

BLENDED LEARNING, AND OPEN AND DISTANCE LEARNING: IMPLICATIONS FOR BEST PRACTICE IN HIGHER EDUCATION

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ABSTRACT

The provision of higher education in South Africa and in many parts of the world is challenged by the enrolment of large numbers of students, many of whom cannot attend classes or afford conventional face-to-face tuition. This has forced institutions of higher education to resort to various forms of non-traditional teaching and learning, among others, open distance learning and blended learning. In South Africa, as elsewhere, official government policy provides for approaches that make extensive use of teaching technologies. This article highlights two problems in connection with blended learning as such and attempts to address both. The first is the fact that, in view of the dynamic and fluid nature of the field, 'blended learning' cannot be defined conclusively, and the other is that 'best practice' has not been examined in connection with blended learning. After offering a working definition of blended learning, the authors unpack what they think has to be discovered in an effort to describe best practice in blended learning. The discussion forms the background for the findings regarding best practice in open distance learning and blended learning proffered in the ten research articles in this journal. In the process, authors outline certain implications of distance learning and blended learning for the practice of higher education.

Keywords: open distance learning, blended learning, teaching and learning, best practice

1. INTRODUCTION

Conditions in higher education in South Africa and elsewhere in the world where large numbers of students have to be accommodated have necessitated the large-scale introduction of innovative teaching and learning strategies. The South African Department of Higher Education and Training (DHET) recently published two papers that had an impact on the provision of distance education in South Africa: the *White Paper for Post School Education and Training* (DHET 2013) and the *Policy for the Provision of Distance Education in South African Universities in the Context of an Integrated Post-school system* (DHET July 2014). The former stated that by 2030, South African universities could expect a total enrolment of approximately 1.6 million students, but added that the government realised that it would not be possible for traditional campus-based universities to accommodate such numbers; therefore, blended learning should play a bigger role in the future to help realise this ideal. Almost 41 per cent of all the students in South Africa enrolled at public universities are already involved in distance education (Makhanya 2014).

Among the strategies to be applied for accommodating the high numbers of students expected to enrol in higher education courses are distance learning (DL), open learning (OL – an open registration system with open access and sometimes combined with DL to become open distance learning or ODL), electronic, web-based, internet, advanced

distributed learning, online learning, the use of intra- and extranets, hypertext and hypermedia documents in learning (e-learning) (Liaw, Huang and Chen 2007, 1067) and blended learning (BL). The innovation in teaching-learning delivery began with DL where students who could not attend classes at institutions of higher education had to be reached by other means (originally paper-based and by correspondence). DL has changed, mostly due to the availability of new technology (e.g. whiteboards, broadcasting of lectures, the availability of DVDs, the internet). Furthermore, the changes can be seen in terms of innovative pedagogy (the introduction of virtual learning and the creation of online communities). The introduction and use of new technologies gave rise to e-learning, which had a major impact on the learning environment. To a large extent it revolutionised learning and development and gave rise to blended learning. Thus, one of the most recent developments in higher education contexts is blended learning (BL).

The introduction of all these ‘alternative’ teaching and learning approaches has confronted institutions of higher education in South Africa and elsewhere with momentous challenges. Of critical importance are the skills needed on the part of the lecturing staff, the physical constraints, the technology involved, and expenditure and resources. These ‘alternative’ approaches to higher education, teaching and learning, have – unsurprisingly, given its prominence and topicality – also begun to feature in the higher education discourse. According to Prinsloo and Coetzee (2013, 1356), research in this area is ‘a crucial ingredient in contributing to ODL practitioners’ understanding of the changing nature and the role of teaching and learning, and in redefining faculty, their roles, the roles of administrative and support staff, students and the expectations of the broader society’. An important part of the research that is being done is devoted to the search for best practice in this area of expertise.

Although this article is intended to serve as an introduction to the collection of articles that follow, it also addresses two problems in connection with BL. It firstly attempts to give a working definition or circumscription of the term ‘blended learning’, given the dynamic nature of the field. The second is to explain what the term ‘best practice’ (in connection, in this case, with BL) might mean. By attending to these two problems, some perspective is provided for the articles that follow.

