

Transforming Teaching, Learning, and Assessment

A Global Paradigm Shift



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Executive Summary

Document 1 of this series acknowledged one of the understandings of curriculum as a continuum that includes the: (i) official / intended / written / formal / ideal / planned or specified curriculum; (ii) implemented / mediated / taught / operational or curriculum in-use; (iii) actual / experiential / learned / received / achieved or internalized curriculum; and (iv) assessed curriculum. Without decisive interventions, this continuum often has a diminution effect in that each subsequent stage is less than the previous one.

The diminution is often due to the fragmentation of curricula reform processes. Reforms of students' curricula are not always accompanied by reforms of teacher education and professional development, or by reforms of assessment and examinations systems. Teachers are rarely afforded the pre- and in-service training required to enable their effective implementation of transformed students' curricula. This creates a gap between the intensions of the official curriculum, and the reality of the taught curriculum. Sometimes, due to inadequate consultations during curriculum development processes, teachers do not always own or commit to the official curriculum. This adds to further diminution along the curriculum continuum. For a range of reasons, learners are not always able to grasp fully what teachers teach. The learned curriculum is therefore often considerably less than the taught

¹ Document 1 also prof-fered a concept of devel-opment that goes well beyond the economic view that dominated the 20th and even the early 21st century. This concept of development is used across all Docu-ments in the series.

curriculum. Assessors tend to assess what is easy to assess through pen and paper formats. Given that teachers and learners are both judged by their performance on assessments and examinations teachers tend to teach what is assessed and/or examined, and learners tend to focus on the same. To the extent that assessments and examinations are themselves misaligned with the intentions of the official curriculum, the assessed curriculum can be only a pale shadow of all the other previous stages along the curriculum continuum.

As outlined in Document 2, competence-based curricula are more demanding and more complex than traditional subject-based curricula. This increases the risk of gaps along the curriculum continuum. However, because competence-based curricula afford much greater room for student and teacher voice and agency, this could be a mitigating factor. Heightened teacher and learner agency have potential to enrich the official curriculum, and to turn the gap between stages of the curriculum continuum into an enrichment rather than a diminution effect. However, this potential still depends on the alignment and integration of curriculum, teacher education and professional development, teaching, learning, and assessment.

This Document outlines the transformations required for teaching, learning, and assessment, to best support the implementation of competence-based curricula, and to reduce the diminution effect along the curricula continua. It advocates for greater teacher and student agency that should enable them to improve on the official curriculum. Without the proposed transformations, competence-based curricula have a limited chance of achieving their intended, and/or more than their intended impact.

Transforming Learners and Learning

Transforming the role of learners: Effective implementation of competence-based curricula requires the transformation of the role of learners from passive recipients of content to active and empowered, self-benefiting agents. In this context, transformation is about accentuating learner voice and learner agency over their own learning. This resonates with the third macro competence presented in Document 2—Self-Agency—which is required for a successful engagement with challenges and opportunities in the 21st century, and within Industry 4.0. Lifelong learning is the best of all opportunities current and future generations can wish for. At the same time, it is a challenging endeavor. It would not be possible to transform learning without first transforming learners into empowered self-benefiting agents.

To make space for learner voice and to promote learner agency, teachers must set up learning environments that stimulate active learner engagement with meaningful and progressively challenging tasks that stimulate their thinking and enable them to develop competence over time. Unlike subject content, competence cannot be transmitted to learners. Rather, competence is progressively developed by learners through appropriate facilitation. Effective development of competence also requires a shift in the leadership for learning from teachers to learners. It is a profound shift from teacher-led transmission, which is

typical of subject-based curricula, to learner-led enquiry, as summarized in Table 1.

Table 1. The Role of Learners in Competence-Based Curricula

| Teacher-led transmission | Learner-led enquiry |
|---|---|
| From passive recipients of an accepted body of knowledge | To developing increasing responsibility for their own learning |
| From memorization and regurgitation | To active enquiry, interrogation, and management of a variety of competing information sources |
| From compliance without engagement | To co-construction and enthusiastic engagement in framing enquiries and outcomes |
| From answering teacher questions | To framing and exploring learners' own questions |
| From competing against one another | To collaborating with one another and with the teacher |
| From compartmentalized learning in single subjects | To integrated, multi-disciplinary connections across subjects |
| From more remote and formal teacher –learner relationships | To trust and rapport between teacher and learners and among learners |
| From 'silo-based' subject learning that lacks connection with learner background and context | To relevant learning, drawing on prior knowledge and cultural context to clarify and refine conceptual understanding |
| From shallow, surface learning (and extrinsic motivation) reliant on teacher talk and demonstration to pass exams | To deep learning and intrinsic motivation: <ul style="list-style-type: none"> • investigating a range of perspectives/ways of looking at issues/problems; • subjecting information and processes to critical interrogation; • examining alternatives and seeking creative solutions; • justifying conclusions/decisions/choices based on evidence/evaluation. |

By fostering learner agency, leadership, and ownership of their own learning, competence-based curricula promote learners' intrinsic motivation, fulfilment, and enjoyment of learning. It recognizes that learners have to want to learn and not be made to learn. They have to be fulfilled in learning rather than be obliged in learning. They have to be intrinsically motivated to learn.

