Blended learning as an approach to foster self-directed learning in teacher professional development programmes[1]

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ABSTRACT

Trends in research on teacher development in recent years have shown a shift away from merely studying what teachers learn to how they learn, how they improve their learning, and how they transform their skills and knowledge into practice so as to offer their own learners an improved educational experience. Although blended learning has been proposed as a means to enhance student learning and engagement, little research has been done on blended learning teacher development programmes, especially in the context of teachers of German Second Additional Language (SAL) in South Africa. This article aims to shift the focus from general setting in higher education institutions to teacher professional development programmes for teachers of German SAL by proposing blended learning as a mediator to foster self-directed learning in teacher professional development programmes. After examining existing definitions and models on blended learning, a synthesis of models, which could be adjusted to the South African teaching context, is proposed. The new model offers certain opportunities to foster the characteristics of self-directed learners, which are highlighted in this article. Suggestions are made on how this model could be utilised in and adapted to the context of teacher professional development for teachers of German SAL in order to foster the characteristics of self-directed learning rather than merely imparting subject knowledge to teachers.

Keywords: blended learning, self-directed learning, teacher development, blending with a purpose

INTRODUCTION

New technological developments offer immediate access to more people and information, while smartphones, laptops and tablets allow their users to purposefully 'blend' digital and physical experiences, as explicated by Stein and Graham (2014). Similarly, blended learning is gaining popularity in the education sector (Graham, Woodfield & Harrison, 2013; Porter et al., 2014). However, despite the increasing prominence of blended learning as an approach in education, it is essential to note that this should not be regarded as the only possible and effective solution in all contexts. This aspect is especially true in contexts where resources are limited.

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Although a number of international publications on teacher training and professional development (PD) exists (Ganz & Reinmann, 2007; Matzat, 2013; Osburg & Todorova, 2009) and extensive research has been conducted on blended learning in the South African higher education sector (Bosch, Mentz & Reitsma, 2019; Petersen & Mentz, 2016), little research has been done on the possibilities they offer for South African teacher PD programmes (Boitshwarelo, 2009). The lack of research on blended learning in teacher PD is especially apparent in the field of German SAL. In 2013, Mbohwa-Pagels and Rode (2014) conducted and published on a nationwide survey among teachers of German in South Africa, which mentions certain challenges teachers of German SAL in South Africa face (Mbohwa-Pagels & Rode, 2014). Annas (2016a) and Laurien (2006) examined the role of German at South African universities, while Von Maltzan (2009) examined South African language politics and the role German plays as a foreign language in South Africa. However, the above-mentioned studies remained descriptive and had a strong focus on the higher education sector. More recently, Wittmann and Olivier (2019) published a theoretical study on further PD opportunities to foster the self-directed learning (SDL) of practising German SAL teachers in South Africa. This article utilises the proposition made by Wittmann and Olivier (2019), but also proposes exploring the possibilities blended learning offers teacher PD while focusing on SDL for practising teachers of German SAL. The main research question that drives this research is: How can blended learning be utilised to foster SDL in teachers of German SAL for professional development?

In order to answer this research question, this conceptual article involved an in-depth literature review regarding the relevant aspects of blended learning and SDL within the context of teacher PD.

The then Department of Education (DoE) in South Africa, currently named Department of Basic Education (DBE), outlined its expectations of teachers regarding e-learning in its Draft White Paper on e-Education Transforming Learning and Teaching through information and communication technologies (ICT) (DoE, 2004) and in its Guidelines for Teacher Training and Professional Development in ICT (2007). While one of the main principles of the White Paper on e-Education Transforming Learning and Teaching through ICT is the achievement of national education goals by 'providing modern technologies to schools in order to enhance the quality of learning and teaching' (DoE, 2004: 6), the Guidelines for Teacher Training and Professional Development in ICT and Training (DoE, 2007: 3) calls for teacher development programmes that provide teachers with 'the necessary knowledge, skills and understanding to successfully integrate ICT into everyday educational practices in a meaningful way'. Teachers, in turn, are required to enhance the problem-solving and critical-thinking skills of their learners by advancing their learners' ability to