The article is structured in five parts. The first details some of the conceptualisation and context as regards the role of blended learning. This is followed by a section defining what constitutes best practice for the design of blended learning, whilst part three describes the reach and innovative potential that blended learning offers practitioners in open and distance education. Given that the contexts in which blended learning has found immediate application (and indeed resonance) involve open and distance learning programmes, part four provides the South African policy framing and its implications for higher education institutions in which this special issue of *Progressio: South African Journal for Open and Distance Learning Practice* (2015) may be contextualised further. Having framed from scholarly and also policy perspective the relationship between blended learning and ODL in the first four parts, part five of the article surveys the

submissions approved for inclusion in this special issue. These contributions all reflect aspects and variations of best practice, and their implications for blended learning in the context of ODL provision. Of course, the rationale of this issue is not simply to illustrate best practice, but also to reflect on how research is conducted in relation to the above-mentioned bi-focality in which blended learning and ODL must be seen. As Friesen (2009, 116) suggests, the research reflected in the last part of the article

... can be understood as identifying and describing a veritable alternative universe of embodied practices situated in historical and cultural circumstances ... [where] ... observations and interactions ... are demonstrated as possessing a complexity and an explanatory self-sufficiency

2. WORKING DEFINITION OF THE TERM 'BLENDED LEARNING' (BL)

Blended learning emerged initially as a concept in relation to e-learning (Bonk 2009; Thorne 2003, 5, 10, 18; Oliver and Trigwell 2005). Sun, Tsai, Finger, Chen and Yeh (2008) define e-learning as the use of telecommunication technology to deliver information to students. According to them, the great advantage of e-learning is the strengthening of the interaction between students and lecturers and the liberation of tuition from the limitations of time and space. They see e-learning as the paradigm of modern education of which BL is an important part. The advent of e-learning facilitated three possible forms of BL, the first being BL as a combination of face-to-face and online teaching, the second a combination of technologies, and the third a combination of methodologies (Sun, Tsai, Chen and Yeh 2008). Bath and Bourke (2010, 2) also describe three modes of BL: Mode 1 where technology is used simply to communicate and store information; Mode 2 where technology is used to enrich the quality of the student learning experience through interactive learning activities, and Mode 3 involves the use of technology to support learning that is largely self-directed.

According to Krause (2007b cited in Bath and Bourke 2010, 1), 'Blended learning is realised in teaching and learning environments where there is an effective integration of different modes of delivery, models of teaching and styles of learning as a result of adopting a strategic and systematic approach to the use of technology combined with the best features of face to face interaction.' Blended learning experiences should therefore be participative and not just interactive (Wild 2007) in order to reinforce the processes of cognition and collaboration. 'Thinking and working together create learning,' according to Allen (2010). Thorne (2003) concurs with this viewpoint by stating that the skill of being able to marry pedagogy to an appropriate blend of technology and learning is not simply the outcome of linking conventional approaches to the online environment. Webb (2012) found in her study that lecturers/tutors cannot be summarily replaced by software; students need continual support, which she referred to as 'emotional labour'. Programmes should contain the 'right' blend of synchronous, web-based and

a-synchronous learning that makes for effective learning. The ‘right’ blend is informed by factors such as time, screen attention and other observed behaviours based on studies of how people interact (or do not interact) with technology. According to Thorne (2003 14, 15) and Friesen (2009), the focus in BL is not on knowledge per se, but rather, on awareness regarding the strategy needed to communicate knowledge in a curriculum, keeping BL in mind. For such a strategy to be effective and credible, it needs to be assessed both in conventional and online terms. Blended learning builds upon existing expertise with respect to assessment in education.

Sharma (2010) correctly argues that the term ‘blended learning’ continues to develop, depending on the nature and context of the ‘marriage’ that Thorne refers to. Because of the ever-changing, dynamic nature of the field, it is difficult if not impossible to give a final and conclusive definition of BL. Based on the tentative definitions and circumscriptions of BL given above, we can now reflect on the issue of best practice in BL.

2.1. Part 1: Meaning of the term ‘best practice’ with respect to blended learning (BL)

It is possible for practitioners who employ BL as delivery mode to learn from a respectable manual (see, for instance, Bath and Bourke 2010) how to go about planning and executing a BL teaching-learning practice. Following a good manual, however, will not guarantee effectiveness and efficiency in BL, which is why practitioners need to resort to best practice. In any field of expertise, including BL, the odds are that, somewhere, others are doing the same thing that one is doing and, in fact, are doing it better. If one wishes to be the best, one needs to find those other, more effective and efficient practitioners, and bench-mark their conceptions of BL. The idea behind best practices is to identify (among other things, through research, such as that reported in the articles that follow) programmes and activities that have been used and tested repeatedly by others and have been shown, through testing and research, to deliver superior results. A best practice approach to process improvement is less about making major overhauls of one’s own practice and more about identifying ways to make incremental but meaningful changes that will consistently improve one’s own BL practice (Holland 2014, 45).