Transforming learning: Teachers remain fundamental in the transformation of learning as do learners. For instance, appropriate "scaffolded" support and interventions from teachers are essential to facilitate learning. Appropriate scaffolding requires:

A "**growth mindset**" (Dweck, 2006). essential for developing intrinsic motivation. This mindset emerges from an understanding that effort and hard work, and willingness to take risk and to learn from failure are key to success.

Deep learning, which is associated with intrinsic motivation and with the meaningful engagement required to arrive at a real understanding of underlying theories/concepts. It is also associated with: the ability to recognize key ideas; distinguish principles from examples; and link ideas in order to construct personal meaning.

The importance of teachers has to be qualified by the recognition that it is learners who do the learning. Everyone and everything else facilitate learners in their learning processes. Learning processes are facilitated by multiple agents, not just teachers. Key among these agents are: the learners themselves first and foremost, their peers, technologies, teachers, parents, and other actors in formal and informal settings. Effective learning processes facilitate learners' development of competence through diverse forms of engagement (Fredricks, Blumenfeld, and Paris, 2004), including:

- *Emotional engagement*: entailing positive (and negative) reactions to teachers, classmates, and content, which influence learner willingness to engage, the quality of engagement, intrinsic motivation, and fulfilment in learning;
- *Cognitive engagement*: including the learner willingness to exert the necessary effort required to comprehend complex ideas and to develop complex levels of competence; and
- *Behavioural engagement*: which determines learner participation levels and the willingness to persist.

The extent of emotional, cognitive, and behavioral engagement influences the effectiveness of learning, and thus, the development of competence.

Furthermore, the development of competence is best facilitated through open, expansive, multidimensional, and collaborative modes

of learning. These modes of learning blur boundaries between teachers and learners, as learners progressively take responsibility for their own learning. The policy challenge here is that often, teachers are not trained to facilitate open, expansive, multidimensional, and collaborative learning. A key policy message then is that transforming learning to support competence-based curricula demands a rethinking and a redesigning of teacher training and continuous professional development curricula.

Transforming Teachers and Teaching

Transforming the role of teachers: The success of competence-based curricula partly rests on the recognition of the role of teachers as co-designers and co-developers of curricula. Success also rests on profound teacher understanding of curricula that should accrue during curriculum design and development stages. Such understanding is crucial for the teachers' buy-in, conviction, ownership, and commitment to effective curricula implementation. Where there is connectivity, ICTs offer enormous potential for inclusive and in-depth consultation with teachers and for their substantial contributions to the design and development of curricula.

At the classroom level, competence-based curricula demand the transformation of teachers' role from that of traditional "sage on the stage" to "guides on the side". This requires teachers to become collaborative planners/co-constructors and supporting actors, who actively facilitate learner engagement in the learning process by:

- Encouraging learner voice and co-construction of relevant and meaningful activities that support the development of competences;
- Exploring what students already know and clarifying any misconceptions at the outset;
- Explicitly emphasizing key principles/concepts and examples;

- Engaging learners actively through group work and enquiry/ problem-based learning;
- Delegating roles and responsibilities to learners;
- Emphasizing depth of learning rather than breadth of coverage;
- Encouraging experimentation and learning from mistakes;
- Offering learners choice about how they wish to demonstrate their progressive development of competence;
- Assessing conceptual understanding and connections rather than individual ideas or facts;
- Developing learner understanding of *assessment for learning* processes, including the following five key strategies:
 - Clarifying/co-constructing learning intentions that make knowledge, skills, technologies, values, and attitudes explicit;
 - Clarifying/co-constructing *success /assessment criteria*, so that learners know what is expected;
 - Engineering *effective questions and discussions* to stimulate thinking and deepen learning;
 - Activating students ability to *assess their own and others'* learning
 - Providing *short, explicit constructive feedback* that identifies how to improve and ensuring that learners act on feedback.

Competence-based curricula also require teachers to assume the role of planners of an enquiry. They need to consider: the level of "scaffolding" necessary for different age and competence groupings; the range and level of learner research proficiency; and their ability to think critically and creatively in groups. Enquiries may be:

- *Highly structured*: where teachers present the issue, structure, and sources for investigation;
- *Loosely guided*: where teachers provide questions to stimulate enquiry but learners use their own approaches and find their own sources of information to investigate; or
- *Open-ended*: where learners and teachers co-construct the enquiry, formulating questions and modes of assessment as they go.

