

Mission possible: Hybrid with a touch of Vet Ed

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ABSTRACT

The Faculty of Veterinary Science of the University of Pretoria (UP) is the only one of its kind in South Africa and is therefore faced with unique challenges with regard to teaching and learning methodologies. Since the university's teaching strategy has evolved into a hybrid delivery mode, the faculty has to abide by implementing innovative teaching and learning practices. The Faculty of Veterinary Science has to accommodate the growing number of student intake while simultaneously embracing the inclusion of educational technology as a pivotal part of its teaching and learning strategy. To accomplish the aforesaid, the faculty is implementing a so-called "block teaching system" into the second year of its six-year degree programme. This system may be expanded to all cohorts if proven successful.

Veterinary Science education at Onderstepoort was not traditionally associated with the extensive use of educational technology. A need was identified to empower lecturers to enhance their educational technology skills in order to change their teaching methodologies to incorporate the hybrid teaching strategy. A workshop was developed for this purpose with the main outcomes to:

- Use a set of different teaching and learning methodologies including inquiry-based learning;
- Feature technology in a hybrid/blended teaching and learning approach;
- Incorporate open education resources (OERs);
- Develop electronic resources that can enhance the flipped classroom approach and be licenced as OERs.

A noticeable paradigm shift was accomplished when initial scepticism turned into enthusiastic and positive attitudes.

Key Words: Hybrid learning, academic development, OER, technology-enhanced learning

1. INTRODUCTION AND PROBLEM STATEMENT

The Faculty of Veterinary Science of the University of Pretoria (UP) is the only one of its kind in South Africa and is therefore faced with unique challenges with regard to teaching and learning methodologies. Since the university's teaching strategy has evolved into a hybrid delivery mode, the Faculty of Veterinary Science has to abide by implementing innovative teaching and learning practices, including appropriate technology and educational technology, open education resources (OERs) and applicable electronic resources. The faculty also has to accommodate the growing number of student intake while simultaneously embracing the inclusion of educational technology as a pivotal part of its teaching and learning strategy. To accomplish this, the faculty is implementing a so-called "block teaching system" into the second year of its six-year degree programme where student-centered active learning is combined with a technology-enhanced, hybrid mode of delivery. This system may be expanded to all cohorts if proven successful.

Inferred from the above, the somewhat unwieldy position of block teaching in the faculty becomes apparent. A definite need to prepare lecturers for the implementation of the block system existed. In pursuit of enhancing the quality of teaching and learning while also

improving student performance, this paper intends to revisit the training that was provided to the lecturers to achieve the aforesaid.

2. REVIEW OF LITERATURE

2.1 Block teaching

The BVSc Veterinary Science programme is a six year degree of which the first year is presented in the Faculty of Natural and Agricultural Sciences at the Hatfield campus of UP while the remaining five years are presented in the Faculty of Veterinary Science at the Onderstepoort campus. Since this is the only veterinary faculty in South Africa, the format of veterinary education did not change much over the past decade. Although there are many similarities between veterinary and medical education, UP's Faculty of Health Sciences was the only faculty of the two to change to a block teaching system. Warman, Pritchard and Baillie (2015) stated that faculty development, that includes staff, academic and educational development, has emerged as an important field of practice. This is also true for UP because with the implementation of the block teaching system in the Faculty of Veterinary Science, the Department for Education Innovation (EI) is playing an integral part in preparing lecturers for this mode of teaching. EI is mainly responsible for the academic development of lecturers in all faculties; and to accomplish this, each faculty has an Education Consultant (EC) and Instructional Designer (ID). Their responsibilities include the educational development of academic staff. Warman et al. (2015), who did their study on the academic development of staff within the implementation of a new curriculum in the Veterinary School of the University of Bristol, highlight a number of important resulting factors. Firstly academic development strategies would improve teaching performance and staff morale. Secondly it would in turn lead to improved learning experiences by students. A move from a teacher-led to a student-centered teaching and learning approach is therefore essential.

In UP's Faculty of Veterinary Science, the so-called block system was implemented in January 2016 to strategically adopt and implement blended and hybrid learning in the BVSc II cohort. Burton & Nesbit (2002) indicate that block teaching, or as they refer to it, intensive teaching, is used more and more in higher education, specifically for postgraduate studies. In the BVSc II programme, however, it is seen as a solution to assist students to focus on only one module at a time, eliminating other distractions. It was clear that traditional teaching methods would not be ideal for this type of teaching and therefore academics needed training to prepare them for this "alternative" way of teaching and assessment, within the wider UP context and its teaching and learning strategies. These strategies include the hybrid teaching model, inquiry-based learning (IBL) and the use of OERs in the faculty. This blend has the potential to facilitate a community of inquiry (Dziuban, Moskal & Hartman, 2004).