- apply ICT skills to access, analyse, evaluate, integrate, present and communicate information
- create knowledge and new information by adapting, applying, designing, inventing and authoring
- function effectively in a knowledge society by using appropriate ICT and mastering communication and collaboration skills. (DoE, 2007: 3)

Policies clearly outline the requirements for teacher PD programmes to develop ICT skills in teachers and for teachers so that they can transfer such skills to their students; however, an additional need for a form of education that provides the skills and predispositions for continual learning was identified (Harber & Mncube, 2011). Universities and teacher PD providers have, therefore, started experimenting with courses that utilise a combination of online and face-to-face instruction, better known as blended learning. These courses are an attempt to not only satisfy learners' learning needs regarding what the current syllabus requires learners to know (Dziuban, Moskal & Hartman, 2005), but also to equip teachers to utilise content knowledge, which is the actual content area of the subjects that are being taught (Doering et al., 2009), as well as pedagogical knowledge, which is the knowledge of how to teach content (Doering et al., 2009), to effectively reach their learners.

As knowledge in today's world changes and accumulates rapidly (Guglielmino, 2013), it is important to cultivate self-directedness in teachers, which they can, in turn, foster in their students to enable them to be lifelong learners. When fostering the characteristics of SDL in teachers, it is still important to not only focus on the external learning management process but also consider internal monitoring and motivational issues. As such, we subscribe to Garrison's (1997: 18) definition of SDL as being

> an approach where learners are motivated to assume personal responsibility and collaborative control of the cognitive (self-monitoring) and contextual (self-management) processes in constructing and confirming meaningful and worthwhile learning outcomes.

Garrison (1992) rightly wonders how the learner (in this case, the teacher as participant of the PD activity) can assume responsibility for their own learning while simultaneously accepting external support and direction (i.e., control). Garrison (1992) concludes that, if SDL were assumed to be freedom from influence, it would be a meaningless concept. Instead, SDL should be centred around continuous dialogue between the learner (in this case, the teacher) and the teacher (in this case, the facilitator):

> The balance of control will properly shift depending upon the context and the proficiency of the learner. However, through sharing control there is an increased probability of students reaching desired and worthwhile learning goals which, in turn, would result in improved intrinsic motivation, ability to learn, and self-directedness. (Garrison, 1992: 144)

To propose a model for a teacher PD programme that does not only assist teachers in fostering the above-mentioned characteristics of self-directed learners in their pupils but also equips teachers to adhere to the e-learning requirements outlined in government policy (DoE, 2004), both the existing theories on blended learning and SDL must be carefully considered. In this article, we propose a suitable model for such a teacher development programme by means of an in-depth literature analysis. We strive not only to provide a theoretical overview of definitions and theories around blended learning but also to consider various models of blended learning in order to propose the synthesis of existing selected models into one model – adapted and suitable to foster the characteristics of SDL in teachers. Furthermore, we highlight the need for a stronger focus on blended learning in South African teacher development and the opportunities blended learning can offer while fostering SDL.

UNDERSTANDING BLENDED LEARNING

Little research has been conducted on blended learning in teacher PD (Boitshwarelo, 2009). Nonetheless, in the last decades, universities and other educational institutions in general have regarded blended learning as promising (Garrison & Vaughan, 2013; George-Walker & Keeffe, 2010; Osguthorpe & Graham, 2003) and are increasingly moving towards instructional models of blended learning (Dziuban et al., 2005). This shift can largely be ascribed to the fact that universities and teacher-training institutions have witnessed rapid technological and socioeconomic changes, leading them to rethink their educational practices (Garrison & Kanuka, 2004). Blended learning does not only offer increased flexibility to students but can also potentially offer students a wider variety of quality learning experiences as compared to pure face-to-face instruction (George-Walker & Keeffe, 2010) Blended learning also engages students in active collaborative learning (Garrison & Vaughan, 2013). Furthermore, blended learning offers significant advantages over pure online learning, as blended learning still allows for face-to-face engagement with the instructor and, therefore, does not lead to as much estrangement as pure online teaching does (Hew & Cheung, 2014). Similarly, Garrison and Kanuka (2004) posit that blended learning is an effective and low-risk strategy for overcoming the challenges caused by transformational changes that technological developments bring to higher education institutions. Furthermore, they highlight how blended learning offers students the opportunity to form communities without having to be in the same place simultaneously.