The term ‘best practice’ with regard to BL as used in this article refers to practices that have been proved (by various means and methods, as explained by, for instance, the authors of the other articles in this volume) to be effective and efficient in terms of pedagogical significance, the blend of teaching and learning offerings and experiences, the use of technology, delivery modes, curriculum design, appropriateness in terms of the learning styles of students, cost and so on. A critical characteristic of best practices is that they can be shared and replicated to deliver similar results. The underlying concept of a best practice approach assumes that successful approaches will be recorded (as has been done in the articles that follow in the rest of this issue), that knowledge will be

shared and that others will be able to learn from their colleagues' experiences (Holland 2014, 45).

The literature concerning blended learning refers consistently to the role of technology in relation to curriculum design (Friesen 2009; Bath and Bourke 2010) and learning styles (Bonk 2009). Yet, as Thorne (2003, 5) suggests, the central question in reflection about blended learning has to do with recognising 'where it fits in in the broader context or organisational learning and development'.

2.2. Part 2: Best practice: what it is in the context of ODL, including BL

It is clear from the scholarly literature in the field that BL is complex and many-faceted. The following is an indication of the complexity of BL, and of the process of discovering best practice in this field.

Best practice firstly has to be seen against the backdrop of *policy provision* (both by the education authorities and by the higher education institutions concerned). The South African Department of Higher Education and Training identified four roles for distance education (including BL) to play in South Africa (DHET 2014). They are, briefly (the roles are discussed in more detail in Part 4 below) the following:

- Distance education must provide greater access to students. Many potential students are working or do not have the financial means to enrol at a traditional campus, and hence need an alternative way of studying. Distance education can provide the flexibility that students such as these might need.
- The second role of distance education is to provide niche programmes to a small number of students who have the potential to make a big impact on life in South Africa.
- The third role of/for distance education is to offer modules at contact/face-to-face universities to students who require only one or two modules to meet the requirements for proceeding to a next level of study or to complete a qualification. The problem with this role is that universities do not always offer exactly the same programmes for distance and face-to-face tuition.
- The fourth role is the recognition of prior learning (RPL) and to guide students into and in programmes that they might be allowed to use. That will help students who did not have the opportunity to study before.

The DHET provided some steering mechanisms for institutions to enable distance education to develop to its fullest potential. In the first place, the DHET provided guidelines for, and engaged with institutions on the development of appropriate Programme and

Qualifications Mixes (PQMs). The DHET supports institutions wishing to offer distance programmes, but insists that such institutions must be able to motivate their capacity to offer the proposed programmes. The DHET will not allow institutions to offer distance education programmes if they do not possess the necessary infrastructure, facilities or human capital. The DHET has also committed itself to the funding of quality distance education, and lastly the DHET is liaising with quality councils to strengthen the quality of distance education programmes.

The policy on distance education is clear about the fact that the DHET is committed to the expansion of distance education programmes in South Africa.

Best practice has to be identified with respect to the *various professional fields* as far as BL is concerned. In South Africa, teacher education, for example, has recently developed into one of the most prominent fields. Best practice here reflects how teacher education has dealt with the apartheid legacy in terms of the quality of the teachers in the system and of future teachers (student teachers), curricula, curriculum change, innovation, leadership, and other important facets of the teaching profession. The best practices identified in the field of teacher education have to reflect the graduate attributes that need to be measured, not as curriculum outcomes, but rather as attributes that shape a teacher's vision for teaching and learning, even in classrooms where technology is relatively scarce, and / or awareness of wider cultural and social contexts is minimal. According to Bath and Bourke (2010, 25), BL derives from the theory of social constructivism in which 'the individual's learning taking place because of their interactions in a group ... [and involves] ... formal and supplementary activity and resources, to support students in their learning and achievement of the course objectives' (The same or similar criteria apply for best practice with respect to other fields of expertise, such as law, nursing or economics).