Bell (as cited in Warman et al., 2015) indicated that there are some challenges to effective academic development. In the first challenge, namely "time, access and awareness" (p. 350), as Bell was referring to clinical staff, the same challenge was experienced at the veterinary faculty. Based on this, as well as on feedback received from staff attending the first workshop, it was decided to shorten our workshop by one day to accommodate their limited time. The second challenge is that of "motivation and resistance to change" (p. 350). To successfully bring about change there must be a personal desire to change, knowledge regarding how to change, a supportive environment and rewards for changes made. The lecturers were not all positive about the block system and did not feel equipped to make such drastic changes to their teaching. Providing some training and assistance was therefore crucial for the block system to succeed. The third challenge mentioned by Bell (as cited in Warman et al., 2015, p. 350) is that of "relevance, recognition and reward". It was important to ensure that the workshop was relevant and that it addressed the lecturers' needs. The feedback after each day was therefore very important to determine the relevance for the lecturers. As a "reward" they received a certificate of attendance after the workshop and there are some awards for excellence in teaching and

learning in the institution. Hopefully the workshop will equip these lecturers to implement new strategies and at some point be able to be nominated for these awards. The last challenge is the “evaluation of programme success” (p. 350). For the latter the researchers went about determining the success of the workshops by obtaining student feedback after each block, and only then would information about their experience of the new teaching strategy as well as the way the lecturer applied it, be available.

May and Silva-Fletcher (2015) name nine pedagogical principles essential in veterinary education of which active learning and valid and reliable assessment are the two that are also emphasised in our workshop. Moving away from lecture-based or teacher-centered learning to a model of student-centered active learning is one of the pedagogical principles, and was one of the main aims of our workshops. May and Silva-Fletcher (2015) also add that the use of technology is the preferred platform in a blended/hybrid model. In this regard it is of importance to note that Papastergiou (as cited in Vernadakis, Antoniou, Giannousi, Zetou & Kioumourtzoglou, 2011, p. 189) accurately states that “e-learning technology developed around the hybrid paradigm is beneficial for improving the quality of learning, but is useless if it is not based on pedagogical prescriptions”. Pedagogical principles are theories that govern good educational practice. Problem-solving activities in groups or individuals can be used to enhance active learning (May & Silva-Fletcher, 2015).

2.2 Blended and hybrid learning and the flipped classroom in block teaching

In the literature there is a plethora of definitions that describe online learning in its many different varieties, making it difficult and nearly impossible to provide an official definition for online learning in the context of block teaching. Online learning is only a mode of delivery and in its simplest form is any form of learning that is conducted over the Internet, be it partly or entirely. A computer or any other type of device that can connect to the Internet would be required to access all or some information and for collaboration between students and lecturers (Bates, 2015). Bates (2015) further elaborates that online learning supports a number of teaching methods as depicted in Figure 1 below. The researchers agree with Bates (2015) that teaching is a continuum and can be depicted as shown in Figure 1:

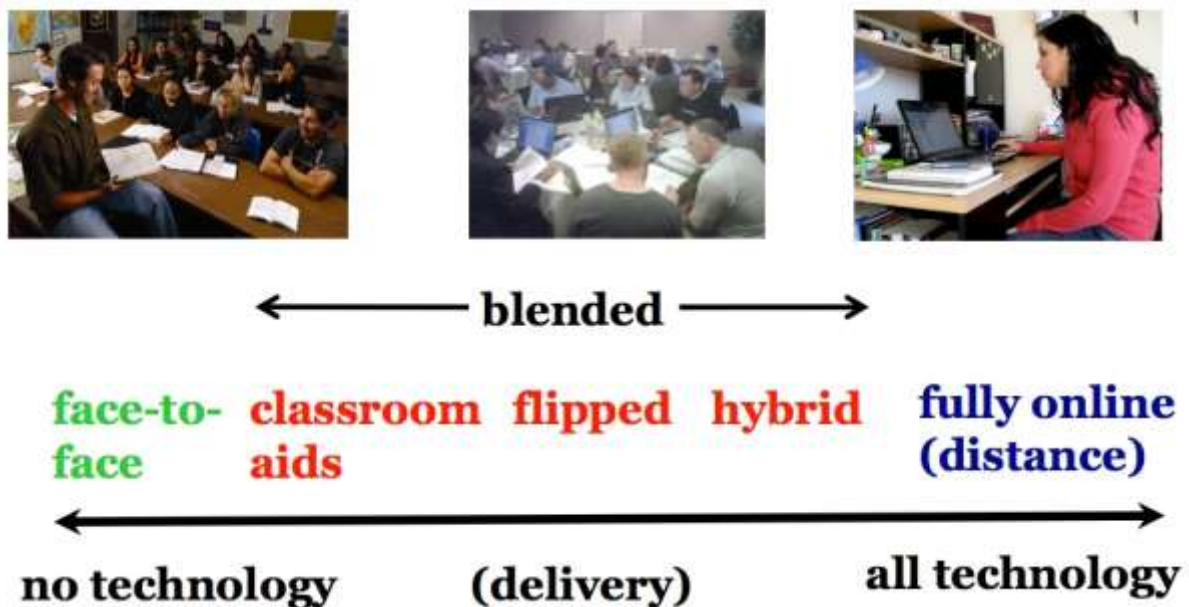


Figure 1: Teaching continuum (Bates, 2015)

From Figure 1 it is evident that “modern teaching and learning” covers a broad spectrum of methodologies and activities. According to Bates (2015) blended teaching and learning

occur when some forms of technology are used as classroom and teaching aids, which could include online learning, therefore making blended learning a sub-branch of online learning. From Figure 1 it is also noticeable that technology-enabled learning is an important component of blended learning.