However, while being widely lauded for the possibilities it offers, there is little consensus on a precise definition of blended learning (Driscoll, 2002; Graham, 2006; Launer, 2011; Picciano, 2009). According to Clark (2003: 4), '[l]ike many learning terms, 'blended learning' has the illusion of being a concrete concept. In practice it is a flexible term that means different things to different people'. Generally, it seems that definitions of, or rather approaches to, blended learning can be classified into three categories (Graham, Allen & Ure, 2003; Kim, 2013) (of which the third category is the most widely followed), namely (i) blending instructional modalities (Driscoll, 2002; Singh & Reed, 2001); (ii) blending instructional methods (Clark & Mayer, 2016); and (iii) blending face-to-face instruction with computer-mediated instruction (Garrison & Kanuka, 2004; Graham, 2006; Sahare & Thampi, 2010; Staker & Horn, 2012). The last approach applies to this article.

For the purposes of this article, however, it is imperative that blended learning be seen as more than a mere combination of face-to-face and digital instruction and that this approach not be deemed to be a definition in itself. Various, more concrete definitions of blended learning exist, of which the most important pedagogical principles will be highlighted. Vaughan (2007: 82) stresses that blended learning is about more than 'bolting' technology to a traditional course. Instead, he emphasises the concept of hybridisation, as part of which online and face-to-face classroom segments are merged in order to encourage active learning, reduce classroom time and create an environment that is highly conducive to student learning (Garrison & Vaughan, 2008). Being conducive to student learning would entail that the environment is highly transformative in order for students to develop critical thinking and complex learning skills (Garrison & Kanuka, 2004). Singh and Reed (2001: 2) place similar value on pedagogical principles in their definition:

> Blended learning focuses on optimizing achievement of learning objectives by applying the 'right' learning technologies to match the 'right' personal learning style to transfer the 'right' skills to the 'right' person at the 'right' time.

Poon (2013) adds to existing definitions that the aim of the delivery methods should always be to complement each other. She is of the opinion that blended learning should significantly 'influence students' perceptions of the learning environment and, subsequently, their study approach and learning outcomes' (Poon, 2013: 271). She, therefore, sees a strong correlation between blended learning, student learning experience and, ultimately, achievement (Poon, 2013). Staker and Horn (2012: 3), on the other hand, define blended learning as

> a formal education program in which a student learns at least in part through online delivery of content and instruction with some elements of student control over time, place, path, and/or pace and at least in part at a supervised brick-and-mortar location away from home.

The above definitions are undoubtedly valid, they complement each other to a large extent, and they are very focused on the teacher (Oliver & Trigwell, 2005). Oliver and Trigwell recognise that many definitions of 'blended learning' rather refer to 'blended teaching', and they suggest shifts in focus from the teacher to the student, content to the experience, and technologies to pedagogy. As part of the student-centredness advocated by Oliver and Trigwell (2005), this article focuses on how fostering the characteristics of SDL could not only achieve a truly student-centred blended learning model, but, in line with South African government regulations requiring teachers to be lifelong learners (DHET, 2014), could assist teachers to develop characteristics of self-directed learners, which they, in turn, can foster in their own students. Before considering how blended learning could support student-centredness and lifelong SDL, certain classifications of blended learning are considered.

