b>Assessment</b>	<ul style="list-style-type: none"> <li>Multiple and varied assessments are not yet in place.</li> <li>A few teachers use multiple and varied assessments as indicators of learning.</li> <li>Rubrics that measure the deep learning skills required for problem solving, communication and collaboration are not yet in place.</li> </ul>	<ul style="list-style-type: none"> <li>Multiple and varied assessments to identify classroom-level needs for higher attainment are not widely used.</li> <li>Most teachers use multiple and varied assessments as indicators of learning.</li> <li>Rubrics that measure the deep learning skills required for problem solving, communication and collaboration across classrooms.</li> </ul>	<ul style="list-style-type: none"> <li>Multiple and varied assessments are embedded into teaching and learning, and are used to identify individual learner needs and strengths for higher attainment.</li> <li>The school encourages and supports the use of multiple and varied assessments as indicators of learning, but this is not included in the digital learning plan.</li> <li>Rubrics that measure deep learning skills required for problem solving, communication and collaboration are in use across content areas across subject areas.</li> </ul>	<ul style="list-style-type: none"> <li>Multiple and varied assessments are embedded into teaching and learning, and are used to identify individual learner needs and strengths for higher attainment.</li> <li>The school's digital learning plan requires the use of multiple and varied assessments as indicators of learning.</li> <li>Rubrics that measure deep learning skills required for problem solving, critical thinking, communication, collaboration, and creativity are in use across subject areas.</li> </ul>

## Section A: Scoring Sheet

School Name: \_\_\_\_\_ Date Rubric Completed: \_\_\_\_\_

School Leaders: \_\_\_\_\_

Teachers: \_\_\_\_\_

Other: \_\_\_\_\_

Enter the identified ranking or “score” into the blank boxes below each key element name, and calculate the overall score (e.g. 16 out of 28 possible points or 16/28): **Early = 1    Progressing = 2    Advanced = 3    Achieved = 4**

Leadership					Comments
Shared Vision	Communication & Collaboration	Sustainability	Policy	Transition	
					<b>Overall Leadership Score (SUM/20):</b>

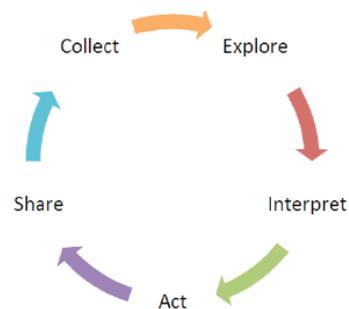
Professional Development			Comments
Professional Development Focus	School-initiated Professional Development	Participation in Professional Development	
			<b>Overall Professional Development Score (SUM/12):</b>

Digital Learning				Comments
Teacher Role	Learner-centred Activities	Access to Digital Content	Assessment	
				<b>Overall Digital Learning Score (SUM/16):</b>

<b>Overall School Digital Plan Progress Rubric Score /48</b>	
--	--

## Section B. Data Interpretation Guide

Analysis for strategic planning is the process of breaking down and examining data to understand project implementation or impact. Before meaningful decisions can be made, it is necessary to understand what the data shows, by manipulating it in thoughtful ways. Analysis bridges the gap between collecting data and interpreting the data for monitoring and adjusting a project. Interpretation - the next phase in strategic planning - is the process of determining “what the data mean”— an important activity between the analysis of data and the making of decisions for next steps.



PHASE	GUIDING QUESTIONS
<b>Explore</b>	<ul style="list-style-type: none"> <li>• Are your rubric results what you expected?</li> <li>• Any surprises? Why?</li> <li>• Any disappointments? Why?</li> <li>• Do you see any alignment or inconsistencies between the rubric results and other data you have? Why do you think this is the case?</li> </ul>
<i>Identify 3-4 questions that emerge as you review your data.</i>	
<b>Interpret</b>	<ul style="list-style-type: none"> <li>• What do the results mean? How would you summarize the data?</li> <li>• What is working really well in your school? What is not?</li> <li>• What are the critical points or trends you saw in the data?</li> <li>• At your school, who needs to be involved in a discussion about this data? How can you engage teachers and other stakeholders?</li> </ul>
<i>Document at least 3 take-aways from your review of your data.</i>	
<b>Act</b>	<ul style="list-style-type: none"> <li>• What does this rubric data tell you about efforts you should prioritize now and in the next school year?</li> <li>• What changes are you going to make based on this data?</li> <li>• How do these data inform your school improvement planning?</li> </ul>
<i>Identify two things you should do based on the data and who in your district should be involved in next steps.</i>	
<b>Share</b>	<ul style="list-style-type: none"> <li>• How should you share your interpretation of the data with: staff, parents, the School Governing Body?</li> <li>• Who should have this information?</li> <li>• How can your data support current or ongoing initiatives in your school?</li> <li>• What is your vision for getting additional input as you go through the planning process?</li> </ul>
<i>Note how and with whom this data should be shared.</i>	
<b>Collect</b>	<ul style="list-style-type: none"> <li>• What local data do you already have available?</li> <li>• What new data do you need to collect?</li> <li>• What about data on the effectiveness of teaching and learning?</li> <li>• What about comments from teachers and learners?</li> </ul>
<i>List other data you already have available and additional data that you need.</i>	

(Footnotes)

1 “Deep Learning” is defined in the Professional Development Framework for Digital Learning as activities that align with the 7 cross-curricular aims listed in the CAPS.



## DEPARTMENT OF BASIC EDUCATION

222 Struben Street, Pretoria, 0001

Private Bag X895, Pretoria, 0001, South Africa

Tel: (012) 357 3000 • Fax: (012) 323 0601

Private Bag X9035, Cape Town, 8000, South Africa

Tel: (021) 486 7000 • Fax: (021) 461 8110



**CALL CENTRE: 0800 202 933**

**website**

[www.education.gov.za](http://www.education.gov.za)

**facebook**

[www.facebook.com/BasicEd](http://www.facebook.com/BasicEd)

**twitter**

[www.twitter.com/dbe\\_sa](http://www.twitter.com/dbe_sa)