Best practice also has to be identified with respect to *enabling environments* (Prinsloo and Coetzee 2013, 1358). Blended learning is concerned with 'how to create' an environment in which the curiosity and interest of the student will be stimulated sufficiently to be a 'pull' rather than a 'push' factor in the learning process. These environments can include the use of sophisticated technology (broadcasts, whiteboards, computer technology and the internet – the online environment). A virtual teaching-learning environment can be blended with a more 'traditional' (synchronous, face-to-face) teaching-learning environment, if needed. A quality learning environment uses an appropriate combination of different media, tutorial support, peer group discussion and practical sessions (DHET 2014). It is also important to take into consideration the social context interactive learning conditions, co-operative learning, self-directed learning, and group interaction (Liaw Huang and Chen 2007, 1068).

Best practice also has to be identified with respect to the *pedagogy* required for effective BL. Best BL practice should not only be described in terms of mode of delivery, but also in terms of pedagogy (the theory and practice underpinning self-study, virtual learning and online communities). Best practice pedagogy should reflect a coherent

blend of activity types and modes as well as the blend with technology. The pedagogy should reflect how knowledge is introduced and packaged for the students (Thorne 2003; Friesen 2009).

Best practice has, furthermore, to be identified with respect to higher education practitioners' ability to develop and design appropriate e-learning and BL *curricula*, programmes and delivery, and also with respect to the students engaged in BL in higher education context. Best practice in this context must reflect that the focus is not on knowledge as such, but rather, on how knowledge is communicated in a curriculum designed with BL in mind. Curriculum design should complement and support the BL project and should be appropriate for the learning styles of the students in question. According to Thorne (2003, 35–38), best practice for the design of blended learning also embodies the identification of the following key aspects of BL:

- the core learning need
- the level of demand/timescale
- the different learning styles
- the potential of using different forms of learning, i.e. match the learning need with the relevant delivery methods and identify the best fit
- the providers to work with
- the education process
- how to provide follow-up coaching support
- the monitoring process.

The identification of best practice with respect to BL also implies the identification of *learning styles* (Hiltz and O'Shea 2005, 148) for the purpose of understanding, in particular, the profiles of distance learning students (typically mature, driven adult and flexible students with demands on working hours, and perhaps ignorance or fear of technology), and/or students who engage frequently in on-line learning environments (e.g. Friesen 2009, 35). Technology has to be planned in relation to the students' learning styles (Bonk 2009), and should show an awareness of the difference in learning styles associated with BL as opposed to contact learning, for instance. Curriculum design should also be suited to the learning styles of the students engaged in BL.

Best practice with regard to e-learning and BL also entails an examination of the possibilities of technology for distance learning and in relation to *globalisation*. The latter has enabled the acceleration of the former, and this has had an impact on the global reach of the 'mega-university'.

Best practice identification has to be done with respect to the *implementation of technology*. Technology can be used to blend traditional learning environments with pure online learning environments in which the emphasis is on virtual learning (Oliver and Trigwell 2005; Thorne 2003, 17). Scholars who champion e-learning and blended learning (see the overview in Friesen 2009) argue that learning and assessment can be made more efficient through technology. Technology facilitates effective differentiation by offering a variety of learning activities suited to different individuals. One of the challenges in higher education as noted by Thorne (2003, 28) and Hiltz and Goldman (2005) is to persuade stakeholders internal to the institution to accept the need for blended learning as an approach that offers a greater variety of learning experiences to students and academics. Based on his survey of institutions that have successfully embraced blended learning through a focus on e-learning, Bonk (2009) comes to the conclusion that the main gain for education in terms of e-learning and blended learning is the fact that it can extend education to communities and individuals who would not otherwise be able to access contact or face-to-face learning typical of conventional undergraduate education and many forms of life-long learning.

Another best practice pertains to the *quality* of BL. The DHET's policy document, therefore, also refers to quality. Although the DHET wants the higher education system to expand, it does not want this to happen to the detriment of quality. The expansion of distance education, therefore, must be complemented and supported by improved curriculum planning and design. Quality programmes will only be possible if institutions invested in their infrastructure and facilities (DHET 2013). Krause (2007a, 4) identifies the relationship between best practice and the quality of teaching and learning as providing an excellent student learning experience that supports students' success, assuring that the quality of teaching programmes is kept at a high level, and providing students with teaching and learning programmes that reflect a distinctive 'signature' experience.