Classification of blended learning models

As much as definitions of blended learning differ, so do their presentation models and forms. There are various forms of blended learning, which Staker and Horn (2012) categorise into four models, namely the 'rotation model, the flex model, the self-blend model, and the enriched virtual model' (Staker & Horn, 2012: 2). Rotation models are characterised by the fact that participants rotate between learning modalities, either at the teacher's discretion or by following a fixed schedule (Staker & Horn, 2012). At least one of these modalities should be online learning, while other examples of modalities include individual paper-based assignments, conventional instruction, either in small groups or as a full class, and individual tutoring. Examples of rotation models include the 'station-rotation model, the lab-rotation model, the flipped-classroom model, and the individual-rotation model' (Staker & Horn, 2012: 2).

In comparison to rotation models, flex models offer the participant more individual freedom. The content and instruction are delivered online, while students follow an individually customised, flexible schedule between learning modalities. The instructor stays on site (Staker & Horn, 2012). Similarly, self-blend models offer students much personal choice and freedom in that students follow one or more online courses to supplement their traditional courses (Staker & Horn, 2012). This category of models was renamed by Christensen, Horn and Staker (2013) as the 'a la carte model'. This name change is ascribed to the fact that the term 'self-blend' might be misleading, as it could be interpreted to mean that students have the authority to blend the methods of instruction themselves. Consequently, the definition has been amended. The a la carte model, therefore, is

> a program in which students take one or more courses entirely online with an online teacher of record and at the same time continue to have brick-and-mortar educational experiences. Students may take the online courses either on the brick-and-mortar campus or off-site (Christensen et al., 2013: 3).

Finally, the enriched virtual model offers students the greatest autonomy by allowing them to divide their own time between face-to-face and online learning (Staker & Horn, 2012). Time division between online and face-to-face instruction is dependent on the course and varies greatly. When conceptualising a blended learning teacher PD programme focusing on fostering the characteristics of SDL, it would thus make sense to employ a model falling into the enriched virtual model category. However, the pedagogical approach used in conceptualising the model must be considered separately.

Pedagogical approaches towards and models of blended learning

In Staker and Horn's (2012) classification of blended learning models, the authors attach a certain value to students' self-directedness by expressly mentioning that each student has a certain amount of control over their learning (time, place, path, pace). Their definition, however, remains rather teacher centred. While accepting their classification, models and pedagogical approaches that do fall into Staker and Horn's (2012) classification are investigated and proposed in this article, and more depth is added to the mere classification. From an extensive literature review of published and unpublished research on blended learning, it was found that, in this context, both Staker and Horn's (2012) enriched virtual model and Picciano's (2009) multimodal model are regarded as highly relevant and appropriate within the context of this article. If the enriched virtual model is chosen, teachers would have the benefit of mostly working online and at their own pace, having supplementary face-to-face encounters with the instructor.

Several blended learning environment models exist, which all fall on a certain point of the continuum between pure online and pure face-to-face instruction. Mishra and Koehler (2006), for example, have developed the so-called technological pedagogical content knowledge (TPCK) model. This model assumes that TPCK is an emerging form of knowledge that goes beyond its components: content, pedagogy and technology. Therefore, to develop good and meaningful content, one should carefully interweave

these three key sources of knowledge (Mishra & Koehler, 2006). In comparison, Puentedura (2012) has developed the SAMR model, which consists of four levels of technology integration: 'substitution, augmentation, modification and redefinition'. This model provides a framework for educators to create learning experiences using mobile devices. The model has been suggested as a framework especially suitable for evaluating m-learning, which Romrell, Kidder, and Wood (2014: 2) understand as 'learning that is personalised, situated, and connected through the use of a mobile device'.

While scholars deem both of the above models to be useful, Picciano's (2009) multimodal model seems to offer an added dimension, which might be particularly useful in fostering the characteristics of SDL, as, in his model, he introduces pedagogical objectives and activities that should drive the approaches used in instruction. In comparison to the above-mentioned models, Picciano (2009) places less emphasis on the content of teaching and more on the emotional and social support participants should receive, be it through dialectics or questioning – through which students can refine their own knowledge –, or through collaborative learning. By blending objectives, activities and approaches within multiple modalities, instructors should be able to satisfy most students' learning needs.