Kirkwood and Price (2016) iterate that technology-enabled learning is the application of digital technology to teaching and learning in an educational context. The intention of technology-enabled teaching and learning is for learning to result from the lecturers' and students' interaction with the technology (Kirkwood & Price, 2016). It furthermore suggests that educational technology can enhance teaching and learning. Although there are no explicit statements in the literature that can vouch for the aforesaid enhancements, the researchers are of the opinion that technology-enhanced teaching and learning could positively impact the effectiveness of block teaching. It is therefore also obvious that in blended learning, face-to-face teaching and learning is combined with some online learning, making it Web-enhanced (Vernadakis et al., 2011). This mix, that has no defined standard as to how much or what part of courses go online, is influenced by many factors including the course outcomes, student characteristics, lecturer experience and teaching style, discipline, developmental level, and online resources (Dziuban et al., 2004). In our block teaching, and in other modes of delivery, Internet resources, and UP's Blackboard learning management system (LMS), branded as clickUP, offer easier access to learning content and both students and lecturers through the use of various tools available to them. The LMS and Internet resources also allow access to material and experts who might not be available otherwise, resulting in a learning environment in the block system where students are actively engaged, potentially learning more than in a traditional linear teaching model.

The combination as described above would normally manifest in either a flipped classroom approach and/or a hybrid learning approach. In block teaching the flipped classroom methodology would be very effective. In a flipped classroom approach the students do their preparation for their face-to-face sessions online, outside the classroom and it usually entails a number of activities (Bates, 2015). In block teaching this would save on teaching time and allow for more student-centered activities that would encourage deep learning. Hybrid learning is a total redesign of the face-to-face classroom experience where 50% or more of the students' time is spent online and whereby the lecturer determines the most effective ways of utilising online and face-to-face activities (Bates, 2015). According to Vaughan (2007) the emphasis of active learning and a reduction of classroom time in the blended learning model can be referred to as hybridisation where the online component and face-to-face components are mixed together, resulting in an environment highly conducive to student learning. Furthermore, Vernadakis et al. (2011) state that hybrid courses have significant e-learning activities in addition to traditional classroom face-to-face teaching and learning.

2.3 Open Education Resources

OERs are digitised materials offered freely and openly to use and re-use for teaching, learning and research (Butcher, 2011; OECD & OER Commons, cited in Kirkwood & Price, 2016; Santosh, 2016). These materials are in the public domain or have been released under an intellectual property license that permits their free use or re-purposing by others, depending on which Creative Commons license is used (Atkins, Brown & Hammond, 2007). Santosh (2016) postulates that creating OERs is beneficial in that it lowers the cost of educational materials, improves quality of materials, shares and modifies learning content for special use, and that it develops innovation. An additional benefit the researchers value is the time-saving element of OERs, especially when the lecturer is a consumer of materials and doesn't have to "re-invent the wheel" so to speak. These benefits are all propagated during our workshops because the researchers believe that these benefits would have a desirable impact on block teaching.

Examples of OER include full courses, course modules, syllabi, lectures, homework assignments, quizzes, lab and classroom activities, pedagogical materials, games,

simulations, and many more resources contained in digital media collections from around the world (Kirkwood & Price, 2016). OER is more than just finding and using materials. It is also about materials lecturers and students create and make available for other people to find, adapt and use. In our workshop the researchers encourage and propagate both these applications. The researchers also encourage UP, via the faculty's OER project, to develop appropriate policies and strategies to not only make use of OER, but to also develop their own OER.

According to Wallace and Young (cited in Graham, Woodfield & Harrison, 2013) OER and the easy sharing of materials over the Internet, makes ownership of intellectual property a contentious issue when implementing blended and hybrid learning, although Butcher (2011) is of the opinion that the opening of intellectual property is having the effect of improving the quality of materials. In one of our workshops the participants mentioned that they could also improve on the quality of digitized educational materials when producing their own OER. The aforementioned policies need to address the issues of ownership and accessibility of materials. At UP these policies still need to be established. Currently UP's intellectual property policy is very restrictive, which hampers the successful application of OER in teaching in general, but also in block teaching in the faculty specifically. Since the OER project in the faculty is a trial to determine the feasibility of OER, the faculty has some leeway in sharing its intellectual property on various platforms. But it needs to be stressed that there is no *carte blanche* in the matter. The African Veterinary Information Portal (AfriVIP) website is the main platform for hosting OERs developed in the faculty. The AfriVIP network of faculties of veterinary science working in Africa and further afield disseminate open veterinary educational resources pertaining to uniquely African veterinary matters.