The various contributions to this volume should be seen against the background of the above definition and discussion of best practices associated with BL and the importance of BL in the modern world of teaching and learning at institutions of higher education.

2.3. Part 3: Range and reach regarding innovation in education

Scholars who champion e-learning and blended learning (see the overview provided in Friesen 2009) see these forms of learning as the means through which student styles can be differentiated by the lecturer (a long-held aim and intention of all good pedagogic practice). Their argument is that learning and assessment can be made more efficient through technology. Technology facilitates effective differentiation by offering a variety of learning activities suited to different individuals and their learning styles.

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2.4. Part 4: Policy frameworks in South Africa and their implications for blended learning and ODL

As mentioned, the reality of having to accommodate larger numbers of students at institutions of higher education has necessitated the publication of the *White Paper for Post School Education and Training* (2013) by the Department of Higher Education and Training (DHET). Its publication was also necessitated by the fact that quite a few institutions were already providing distance education in one form or another.

In the past there was a clear distinction between traditional face-to-face education and distance education. The DHET realises that this is not possible anymore; there is now a convergence of these two modes of delivery. The reason for this is the increasing use of ICTs in higher education. Earlier policy documents proposed a simple continuum of education provision with two virtual poles: one representing purely face-to-face provision and the other purely distance provision. One's position on the continuum depended on how much face-to-face tuition one used as opposed to distance education provision. Due to the increasing use of ICTs the continuum now has to be redefined: it should be portrayed as a two-dimensional grid that represents the increasing variations possible in terms of programmes and delivery methods. The grid also has both a horizontal and a vertical dimension. The vertical dimension begins with fully offline offerings and ends with fully online offerings, with all kinds of variations in between (due to the impact and availability of ICTs). The horizontal dimension begins with a fully campus-based face-to-face mode of delivery opposed to a total distance mode, with all kinds of variations in terms of contact in between, classified as blended/hybrid forms of provision (SAIDE 2012; DHET 2014, 9; as originally contained in SAIDE 2012, 2 and Krull 2014, 17).