By focusing on the multimodal model, while drawing from the TPCK and SAMR models, a blended learning model for teacher PD to foster the characteristics of SDL is subsequently suggested.

BLENDED LEARNING IN SUPPORT OF SELF-DIRECTED LEARNING

Even though the relevance of blended learning for SDL has been shown in literature (Olivier, 2019), merely establishing blended learning environments for teacher PD opportunities will not in itself promote self-directedness in participants, or, as put by Wang (2010: 189), 'the meaning of ICTs depends entirely on how they are used within any cultural setting'. The blended learning model should not only be designed around the preparation of the content but should essentially be based on insights relating to students' character and nature (Bosch & Pool, 2019). The success or failure of a PD activity in fostering characteristics of SDL would, therefore, be largely dependent on the approach and content used in the activity.

Following a learner-centred approach to blended learning, as suggested by Picciano (2009), corresponds with Bonk, Kim and Zeng's (2005) prediction that blended learning will be increasingly determined by participants themselves as blended learning options proliferate. Reinmann et al. (2009) view the great potential of blended learning to encourage SDL as one of its main benefits. Oliver and Trigwell's (2005) demands towards blended learning to focus on students' experiences, in comparison, tie in closely with andragogy as postulated by Knowles (1973). The underlying basic assumptions of andragogy are (i) as persons grow and mature, their self-concept changes; (ii) their experiences play a greater role in their learning; and (iii) their readiness to learn is increasingly determined by the developmental tasks necessary to fulfil their social role (Knowles, 1973: 45-46). Similarly, Ranieri, Giampaoplo and Bruni (2019) published a study in which they investigated educators' professional learning ecologies in a blended learning environment. They concluded that formal education seems to play a less significant role in shaping their participants' professional identity as compared to factors such as personal or work experiences and colleagues (Ranieri, Giampaolo & Bruni, 2019). In addition, according to Knowles (1973), an adult has a more problem-centred approach to learning than a child. Therefore, when thinking about a blended learning teacher PD model, it would make sense to choose a blended learning model that takes the experiences and the individual differences and learning needs of teachers into account. Following this approach, one would have participants who learn because they genuinely want to develop an understanding and mastery of the material (Ross et al., 2002). Although motivation has been found to be a central aspect of learner autonomy in distance learning, it remains imperative to enhance those components of motivation that actually contribute to autonomy – most notably the participants' belief in their own ability and goals (Lynch & Dembo, 2004).

In adaptive learning theory, which holds as an underlying principle that personalising instruction improves learning (Murray & Pérez, 2015), participants with a strong belief in their own abilities and goals would be classified as being motivated by task or achievement goal orientation (Ross et al., 2002). It seems significant that these participants have been found to display high levels of self-efficacy (Anderman & Young, 1994), attach a high intrinsic value to their learning, and are more likely to make attributions to effort (Ames, 1992). Masie (2006: 25), furthermore, describes how learners naturally add learning elements:

> They add what is missing, they mix it with what they need, and they subtract what is not valuable. They socialise it. They find context. And they transform training and instruction into learning.

Therefore, it would make sense to develop a blended learning teacher PD programme that focuses on learning and dialogue rather than on teaching content. In this case, there would be a continual shift of dependence and control. The participant would have to be neither dependent nor independent. The interdependence of the participant will dynamically shift in balance between the facilitator and fellow learners (Garrison, 1992). To achieve fostering achievement goal orientation as part of a blended learning PD programme, one should carefully consider the most appropriate model and strategy.