For competence-based curricula, teachers need to play the role of effective scaffolders and sequencers of learning. They must ensure a good match between competences that learners need to develop and facilitative activities that allow them to build and demonstrate that competence.

- *"Scaffolding"* refers to the supporting and structuring of learning to reduce the number of choices a learner has to make so that they can concentrate on building the required competence.
- *Cooperative or guided learning* is similar to scaffolding and refer

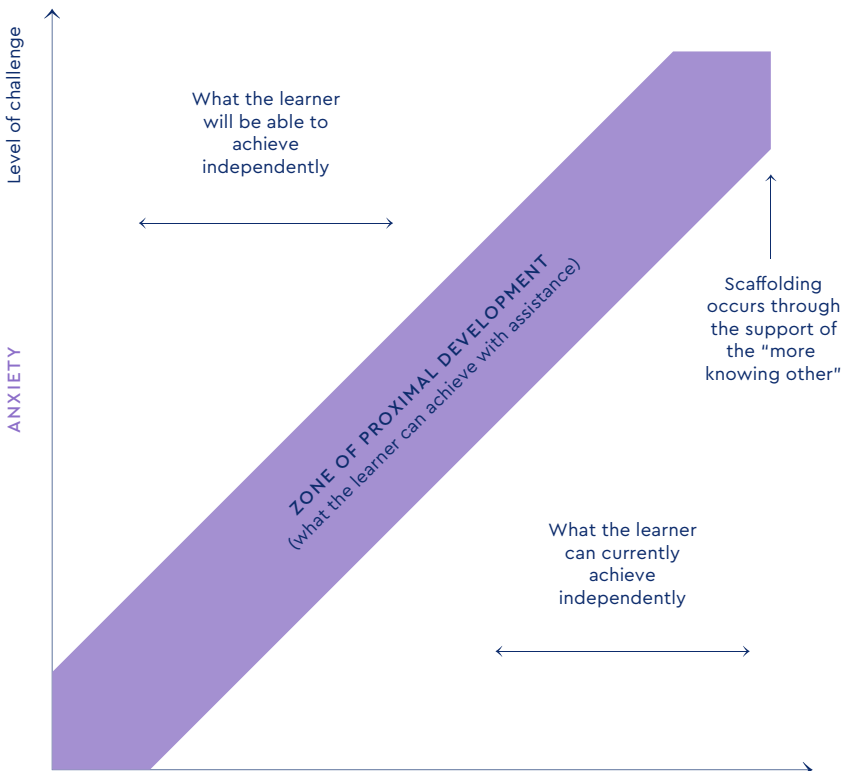
Table 2. Steps in planning an active enquiry-based learning

| | | | | |
|--|---|---|---|---|
| <p>1. Identify a topic or issue for investigation</p> | <p>In discussion with learners</p> <ul style="list-style-type: none"> Consider how to focus learners' thinking in ways that are creative, challenging, motivating, and applicable or relevant to a real life problem/challenge/situation. Think beyond the conventional assignments to stimulate learner creativity. Agree/co-construct the focus of enquiry and the audience to whom the assignment is being addressed. | | | |
| <p>2. Clarify learning intentions</p> | <ul style="list-style-type: none"> Begin to clarify the essential elements of learning involved <p><i>For example, any substantial enquiry generally facilitates the development of the following elements. Each element should be discussed in detail with learners.</i></p> | | | |
| <p><i>Make sure that the final title of the assignment communicates the learning intention accurately to learners.</i></p> | <p>Conceptual knowledge and understanding</p> <hr/> <p>What do learners want to learn about in relation to this topic?</p> | <p>Thinking skills</p> <hr/> <p>What do learners need to think about?</p> | <p>Modes of Communication</p> <hr/> <p>What form of communication could they use to best show that they have learned?</p> | <p>Development of personal capabilities, etc.</p> |
| <p>3. Clarify the essential conceptual knowledge</p> | <ul style="list-style-type: none"> Identify key concepts at the heart of the enquiry; Identify prior learning and clarify any learner misconceptions; Ensure learners gain a sound grasp of relevant concepts | | | |
| <p>4. Clarify higher-order thinking skills</p> | <ul style="list-style-type: none"> Identify the type of thinking skills to be developed, applied, and demonstrated (See possible activities in Table 3) | | | |
| <p>5. Clarify the mode of assessment & communication</p> | <ul style="list-style-type: none"> Offer choice in and clarify the mode of assessment and communication to best demonstrate competence | | | |
| <p>6. Clarify the personal competences</p> | <ul style="list-style-type: none"> Identify how learners will work on the enquiry – independently or in groups, including their self-management and group organizational skills | | | |
| <p>7. Agree on Success / Assessment Criteria</p> | <ul style="list-style-type: none"> Develop a rubric setting out characteristics of competences that: <ul style="list-style-type: none"> meet the expected standard; might exceed the expected standard; do not 'yet' meet the expected standard | | | |

to the level of support given to a learner over time until they become sufficiently competent and confident to undertake a specific task independently. The underpinning pedagogical idea is that teachers use cooperative learning strategies to afford learners the opportunities to learn from, and to develop competences, in cooperation with their more advanced peers.