3. RESEARCH METHODOLOGY

3.1 Research paradigm, design and methodology

Vested in the pragmatic research paradigm, the research was concerned with applications or working solutions to teaching smarter in the faculty's block system in order to improve student performance in the BVSc II cohort and to enhance these students' engagement in and quality of learning. The pragmatic research paradigm also allowed the researchers to use multiple research methods and different forms of data collection and analysis (Creswell, 2009). In this research, combined qualitative and quantitative research designs (mixed-methods research) were used to collect and analyse both text and numerical data. A mixed methods design added greater strength to the research findings, since it enabled the researchers to understand the research problem more completely and in-depth (Fouché & Delpont, 2013). The research design also comprised a literature study and an empirical study. The purpose of the literature study was to gather theoretical information and to position the research within existing literature. It also provided the theoretical support for the empirical research. Consequently, the research results were used to inform the hybrid model of teaching and learning for the BVSc II cohort in the Faculty of Veterinary Science at UP.

3.2 Population and data collection method

The population for this research comprised staff members from the faculty who were directly involved with teaching the BVSc II cohort. The sample group comprised the academic staff members as well as library staff members who supported the academic staff members and also taught a small component. Participants consisted of 12 academic and four library staff members in the first workshop and nine academic staff members in the second workshop. The researchers applied target sampling for selecting potential research participants for the purpose of this research, because it was focused on a specific group of academic staff members in the faculty.

Both qualitative and quantitative data were collected and this was done by means of self-generated online questionnaires. It was argued that the questionnaires were appropriate to gather data in that it could elicit relevant information about the effectiveness and success of the workshop, branded as the Block Builders' Workshop. The questionnaires were designed in Qualtrics, UP's official survey software. The questions included a variation of closed and open-ended question types (Maree & Pietersen, 2007) to generate useful information regarding the success level of the implementation of hybrid teaching and learning in the BVSc II programme. After completion of the questionnaires, the participants submitted their responses to the Qualtrics server. It was determined that participants would need approximately 10 minutes to complete the questions of each of the instruments.

Data which could inform the effectiveness of the Block Builders' workshop were collected. During the workshop the participants were offered opportunities to give feedback on each day's presentations and activities. Feedback was obtained of the participants' level of satisfaction regarding the applicability and presentation of the topics. The participants were also offered the opportunity to share the things they enjoyed and did not enjoy each day. They could also make suggestions for improvements of any aspects of the workshop sessions. Throughout the research the researchers observed credibility, dependability, confirmability, transferability, reliability and validity.

3.3 The workshop

As part of UP's teaching strategy change to that of a hybrid delivery mode, the faculty is now also changing its delivery mode to encompass hybrid learning. The faculty is aware that they need to implement innovative student-centered teaching and learning strategies by including more educational technology while also accommodating the growing number of students. To accomplish the aforesaid, the faculty is implementing block teaching and it is being trialled in the BVSc II programme. EI needs to empower lecturers to enhance their teaching and educational technology skills for this purpose. A workshop, called the Block Builders' Workshop, was developed for this purpose. EI hosted a five day workshop during February 2016 and a four day workshop during June 2016. It is envisaged that another workshop will be hosted during the latter part of 2016. These workshops are to be repeated every year until all the academic staff members in the faculty have been trained. Due to time, access and awareness constraints among the academic staff members the second workshop was reduced to a four day event.

The rationale behind the workshop was to support the academic staff members in revising their BVSc II course materials so that it embraces the following:

- Develop designs that understand the special requirements of preparing materials for the block system;
- Embrace technology and a hybrid/blended learning approach;
- Embrace OERs;
- Use a set of different teaching and learning methodologies, including inquiry-based learning.

The aim of the workshop was to provide the participants with a deep understanding of the complexities involved in revising and quality assuring academic courses. The workshop provided participants with some of the necessary skills to plan, design and quality assure new courseware by using a set of different teaching and learning methodologies, including inquiry-based learning (IBL). At the end of the workshop the participants would have also compiled detailed course plans and an assessment plan. Participants would have also developed some electronic resources that can enhance the flipped classroom approach in a hybrid teaching strategy and be licenced as OERs to be used to teach in a block system.

The workshop programme contained strategically selected topics, including:

- The core principles that need to shape the revision of the 2nd year courses to support block teaching and learning. This topic focused on block teaching characteristics, the integration of Information Communication Technology (ICT) into

the lesson design, e-learning, a brief overview of the use and development of OER, IBL lesson design and student-centric methodologies.