Bath and Bourke (2010) have focused on the blended learning design process and suggest that designing a blended learning environment should be done systematically by planning for integrated learning, then designing and developing the blended learning elements, followed by implementing the blended learning design, reviewing (evaluating) the effectiveness of the blended learning design, and improving the said design for the next course (Bath & Bourke, 2010). While designing the model, close cooperation with the participants is required to ensure that it is set in a community of inquiry (CoI) framework as postulated by Garrison and Vaughan (2008). A CoI is a collaborative-constructivist process model that integrates three elements, or so-called presences, which are required for successful online learning: (i) cognitive presence (CP), (ii) social presence (SP), and (iii) teaching presence (TP) (Castellanos-Reyes, 2020: 557; Garrison & Vaughan, 2008). The model proposed in this article will, however, go beyond the social, cognitive and teaching presence, traditionally associated with the CoI framework, and focus on participants' self-directed learning skills as demanded by Bosch and Pool (2019). Expanding on the CoI framework in this manner should not only assist participants to influence their own learning outcomes but will also encourage them to 'reflect on the effectiveness of their current learning strategy, as well as to interpret and reflect on their achievement' (Lubbe & Mentz, 2019: 352). Ensuring that emphasis is placed on the participants and their experiences will situate the activity well within adaptive learning, as described by Howard, Remenyi and Pap (2006: 1):

> the use of what is known about learners, a priori or through interactions, to alter how a learning experience unfolds, with the aim of improving each learner's success and satisfaction.

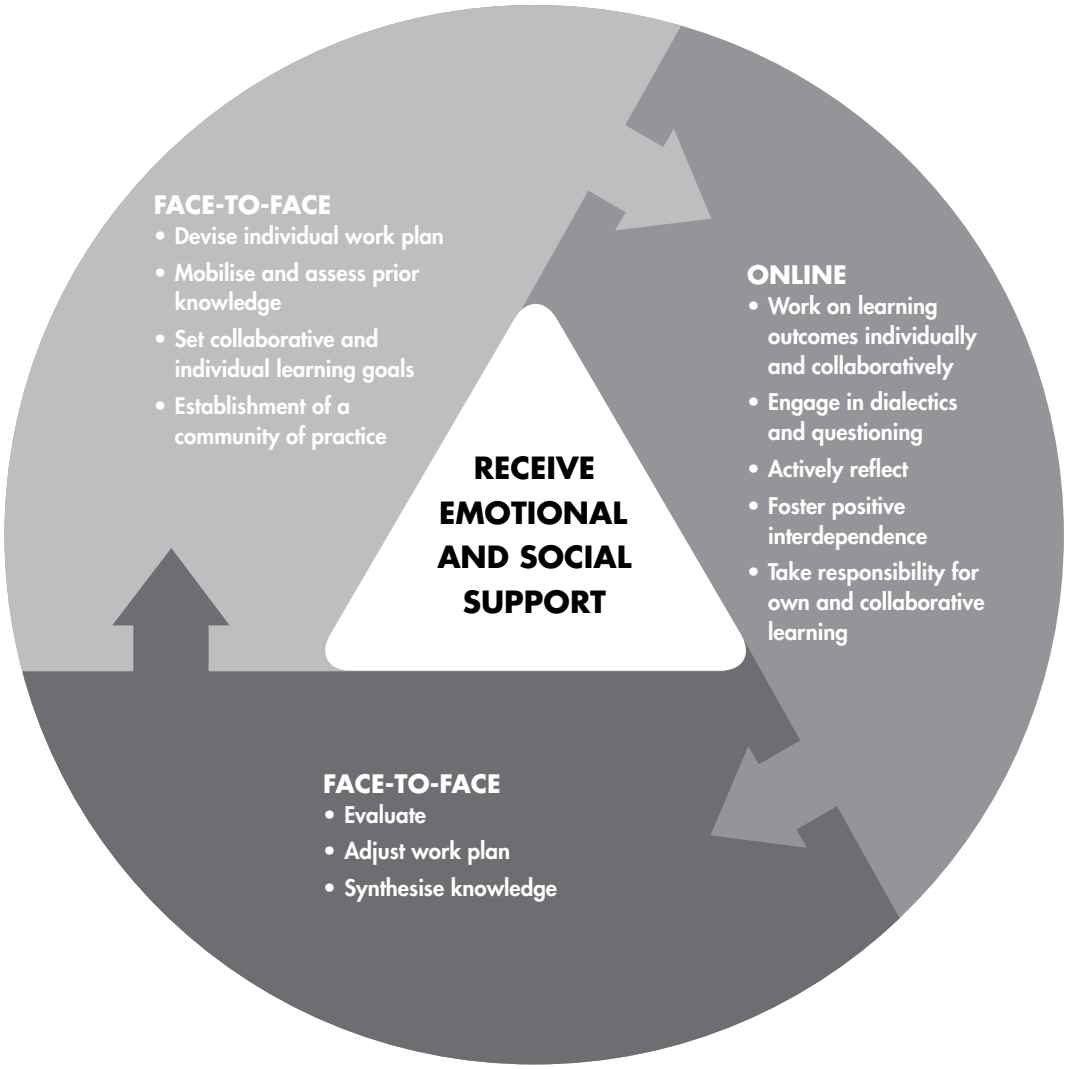
By not only having self-determination in influencing their own learning aims but also a space where they can shape their practice and reflect on their learning, participants should be highly motivated to master their goals (Ross et al., 2002). However, as demonstrated by Hofmann (2006), blended learning designs have to be carefully crafted so that true curricula are weaved to facilitate effective learning.