- **The zone of proximal development** refers to "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers" (Vygotsky, 1978, p. 86). (see Figure 1).
- **Sequencing** is a related strategy - it entails making sure that learners have time to explore and develop constituent elements of competence—knowledge, skills, attitudes, technologies, etc.—before they are challenged to interactively apply them. For example, learners can be "scaffolded" to build critical thinking by using "thinking diagrams".

Figure 1



- *Thinking diagrams* can also be used to help structure and scaffold learners' critical thinking by following logical steps that improve their thinking.

Table 3 summarizes elements of the shift in the role of teachers from expert transmission to the incorporation of social constructivist approaches that develop students' cognitive and reflective capacities as autonomous and collaborative learners.

Table 3. The changing role of the teacher in competence-based curricula

| From | Transmission | To Collaboration |
|--------------------------------|---|---|
| Role of the teacher | Teacher as expert transmitter of knowledge; Textbook dominated; | <p>Teacher as facilitator of interactive learning characterised by timely scaffolded interventions within 'the zone of proximal development' (ZPD)</p> <p>Teacher as a co-constructor and collaborator in learning, encouraging learner involvement in planning and reflecting on:</p> <ul style="list-style-type: none"> • the focus of learning • the process of learning • learning intentions • success criteria • questioning • peer and self-assessment • constructive feedback • taking responsibility for autonomous and collaborative learning |
| Competences needed by teachers | <p>Domain/ subject expertise</p> <p>Organisation and communication of content</p> | <ul style="list-style-type: none"> • Facilitating learning by providing access to sources of information • Creating cognitive challenge • Scaffolding competence development • Effective questioning • Constructive and appropriate feedback • Developmental assessment and interpretation • Genuine co-construction of enquiry-based activities and modes of assessment • Timely interventions to challenge and deepen reflection on learning and related values and attitudes • Open-ended creative outcomes • Meta-cognitive reflection on inputs, outputs, and dynamics • Self and peer assessment • Evaluation for improvement |

Transforming assessment

Within the curriculum continuum, assessment has significant potential to support and reinforce curriculum reform. However, it equally has enormous potential to distort the official/intended curriculum. Concerted attention needs to be paid to the nature of assessment, the instruments used, and to their alignment with the official curriculum. Assessments that endeavor to cover the scope and depth of the official curriculum can have a reinforcing, and even integrating effect on curriculum, teaching, and learning. However, these types of assessments are rare. Because of the cost, time, complexity, and the human resources required to effectively assess learning, most assessment and examinations systems tend to focus on discrete knowledge and skills that are easy and cost-efficient to test, and mainly through pen and paper. Inappropriate assessment can distort the official curriculum in a manner that leads to a diminution effect along the curriculum continuum. When appropriate strategies are used in assessment, they can support the implementation of the official curriculum, enhance learning, and lead to an enrichment effect. However, gaining these benefits of appropriate assessment demands a specialized knowledge of assessment by all concerned.

Too many opponents of assessment site poor practice to support their arguments. This document takes a different view of assessment.

It underscores the point that good practice assessments conducted by specialists, do support curriculum implementation, as well as teaching and learning. This document also emphasizes the reality that the way curriculum is designed and presented can contribute to bad practice in assessment. If well designed, competence-based curriculum can reduce the risk of bad practice in assessment. If a competence model of curriculum is based on developmental continua and if teachers are supported to teach to the continua, and if assessors are supported to align their instruments, the problem of misalignment between curriculum, teaching, learning, and assessment can be overcome.

The power of assessments and examinations to distort or support the official curriculum mainly lies in the reality that performance on assessment determines learners' future life chances in fundamental ways. Because teachers and learners are judged on their performance on assessments and examinations, regardless of their relationship to the official curriculum, teachers tend to teach to assessments, tests, and examinations. Learners equally focus on what they know will be assessed, and most importantly, examined. A key policy message is that education and learning systems cannot succeed at adopting competence-based approaches to curriculum without similarly transforming teaching, learning, as well as assessment and examination systems. All the three elements must be aligned. Transforming curricula to competence-based approaches and leaving teaching, learning, assessment, tests, and examinations subject-based is tantamount to not transforming curricula.

Most importantly, competence-based curricula must lead quality assessment rather than be led by poor practice assessments, tests, and examinations. They must also lead competence-based pedagogy, teaching, and learning. Quality assessment tools and procedures should be used as tools to collect evidence of competence as intended in official curricula. They must also be used to collect evidence of the learners' progression in the development of competence from novice to expert and beyond, as intended by the official curriculum.