- From the horse's mouth: Experiences of the block system. Perspectives on the block system were shared with the participants by academic staff and students.
- Latest learning theory. This topic gave an outline how today's youth have developed different ways of learning. It also included suggestions about how lecturers should design their teaching and learning environment to support the students' learning preferences.
- A planning template that helps guide the QA process was introduced and used in group work activities. The intention was to ensure the outcomes indicated in the curriculum documents were aligned with the needs of an existing module. Curriculum critique was also encouraged.
- Existing course analysis. Participants were provided with an interactive course evaluation tool and asked to do an analysis of an existing course. The tool queries course length, course content size, relevancy and currency of the content, opportunities for student practice, opportunities to interact with external experts, pedagogy approaches, use of technology, opportunities for 'anywhere, anytime learning', etc.
- Hybrid and blended learning. Participants were exposed to exemplary use of UP's LMS to produce learning environments that use both e-learning and face-to-face sessions optimally. In a plenary session participants explored various examples and then discussed what might work for their subject using similar approaches.
- LMS functionalities. Participants identified LMS (clickUP) tools that they could possibly utilise.
- Developing a learning pathway. Information on how to develop a learning pathway that clearly guides a learner through the blended learning experience was conveyed to the participants. Where necessary and applicable, the sequence of learning events was clearly shown.
- Alternative pedagogies. Participants interrogated examples of inquiry-based learning and were required to think of how they might use the same approaches for at least one sub-topic within their new design. The participants also had to consider what the impact on their assessment strategies would be.
- Assessment strategies. The participants were exposed to accountable assessment. The context in which assessment takes place was addressed as well as the educational impact of assessment. Participants were also requested to develop an assessment plan for their modules. The types of assessment tasks and tools (including e-assessment tools) were addressed, as well as implementing assessment in a hybrid/blended model.
- Assessment planning document. Participants planned their assessment tasks in group activities and ascertained to what extent it aligns with the module outcomes and teaching methods. Participants had to apply the principles of Biggs' (n.d., p. 2) constructive alignment model and were also given the opportunity to start creating assessment tasks as indicated in their assessment plans.
- Exposition to OER and adaptation techniques. Participants were exposed to OERs where the following questions were addressed: What are they? What is Creative Commons licensing? How do you search for them on the Internet? and How can we use the OERs? This was done via a tutorial in clickUP that emulated good e-learning design. Participants then searched the Internet for existing OERs that they could incorporate into course design. Participants also made a selection of the OERs they have found and inserted the URLs into the planning template.
- Creating digital resources. Participants were exposed to some prior created resources and were given the opportunity to create videos, customise their courses on clickUP and insert videos into clickUP. Participants also had the opportunity to use their own or sourced videos directly from YouTube and Vimeo and insert them

into clickUP, to do lecture recordings, and use Office Mix or other appropriate technology to create narrated PowerPoint presentations.

The participants were also given access to a vast array of resources they could utilise, including the abovementioned planning templates they had to update on a continuous basis, course analysis template, and IT/educational technology tools including Office Mix, TurningPoint clicker technology, iSpring PowerPoint conversion software, Unisa's onscreen marking tool, Prezi, Respondus, back channelling web sites, Turnitin to improve student writing, video editing software, YouTube, Web 2.0 and Web 3.0 tools.

4. RESULTS

The data was obtained by means of self-developed online questionnaires and are analysed and interpreted in order to determine the value of the Block Builders' Workshop in promoting student engagement in the BVSc II cohort. A total of 25 respondents completed the online questionnaires. The analysis and interpretation of the data obtained are presented according to the sections of the questionnaires. The obtained data are analysed by using a descriptive approach in the form of frequencies, percentages and graphical techniques.

Feedback was obtained of the participants' level of satisfaction regarding the applicability and presentation of the topics. The participants were also offered the opportunity to share the things they enjoyed and did not enjoy each day. The last part of the feedback was where the participants could also make suggestions for improvements of any aspects of the workshop sessions.

4.1 Analysis and interpretation of online questionnaires

4.1.1 Workshop 1: Day 1.

Figure 2 depicts that 10 (71%) of the respondents were very satisfied with the applicability of the session on the block system. With regard to the latest learning theory eight (57%) of the respondents were satisfied whereas six (43%) were very satisfied. Ten (71%) respondents were very satisfied with the presentation and tool provided to analyse their existing courses. The Block Builders' planning template was well received and the participants appreciated the opportunity to work with the template and analyse the existing courses since nine (64%) of the respondents were very satisfied with the applicability of this session.

It is thus encouraging that most of Day 1's sessions were very well received as emphasised by comments on what the participants enjoyed, such as "Accessing current course and seeing where improvement need to be made and how it can be changed to be more blended", "Interesting to hear modes of teaching and new technologies", and "Learning about different alternatives to face-to-face lectures." There were no complaints about Day 1 although one participant indicated that it was "a bit difficult for some subjects to fit into what we have learned."