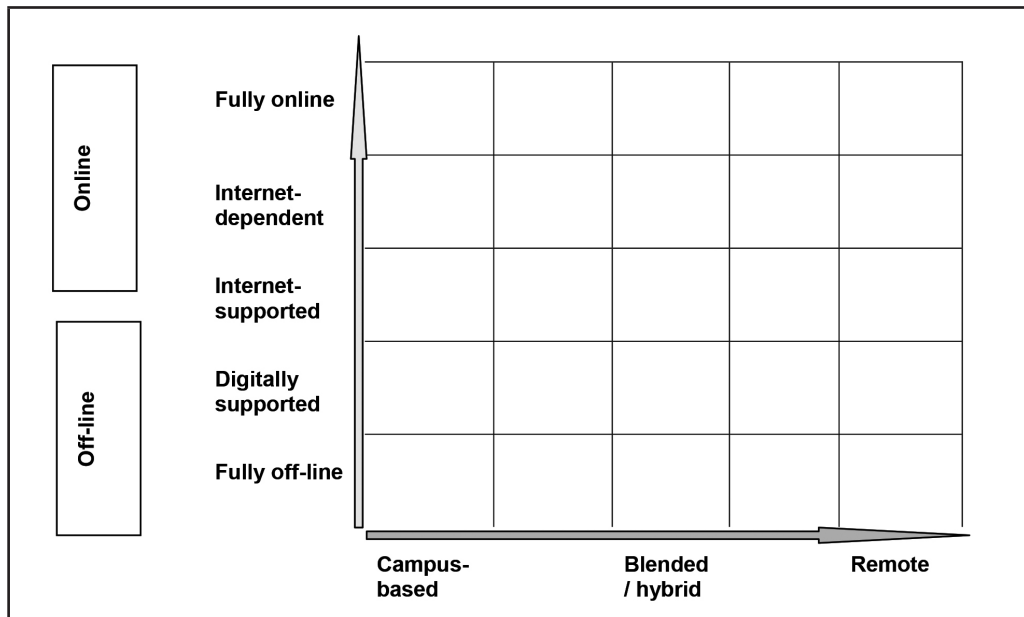


Figure 1: Possible variations in terms of programmes and delivery modes

The Council of Higher Education's (CHE) document *Distance Higher Education Programmes in a Digital Era: Good Practice Guide* seems to prefer the use of open learning to distance or open and distance learning; it nevertheless also mentions a range of distance education methods that in its opinion can give side-based effect to open learning principles (CHE 2014). The grid represents the various interrelationships between sites-based modalities and curriculum design features. On the Y-axis is described the three broad site-based modalities (campus, hybrid/blended and remote) and the extent to which online and digital requirements feature in the curriculum. Thus whilst the student might be located in terms of the site-types described (campus based, or a combination of campus and remote learning, or the student being remote from the learning centre) the degree to which the curriculum evidences a blend of technologies, as well as a variety of learning activities (requiring technology and net-based learning to more or lesser extents) is represented by X-axis (ranging from fully offline to fully online).

When looking at the situation at micro level, of the 23 public universities in South Africa only nine offer distance education programmes. The University of South Africa (Unisa) is the only public university that can be classified as an exclusively distance education institution and single dedicated distance education university in South Africa (Department of Education 2001). The North-West University is the second largest provider of distance education programmes in South Africa. The other seven institutions have relatively small numbers of distance education students (Makhanya 2014). This situation may change dramatically if institutions decide to offer distance education programmes as allowed by the policy.

As mentioned, distance education must firstly provide students with greater access. Many potential students are working or do not have the financial means to enrol at a traditional campus, and hence need another way of studying. Distance education can provide the flexibility that students such as these might need, a point made also by Heard

(2014) who argues that curriculum designers need to think and act more creatively to design curricula in terms of the required values, habits and assumptions of society. To achieve this, universities need to move into distance education and BL deliberately. The question now is how government will attempt to convince all universities of the urgency to do so. Another important question is whether it would be necessary for all 23 universities in South Africa to offer distance education/BL programmes.

A second role of distance education is to provide niche programmes to a small number of students who have the potential to make a big impact on life in South Africa. This is not easy for institutions of higher education to do; it will be interesting to see whether any institution opts for the provision of such specialised training. A blended mode of provision might be appropriate for this type of programme.

A third role of distance education is to offer modules at contact/face-to-face teaching universities to students who require only one or two modules to meet the requirements for proceeding to a next level of study or to complete a qualification. The problem with this role is that universities do not always offer exactly the same programmes for distance and face-to-face tuition. It might mean substantial investments by institutions of higher education into programme delivery if they decide to follow this route.

The fourth and last role of distance education is the recognition of prior learning (RPL) and to guide students regarding programmes that they might be allowed to take. That will help students who did not have the opportunity to study before. Fulfilling this role will probably not be easy for institutions either, because of the wide range of potential students wishing to apply for RPL.

The above outline of the scholarship regarding blended learning internationally and in the context of open and distance learning in South Africa forms the backdrop for introducing, in the following section, the various contributions made to this *Progressio: South African Journal for Open and Distance Learning Practice* Special Issue (2015) in relation to open and distance learning and blended learning, as described and problematised by the contributors. In Part 5, best practice is shown to refer to the pedagogic implications that blended learning may have (drawing from a variety of delivery modes, the uses of technology and curriculum design suited to the learning styles of students engaged in open distance learning) for open distance and blended learning in particular.

2.5. Part 5: Blended learning, ODL and best practice: sectoral perspectives

Botha-Ravyse's article on multi-media for flipped classrooms refers to a mode of teaching that moves away from traditional lecturer centred teaching to a multi-modal teaching approach in a flipped classroom. This change has become necessary as a result of modern-day students being more interested in (inter-)active visual methods of teaching. Botha-Ravyse's work evidences what Kelly (2014, 9) promotes as best

practice in curriculum design: begin with a solid foundation in online learning pedagogy and technical knowledge and integrate the two modes. An important condition for the success of this approach is the availability of such multi-media and of multi-media content (often a problem in less developed areas and contexts). By making use of Picciano's (2009) model for multi-media learning, Botha-Ravuse developed a multi-media approach for application in a flipped classroom. Her research shows that success with such an approach is not automatically guaranteed; the students have to be exposed to it for a rather lengthy period before they understand the rationale behind it and begin benefitting from it. The success of a multi-media approach also depends on other factors and conditions that enable the conditions for best practice to emerge.