Keeping in mind the above-mentioned importance of pedagogically sound, carefully interwoven blended learning designs, suggestions are made in the next subsection regarding the opportunities to foster characteristics of self-directed learners in teacher PD programmes.

Blended learning to enhance self-directedness in teacher professional development programmes

When designing and developing a blended learning PD activity[4] focusing on SDL for South African SAL teachers, it is imperative to place emphasis on participant experience and individual differences between participants' learning needs, preferences and styles. Situated within Staker and Horn's (2012: 15) enriched virtual model, participants divide their own time between face-to-face and online instruction. While all material is made available online, participants have an initial and a closing face-to-face meeting with the instructor in order to plan and structure the online phase initially, and to reflect upon it afterwards. Participants are also encouraged to activate and assess their pre-existing knowledge, not only on content but also on learning processes (Bolhuis, 2003), in order to develop their metacognitive thinking. Throughout the online phase, participants can schedule additional face-to-face meetings. The PD activity itself should be based on Picciano's (2009: 11) multimodal model and can be represented by Figure 1 below.

Figure 1:
Teacher professional-development opportunity in the 'virtually enriched' spectrum of Staker and Horn (2012)



4 As this article relates to South African teachers, the phrase 'professional development activity' as used in the Department of Basic Education policies like the 'Draft White Paper on e-Education Transforming Learning and Teaching through ICT' as well as the 'Guidelines for Teacher Training and Professional Development in ICT' will be used when referring to any programme or course designed to further South African teachers' education.

During the initial face-to-face meeting, the participants collaboratively determine their overarching group learning goals while setting smaller individual goals within this setting. The facilitator assumes the responsibility to design a learning environment that enables participants to take active responsibility (Bosch & Pool, 2019). In this context, it is important to note that participants will not be left to their own devices when making their choices but that they will be assisted to make appropriate choices, as MacDonald (2008) warns that certain participants arrive equipped to make their own choices, while others may be overwhelmed by the possibilities. Group decisions and goals are also set, as collaborative learning is not only one of the pillars of Picciano's (2009) multimodal model but also one of the key elements of SDL (Garrison, 1997). Learning is treated as a social phenomenon, thereby creating positive interdependence (Bolhuis, 2003). After the learning goals have been set, the instructor and participant cooperate in assessing the participant's learning aims and the content to be covered. In line with Picciano's multimodal model, multiple technologies and media are used (Picciano, 2009). The instructor, therefore, supports the participant in establishing their learning goals and the choices they have when learning. Setting up such a collaborative learning environment in which the participants have an input in shaping their own and collaborative learning goals will be conducive to constructing meaningful knowledge (Garrison, 1997). Furthermore, throughout the learning process, the participant is supported in developing the necessary skills of reflection, self-direction and self-management (George-Walker & Keeffe, 2010) by journaling as well as by constantly evaluating the course and learning. Developing these skills will ensure that not only the external contextual elements but also the internal cognitive processes that precipitate and shape the participant's thinking are taken into account, thereby assisting each participant to develop a cognitive presence, which Garrison (2003: 4) defines as 'the process of both reflection and discourse in the initiation, construction and confirmation of meaningful learning outcomes'.