Reinforcing teacher assessment: Teacher assessment can provide invaluable insights into learners' progressive development of competence. This requires the use of a range of assessment tools. For instance, quality assignments can allow learners to demonstrate their level of competence in more applied and meaningful ways. Teacher-designed continuous assessment is best suited for monitoring learners' progression in the development of competence, referred to as developmental progression. However, pre- and in-service training, as well as continuous professional development that enable teachers to design and conduct effective continuous competence-based assessments are exceedingly rare. Effective and reliable assessment by teachers requires their effective initial preparation, continuous professional development (CPD), and experience. Combined, these enable teachers to:

- Create and customize well-designed tasks which assess not only the overall competence but also the use of relevant constituent elements of competence—knowledge and understanding, skills, attitudes, values, etc.—in appropriate and meaningful contexts;
- Create and customize criteria that illustrate progression in learning related to the particular competences they wish to assess; and
- Make judgements across the full range of learning goals and provide effective and reliable feedback to learners about what they need to do to improve, and to other stakeholders about overall achievement.

Another critical policy message is that competence-based assessment and examinations systems require significant investment in the professionalization of teachers as assessors of learning. Competence-based assessments also require trust in teachers' ability to make reliable judgements and to utilize assessment as an inherent and important part of teaching and learning.

Developing teacher assessment capacity: In competence-based approaches, teachers are not just co-designers and co-developers of curricula. They are also pivotal co-assessors, co-testers, and co-examiners. It is profoundly important that the transformation of curricula to competence-based approaches is accompanied by the development of teacher capacity for assessing learners' *developmental capacity to develop competence up to desired levels*.

If we break down this definition into its constituent parts, assessing learning in competence-based curricula requires teachers to understand:

- What "developmental progression" means, in general terms, and an understanding that progressing is neither linear nor necessarily age-related. Rather, it is iterative, interactive, and dependent on making connections to prior learning and to context; and
- How to design and assess tasks/activities of "increasing complexity" that:
 - Are valid, i.e., that assess and measure what the task is intended to assess;
 - Are reliable, i.e., consistently assess what they are meant to assess and are consistent in the methods and criteria they apply;
 - Specify clear assessment criteria so that learners may understand what they need to do in order to demonstrate a certain standard/ level of performance and ultimately the overall competence; while stretching and motivating learners to deploy maximum effort.

In strengthening teacher capacity, it should be borne in mind that assessment is not an exact science. A distinction should also be made between psychometrics, which, because of its base in mathematical modelling can be quite precise. Psychometrics is best suited for providing policy makers advice on system level changes. Classroom assessment on the other hand is more a matter of teacher judgement than mathematical modelling and precision. As such, technical assessment issues like validity and reliability often take second place to teachers' expertise in using appropriate assessment to support learning. To help make an evidence-based judgement about levels of performance over time, it is best to base judgements on a number of different *criterion referenced assessments*. It is consistency in performance that counts towards competence. Beyond effective assessment, competence-based curricula demand teacher capacity in the effective use and reporting of the outcomes of assessment. This involves "the purposeful process of observing, interpreting and recording evidence of learning and communicating this interpretation of learning to stakeholders" (Griffin, 1990) for various purposes, including:

- **Diagnostic assessment:** To collect baseline evidence on learners' prior learning and potential to handle planned learning cycles or programs. Such baseline data provides a diagnosis of learner strengths, learning needs, and gaps that need to be addressed. Diagnostic assessment will also inform planning for groups of learners, as well as the design of specific interventions for individual learners. It provides a starting point for teaching and learning.
- **Formative assessment:** To monitor student learning on an ongoing basis by listening to, observing, interacting, and talking with learners on a daily basis. This allows for the identification of potential misunderstandings and misconceptions. It also informs the design of appropriate and timely interventions in the "zone of proximal development" (Vygotsky, 1978). Appropriate and timely intervention also enables the clarification and acceleration of learning.

Formative assessment also provides focused constructive feedback that helps learners to identify strengths and to immediately make required improvements. It equally supports teachers and learners to consider how teaching may be adjusted and/or to revisit any aspects that were not clearly understood or that need reinforcement.

- **Summative assessment:** To (i) evaluate student progress at the end of a unit, semester, year or program; (ii) compare learners' efforts against agreed standards or benchmarks (criterion-based); (iii) assess learners' progress against their own previous efforts; (iv) guide learners' efforts, activities and pathways in subsequent courses; and (v) help teachers to systematically examine patterns of learner performance across courses and programs and use this information to improve teaching.

In summary, the strengthening of teachers' capacities to develop and apply competence-based assessment goes well beyond an understanding of the theories and schools of thought that underpin such assessments. More specifically, it requires mastery of specific skills, tools, and techniques that make for effective competence-based assessment. Examples of required skills, tools, and techniques include: (i) the design and use of assessment rubrics; (ii) articulation of competence-based criteria; (iii) planning assessments and making judgements; and (iv) creating, communicating learner feedback and using it to improve teaching and learning. Teachers also require the capacity to analyze learner feedback and to use insights gained and results to improve their practice as well as to engage more effectively with learners and other educators.