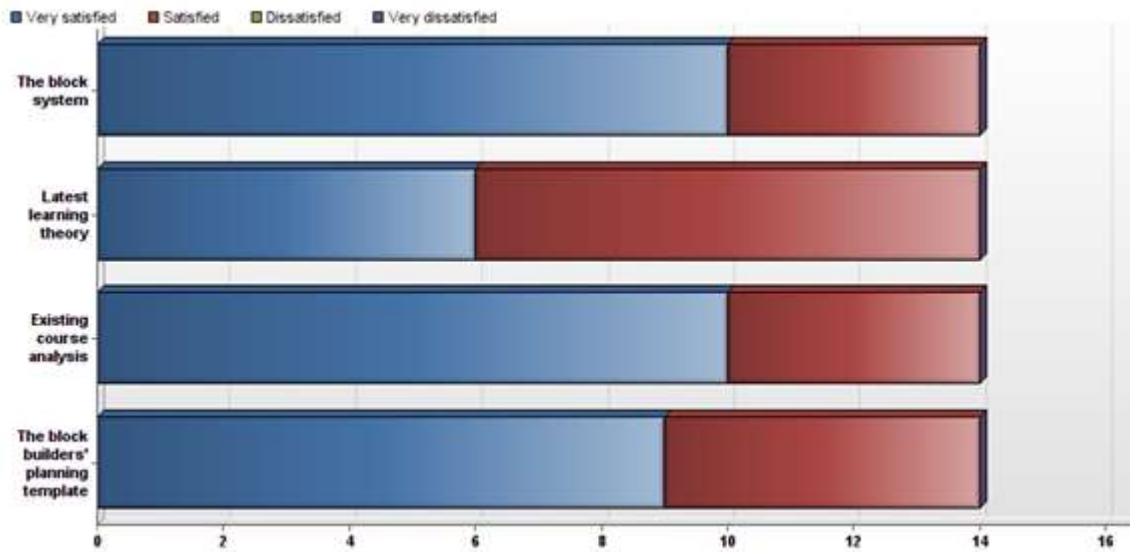


Figure 2: Workshop 1, Day 1: Applicability of the topics

4.1.2 Workshop 2: Day 1.

The feedback from the participants of the second workshop is presented in Figure 3 below and shows a slight contrast to that of the first workshop. Five (56%) participants were satisfied with the block system session and six (67%) were satisfied with the latest learning theory session. Seven (78%) participants were satisfied with the sessions on existing course analysis and the Block Builders' planning template. The participants were all in agreement that change is inevitable and that lecturers should embrace the millennial generation in their block teaching using appropriate modern technologies.

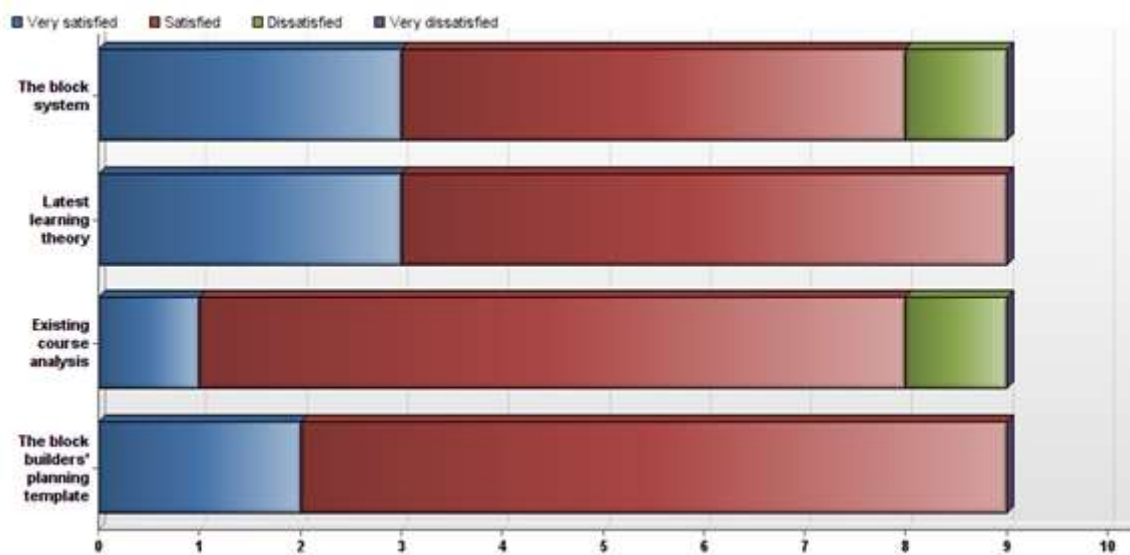


Figure 3: Workshop 2, Day 1: Applicability of the topics

4.1.3 Workshop 1: Day 2.

On Day 2 the researchers presented sessions on the implications of using hybrid learning, alternative pedagogies and clickUP functionalities. Eight (53%) participants indicated that they were very satisfied with the session on implications of using hybrid

learning, while eight (53%) also indicated their satisfaction with the session on alternative pedagogies. It is encouraging that the best received session on the day was the clickUP functionalities session with 11 (73%) participants indicating that they were very satisfied with this session. Although all the participants have been using clickUP, it became evident that they did not know about all the functionalities and tools the LMS has to offer. They also appreciated the time that was availed to them to plan and develop their own courses while also implementing some of the aforementioned tools and functionalities.