In their article on establishing the pedagogical value of asynchronous discussion (forums) in both open and distance learning, and face-to-face teaching and learning situations, Pillay and Alexander found that such discussions/discussion forums, despite being held in two different institutions of higher education, indeed offered valuable pedagogical potential for both groups of students. Among other things, it encouraged social and public professionalism. They also discovered that students and educators collaboratively learning and teaching on issues related to the real world in discussion forums could potentially make learning more effective, while strengthening and nurturing 'a good social perspective'. They arrive at this conclusion after joint reflection on their experiences at their respective universities. The use of asynchronous discussion forums is mooted as a best practice in this article.

Singh's article reports on the use of blended learning in higher education. She identifies several problems to be addressed in the context of higher education when considering the use of blended learning. One of the most important is the difference in teaching and learning across contexts that range from face-to-face contact teaching to 'correspondence' teaching and learning. Different contexts call for different approaches when considering the incorporation of blended teaching and learning interactions. Her article reports on how blended learning can be utilised in a post-graduate course, in a specific higher education context. Her experience in this particular case study shows that blended learning should be considered seriously as a mode of teaching and learning, particularly when the necessary technology is available. The matter of available technology merits serious attention, particularly for rural areas. She also found that blended learning can be utilised effectively for teaching large classes. This article suggests that accounting for context is part of how best practice comes to be experienced by students, as noted by Thorne (2003).

Moodley, Singh and Cloete explore the incorporation and use of learning management system and social media for blended learning at a rural university. They make a provision of the possible barriers in the context of best practice in blended learning. They highlight several issues which have already been covered by research in the areas of barriers to learning in a blended mode like poor internet access, lack of computers and so on. Thus, they want to argue that in many instances one critical

factor is the way the students perceive blended learning. They suggest that the student perception towards use of social media in blended learning is a major challenge. They conclude that social media can be manipulated in its usage to suit needs of students and lecturers in a blended context. If this is done well, it can leverage some of the major challenges in blended learning. Therefore, they conclude that students at a typical rural university prefer to use social media to engage in the learning process rather than accessing teaching and learning through the learning management system.

In her article, Van Niekerk draws attention to the role and importance of interactive whiteboard technology in ODL, particularly as part of a blended learning environment. She reports on an investigation into the perceived problem that students, despite being adults, when exposed to this technology for the very first time, do not seem to be quite ready for it as medium of instruction. A survey among a sample of such students confirmed this surmise. The investigation also revealed a number of key aspects to be attended to before an interactive whiteboard session takes place to ensure that teaching will be effective. Interestingly, she concludes that students' first encounter with this mode of instruction should be planned in such a way that students experience it as meaningful and effective. Their first experience with interactive whiteboard technology tends to determine whether they will find the remaining sessions worthwhile. Lecturers making use of this technology should also be aware of the inherent limitations and shortcomings of this mode of instruction. It is clear from this article that ensuring student readiness would be a best practice to follow before implementing a particular technology.

Combrinck, Spamer and Van Zyl explore the extent to which dialogue between lecturer and students occurs in relation to the use of interactive whiteboard and other technologies in the context of open distance learning programmes. They suggest that this dialogue is facilitated by the use of technologies that require interaction between student and lecturer. Surveying students' perceptions of the usefulness and quality of the dialogue, they argue that one area that needs attention in terms of dialogue concerns the knowledge and skill of using technology. Another area needing development is students' levels of proficiency (familiarity with and competence in) using the internet. Using Moore's Transactional Theory (1993), Combrinck, Spamer and Van Zyl argue that the design of the curriculum in relation to the uses of technology is important if self-direction and learner autonomy is to be enhanced. Their article also affirms the point made by Sun et al. (2008) who note that technology quality (students' perceptions of microphones, earphones, electronic boards, etc.) and internet quality (the perception students have of network quality) are important factors to enhance learning and, in this case, blended learning.

In her article, Laubscher, Seugnet Blignaut, Hercules and Els deals with the important problem of low achievement in Mathematics in many school and training systems. Her article contains the results of a comparative study between student teachers in two African countries and a sample of students from a Scandinavian country in which she measured the attitudes of student teachers towards the application of ICTs

in Mathematics. The results show that the two South African student samples seemed to have been more positive about the use of ICTs in Mathematics than their counterparts from the north, despite the fact that the latter had more exposure to ICTs. The first two groups also seemed to employ ICTs in their classrooms more than the Scandinavian group. Laubscher et. al concludes that planning should be done with regard to the types of technology used for each student group to ensure that the students are comfortable with it, that its implementation is effective so that, according to Bath and Bourke (2010, 1) 'the act of "blending" achieves better student experiences and outcomes, and more efficient teaching and course management practices.' Planning the nature and purpose of the blend (as suggested above) seems to be an important best practice when contemplating exposure of students to various forms of ICT.