Transforming Teacher Continuous Professional Development

The transformation of pre-service teacher education curricula in alignment with learners' curricula is necessary but insufficient to deepen and sustain pedagogies and other classroom practices that support competence-based curricula. This is because for most countries, the cadre of practicing teachers far outnumbers that of initial entrants into the profession. Even if first-time-entrants came in with appropriate practices, the sheer numbers of practicing teachers with less appropriate practices could easily wash out the impact of first entrants. Where there is dissonance between cohorts, experienced and senior teachers are likely to prevail over the least experienced new entrants. Rare exceptions would be where an experienced teacher is open to learning from her/his juniors, and allows for position leadership to yield to functional leadership.

Another risk to having old practices prevail over the new is that it is only when demonstration and coaching are added to the mix of professional development strategies that teacher classroom practices show substantial and enduring change (see Table 4). Invariably, new teachers depend on experienced teachers for coaching and mentorship. Where teacher CPD is weak, such coaching and mentoring can unintentionally make new teachers embrace pedagogies that are not compatible with competence-based approaches. Transformation of

teaching therefore needs to be accompanied by appropriate CPD that support effective pedagogies to take root. Overall, all teachers want to succeed at supporting learning. Griffin, Francis and Robertson (2017) show evidence that once teachers can be shown that particular practices improve student learning it is easier to change teaching practice in a sustainable way.

Table 4. Success of different methods of professional development

| Training Components | Outcomes | | |
|--------------------------------------|---|--|--|
| | % of participants who demonstrate Knowledge | % of participants who demonstrate new Skills | % of participants who transfer into Classroom Practice |
| Theoretical Knowledge and Discussion | 10% | 5% | 0% |
| Demonstration in Training | 30% | 20% | 0% |
| Practice and Feedback in Training | 60% | 60% | 5% |
| Coaching in Classroom Settings | 95% | 95% | 95% |

Source: Joyce and Showers (2002)

Teachers benefit most from school and classroom-based CPD, with a clear focus on learning processes and on improving pedagogy that addresses immediate school needs (Timperly et al., 2010; Sutton Trust, 2014), and allows colleagues to work together (Pedder and Opfer, 2010). One of the most valuable resources that teachers need in making the journey to deep pedagogies and competence-based teaching is a professional learning culture that facilitates constant access to peers participating in collaborative teaching opportunities (Griffin, 2014) rather than teachers working alone.

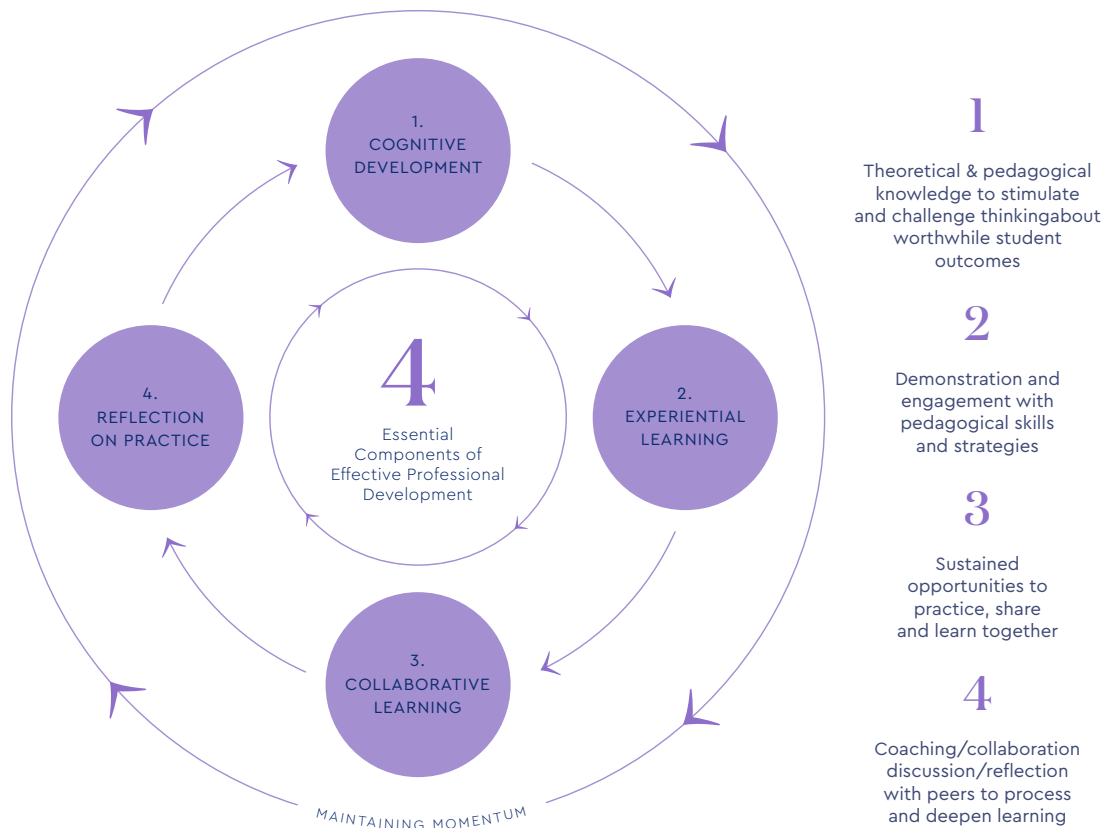
A key policy message is that while costly and time consuming, the use of intensive in-school CPD strategies such as coaching is not only desirable but essential for desired transformation of teaching—such as to competence-based teaching approaches.