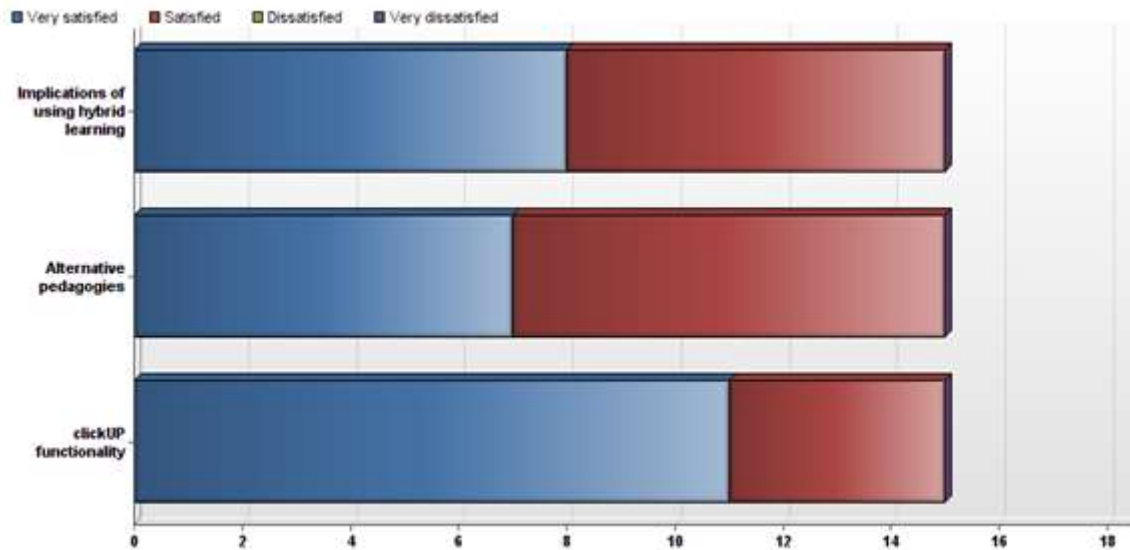


Figure 4: Workshop 1, Day 2: Applicability of the topics

4.1.4 Workshop 2: Day 2.

The only change from Workshop 1 Day 2 was the addition of updating the planning template. From the data it can be deduced that most of the participants regarded the sessions as worth their while. Discussions on hybrid learning, the video conferencing tool in clickUP (Collaborate), alternative pedagogies, badges and new teaching modalities were well received. Some participants expressed the need for dedicated hands-on technical assistance although they were expected to be skilled in this regard.

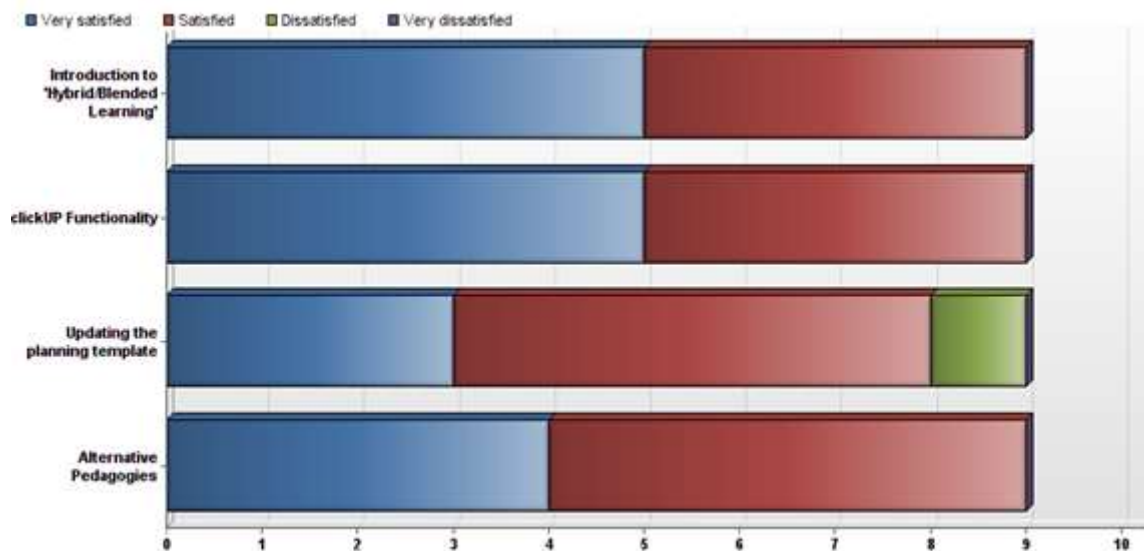


Figure 5: Workshop 2, Day 2: Applicability of the topics

4.1.5 Workshop 1: Day 3.

The day was dedicated to various topics of assessment and 13 (93%) participants found it worth their while as indicated in Figure 6 below. What they valued most was their own critical evaluation of the composition of existing examination papers using Bloom's taxonomy. An awareness of the importance of changing their assessment strategies in the block system was raised and was well verbalised by one participant's comment that "the problem with the block system is deep learning and that we carefully need to plan the assessment."