After the initial meetings, the instructor designs a learning environment focusing on collaboration (Picciano, 2009) online in which participants work on achieving their individual learning outcomes, while forming part of a community that is united by its academic purpose and interest, and that works collaboratively towards attaining intended learning goals and outcomes (Garrison & Vaughan, 2008). A CoI is established in which participants are cognitively engaged, ideas are supported and critically analysed, and meanings negotiated (Garrison, 2003). Furthermore, positive interdependence is established between participants by means of group goals in order to encourage them to display appropriate behaviour and to engage and achieve group outcomes (Bosch & Pool, 2019). Discussions and questioning form a large part of the group activities, as they allow the instructor to follow the participants' progress and assist them in refining their knowledge (Picciano, 2009). Participants are encouraged to complete regular reflections, both individually in journals and as a group in discussion forums, and participants are requested to share their reflections with the instructor and the group to further enrich their reflections (Picciano, 2009). By modelling reflective enquiry, students develop the ability to manage and monitor their own learning. This allows them to develop the ability, as well as the confidence, to be self-directed learners (Garrison, 2003). Conceptualising these interactions is imperative, as Garrison and Kanuka (2004: 97) regard one of blended learning's most promising opportunities to be the 'quality and quantity of the interaction and the sense of engagement in a community of inquiry and learning, achieved through the effective integration of Internet communication technology'. Moreover, participant reflections and feedback enable the instructor to respond to the individual learner's situation as the learner progresses through a learning activity and to adapt either the activity itself or the technology to be used in order to support the participant's learning if necessary (Howard et al., 2006).

Towards the end of the programme, students submit an assignment that synthesises and assesses (Picciano, 2009) their learning. Learners evaluating their learning outcomes is another cornerstone of SDL (Merriam, 2001). In the second face-to-face meeting, participants can evaluate both the programme and their own learning. They then formulate new goals, based on the achievement of the goals set in the first face-to-face

meeting as well as their own continuous and summative reflections, and, in cooperation with the instructor, they develop new strategies to attain these new learning goals.

CONCLUSION

When developing a blended learning teacher PD programme, it is important to not only focus on the content to be taught, but also on the skills to be learned in order for participants to develop into lifelong self-directed learners. By fostering the skills of the self-directed learner in participants, one can hope that participants would gradually learn to identify their own learning needs and make appropriate choices to satisfy their needs by being encouraged to set and assess their learning aims, initially mostly collaboratively but increasingly individually.

It is important to note that, in terms of limitations, this article has not and does not intend to cover all the possible scholarship around blended learning, SDL and teacher PD. From the extensive literature review, the authors then had to be selective in terms of specific literature in order to answer the research question.

The aim of this article was to fill a gap in the scholarly discourse by focusing on teacher PD – an area currently under-researched in South Africa. A PD model strongly aligned with Picciano's (2009) multimodal model was proposed and firmly placed within the enriched virtual model of Staker and Horn (2012), focusing primarily on fostering the skills of self-directed learners and on participants improving their pedagogical knowledge, which is in contrast to the more traditional teacher PD models focusing on content knowledge. Should this model be implemented in practice, it is hoped that participants would improve their pedagogical and technical knowledge of digital media while improving their SDL skills and assisting their own learners in doing the same.

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