Research on effective teacher CPD also confirms that merely presenting information, disseminating guidelines and/or offering short, infrequent off-site in-service courses has little or no impact on teaching practices. For their effect, CPD programs should rather focus on impacting valued learner outcomes.

Effective teacher professional development must include all 4 components:

- Knowledge – worthwhile research-informed theory, content, and expertise;
- Integrated pedagogical and assessment skills and strategies;
- Modelling, demonstrating, and engaging with approaches, ideally in settings that approximate to the workplace;
- Practicing the approaches frequently over a substantial period of time between professional inputs; (2–6 months a minimum) with ongoing and follow up evaluation of impact and refinement;
- Concurrent dialogue/coaching/peer collaboration in activities such as lesson planning, preparing related resources, peer observation, discussion, and reflection on impact.

Figure 2



Source: Adapted from Joyce and Showers (2002); Timperley (2010).

The Challenge

A real threat to instituting and sustaining pedagogical approaches that support competence-based curricula is that in many countries, especially developing countries, teaching is not yet professionalized. This is evident in unclear minimum qualifications, unspecified competence frameworks, unstated minimum experience, and lack of licensing procedures. Teaching still lacks core characteristics that define a profession, vis: (i) a profession-specific, systematized, scientific body of knowledge that informs the daily activities of practitioners; (ii) a lengthy period of higher education training and induction; (iii) engagement in continuous professional development; and (iv) autonomy to exercise professional judgement and decision-making in practice and in governance over the profession (Guerrero, 2017).

Even where teaching is recognized as a profession deserving systematic CPD, it enjoys very low status across many fronts. These challenges persist despite decades of calls to professionalize teaching. Since half a century ago, ILO and UNESCO (1966) underscored that “teaching should be regarded as a profession ... which requires of teachers expert knowledge and specialized skills, acquired and maintained through rigorous and continuing study; it also calls for a sense of personal and corporate responsibility for the education and welfare of the pupils in their charge”. The same call is echoed in

Throughout their professional practice teachers are committed to developing and demonstrating increasing competence in relation to the following:

Vision and Values

1.1 Develop and sustain a professional vision for learners

- Enable each learner to achieve their potential;
 - Know how pupils learn best and keep up to date with emerging research;
 - Build and sustain supportive motivating and caring relationships with learners;
 - Establish clear routines for effective learning;
 - Provide stimulating learning environments conducive to learning;
 - Set high expectations for all learners;
 - Ensure quality of access for all learners in their care, regardless of age, ability/disability gender, sexual orientation, race, religion or belief;
 - Promote learners' self-confidence, self-esteem, curiosity, and love of learning;
 - Safeguard learners' health and well-being and take all reasonable steps to address issues that might impact on learner welfare, e.g. bullying/cyber-bullying, stereotyping discrimination;
 - Access appropriate and timely advice, expertise and support as necessary.
-

Develop and sustain professional relationships, values and behaviours

- Inspire public confidence, respect and trust in themselves, their school and in the wider teaching profession and act as a role model for learners;
 - Develop professional, collaborative relationships with colleagues, other professionals, parents/guardians/carers in the interests of all learners;
 - Adhere to standards of behaviour in keeping with the profession;
 - Ensure transparency, integrity and probity in all actions;
 - Observe professional boundaries at all times;
 - Ensure behaviour management, physical contact and communication with learners is appropriate, in and out of school;
 - Maintain clear and open channels of communication;
 - Conduct assessments and examinations with integrity at all times;
 - Keep all personal/education records secure;
 - Ensure the accuracy of information prior to dissemination;
 - Disclose sensitive or confidential information e.g. attendance and exclusion information, only where it is appropriate to do so;
 - Report any incident perceived to threaten the well-being of learners;
 - Comply with policies procedures and guidelines at all times, e.g., use of school property, facilities, finance and ICT.
-

2

Teaching Learning and Assessment

2.1 Plan strategically (for own teaching)

Consult learners on their needs and interests, and take account of feedback;
Plan schemes of work and well-structured differentiated lessons and resources; extension and assessment activities; interventions and support;
Review and adjust planning in light of feedback and reflect on impact.