Bansilal explores teachers' perceptions of how professional development can enhance their practice if mixed mode delivery is applied through a distance education model. One of the arguments is that we should use mixed mode to deliver professional development programmes, more so for the practising educators. This is due to various constraints like time, curriculum change and distance from the university. Bansilal highlights the complex nature of dealing with educators' professional development, as well as the use of pedagogic content knowledge. The article provides a framework for understanding professional development for Physical Science teachers to improve the linking between content knowledge and mode, to narrow the gap between the practice and theory. Thus, the relationship between a teacher and the way he or she understands content and teaches it, influences attitudes and perceptions, which can lead to an improvement in student achievement.

Kruger, De Witt and Van Rensburg explore the issue of whether portfolios for teacher education in the Foundation Phase can be used to support the development of a teacher's applied competence (or what Bansilal refers to as pedagogic content knowledge). The article explores the critical need for developing and sustaining competence in distance education. The exploration of the links between literature and teachers' experiences are shown to add value to the distance learning programme affirming Krause's (2007a, 4) observation that 'High priority attached to student learning and pedagogical needs' can transform education contexts by developing metacognitive elements and lifelong learning in teachers.

Gachago, Strydom, Hanekom, Simons and Walters explore lecturers' perspectives at a university on the use of WhatsApp to support teaching and learning in higher education. They investigate the use of WhatsApp as a tool to be introduced into the teaching and learning in terms of creating engagement, ownership and impact in relation to student teachers and their teaching and learning practices. The article describes the four conceptual mechanisms as tools to describe learning taking place: identification, co-ordination, reflection and transformation. Thus the common learning practice for each is described using these conceptual tools. Three case studies are presented. The findings in the study indicate that accessibility and immediacy of WhatsApp as a mobile

technology helps in facilitating co-ordination of learning in context of the geographical and physical distance.

3. CONCLUSION

This *Progressio: South African Journal for Open and Distance Learning Practice* Special Issue (2015) is devoted to describing and understanding an emerging scholarship in which the pedagogic uses of technology, particularly best practice, in blended learning are foregrounded in the context of open distance learning. Rapid advances in technology development have not been paralleled by equally rapid scholarship in which the connections between learning styles, technological tools and modes of delivery have been explored. In part, this arises from the fact that the scholarship is, by its nature, reflexive, iterative and accumulative. Developing an understanding of pedagogic best practices in relation to open distance learning, and with reference to technology, might suggest that all three areas are equally well articulated and developed, and such that the connections between the three are self-evident.

The contributions to this *Progressio: South African Journal for Open and Distance Learning Practice* Special Issue (2015) suggest that such synergies need to be explored further, and moreover, that to understand what constitutes best practice in relation to blended learning requires a radical reconsideration of the role of the student in open distance learning for two reasons. First, conventional approaches to teaching and learning assume a homogeneity of learning styles in which technology choice and technology familiarity are not variable. The opposite is true, especially in relation to blended learning: any curriculum designed with an awareness of blended learning must begin, at the very least, with some assumptions about students' understandings of, and familiarity with, technology. Bath and Bourke (2010, 1) suggest that BL 'can involve a mix of delivery modes, teaching approaches and learning styles ... ways that support and enhance the teachers' role, the students' individual cognitive experiences, as well as the social environment; three key elements in successful learning and teaching'. Secondly, having ascertained what technology is commonly available to students, and what familiarity each might have with technology, the teacher (or academic) engaged with curriculum design is required to consider the implications technology will have for students' learning styles, especially those involved in distance (open distance) learning, including blended learning.

These two reasons provide the basis for an understanding of curriculum-making in which the design element (the blend of technology with learning) is foregrounded to enable better access to, and engagement with, the content and delivery mode. It is from this basis that shared practices come to be developed by teachers. That sharing enables reflection, which ultimately takes the form of distillation into a scholarship concerning best practices in relation to blended learning within open and/or distance learning contexts.

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