2.2 Provide for quality teaching and learning

Negotiate individual goals that motivate, stretch, and challenge learners;
Ensure the focus of learning is clearly understood by all learners;
Utilise stimulating and effective strategies resources and technologies;
Engage learners actively in structured and well-paced learning activities which explicitly develop and enhance learners':

i) Dispositions to learn, including:

- intrinsic motivation and dispositions to learn;
- resilience to sustain effort in the face of challenge;
- autonomy, self confidence and self-esteem;
- ability to handle setbacks as part of worthwhile learning.

(ii) Capacity to develop and deploy competences, including: -

- conceptual knowledge and understanding;
 - cross-curricular (literacy, numeracy, and ICT) skills;
 - thinking skills (including information management, problem-solving, decision making and creativity);
 - personal capabilities, including managing self, working with others, self and peer evaluation and reflection.
-

2.3 Provide for quality assessment

Co-construct assessment tasks and success criteria to deepen, monitor, and assess learning;

Develop pupils' ability to self and peer assess in order to:

- understand expectations and standards;
 - provide constructive feedback;
 - identify strengths, areas for improvement and next steps in learning and act on feedback to maximize consolidate and extend learning.
-

3

Continuous Improvement

3.1 Monitor and evaluate learners' progress

Make accurate and productive use of a range of diagnostic, formative and summative assessment tools and data;

Gather information about learners and their progress;

Monitor and track individual performance and progress over time;

Report to and advise learners, parents/carers and colleagues on:

- Individual learner potential, achievement, underachievement, outcomes and value added;
 - areas for future focus and development;
 - future pathways and support.
-

3.2 Review and reflect on own practice

Review the impact of teaching on learner well-being and achievement;

Identify own key strengths, challenges, and areas for refinement;

Adjust planning and approaches in light of reflection and feedback;

Identify areas of focus for PRSD and ongoing professional learning.

3.3 Engage in continuous professional learning and improvement

Individually and in collaboration with colleagues:

- Keep up to date with relevant knowledge teaching strategies and research insights to inform professional practice;
 - Critically examine personal and professional attitudes and beliefs and challenge assumptions and professional practice;
 - Develop, test, evaluate, adapt and apply new understandings and effective approaches through, for example:
 - professional dialogue within trusted colleague networks;
 - classroom observation;
 - action research;
 - research lesson study;
 - mentoring and coaching;
 - accredited study.
 - Contribute to teams, projects and collaborative partnerships to make a positive contribution to the school in its local and global community and to enhance personal leadership capacity and professional impact and influence.
-

current dialogue on the teaching profession. For instance, the recent multi-agency 10th Policy Dialogue Forum of the International Task Force on Teachers underscored that “today's world needs highly skilled professional teachers who can shape the future citizens of the world we want to live in... who can work with children to help them be creative and critical thinkers; children who can collaborate and communicate with people of diverse cultures; children who can be innovators while at the same time advocating for environmental and social justice” (UNESCO, 2017). The forum called not only for the establishment of minimum teacher qualifications but also for a common understanding of competences that indicate what teachers should know and be able to do, including desirable levels of performance at different stages of a teacher's career.

Overall, competence-based curricula place more demands on the teaching profession. They demand the transformation of the role of teachers, and among others, this demands appropriate and well aligned CPDs. Even for initial entrants into the profession, CPDs are essential for keeping up with demands that 21st century changes place on teachers and for effective implementation of competency-based curricula where sustained relevance is paramount.

An important part of aligning CPD curricula with the demands of learner curricula includes the articulation of teacher competences which should be developed through initial education and sustained through CPDs. It is inconceivable that teachers can effectively facilitate learner development of competences outlined in Document 2 when their own competences remain obscure and/or unstated. Gallagher has articulated a framework of teacher competences that begins to address this void (see Table 5).

With all said, just as is the case with learners, the most significant competence that 21st century teachers must have is lifelong learning. This is vital even within Industry 4.0, where teachers are expected to prepare learners for futures whose directions and details remain unknown.

Conclusion

At the end, a successful adoption of competence-based curricula requires an integrated and systemic approach to curriculum, teaching, learning, and assessment. Reforms in any one of these aspects cannot bear desired levels of impact without commensurate reforms in other aspects. Fragmented and linear reforms are also insufficient. Reforms should be undertaken simultaneous, allowing for interactive processes that ensure coherence and mutual reinforcement. Learners and teachers are key agents of success in the reforms, alongside with other educators, and a broader base of stakeholders including other sectors, communities, and families.

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