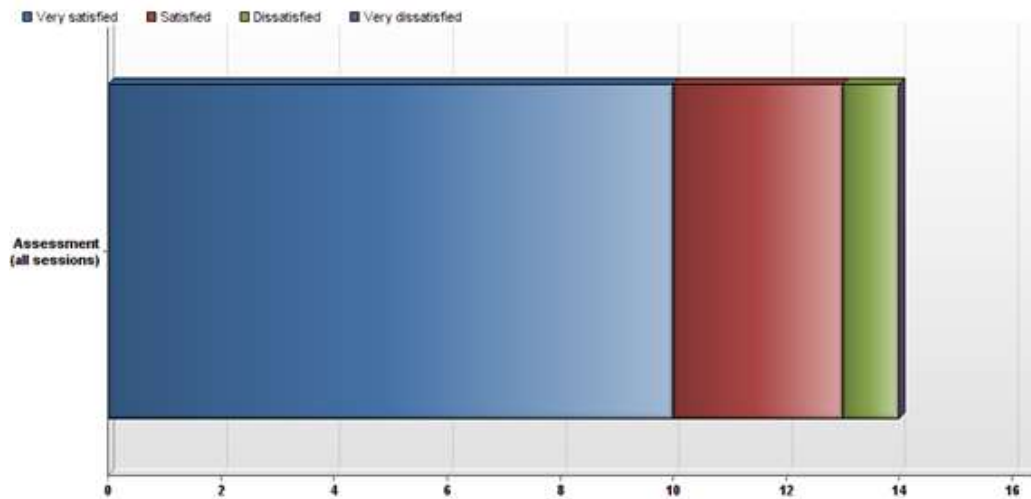


Figure 6: Workshop 1, Day 3: Applicability of the topics

4.1.6 Workshop 2: Day 3.

Figure 7 reveals that all the participants were either very satisfied or satisfied with the assessment sessions. They echoed the sentiments expressed by the participants of the first workshop (cf. 4.1.5) that the analysis and evaluation of examination papers are important.

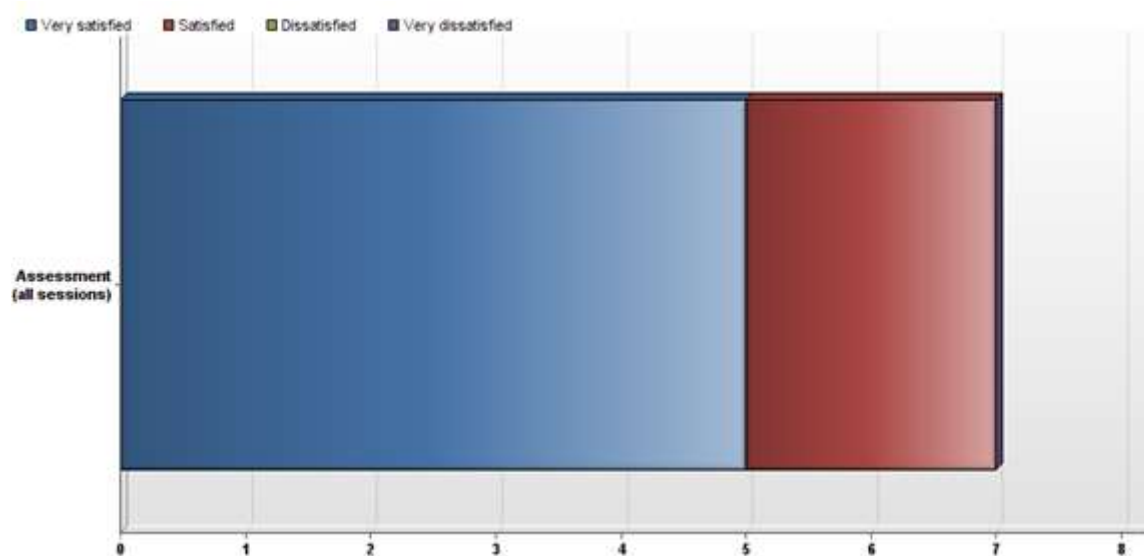


Figure 7: Workshop 2, Day 3: Applicability of the topics

4.1.7 Workshop 1: Day 4.

Day 4 was dedicated to OERs and developing a learning pathway. The day's programme focused on defining OER, finding existing OER, analysing the value of OER and determining the level of adaptation needed to make the resource appropriate for a veterinary course and also an investigation into 'Use', 'Re-Use' and 'Remix' strategies. There was also a section on Creative Commons licensing and implication of what each license permitted. It was hoped that materials developed for the block teaching would either be developed from adapting existing OER or that unique materials would be released with an open license on AfriVIP.

The section on the learning pathway was an attempt to provide participants with skills to use clickUP to structure learning. In this session participants studied strategies to lay out resources and activities so that students can appreciate the sequence and steps required to progress along a learning pathway.

As shown in Figure 8 below, 11 (79%) participants were very satisfied with the session on OERs while 10 (71%) participants rated the session on developing a learning pathway as very applicable. The data denote that OERs are less known to the participants and they found the information about OER licencing and searching for material very practical. One participant expressed the view that "there are many opportunities for contributing to OER as limited open veterinary anatomy resources are available."

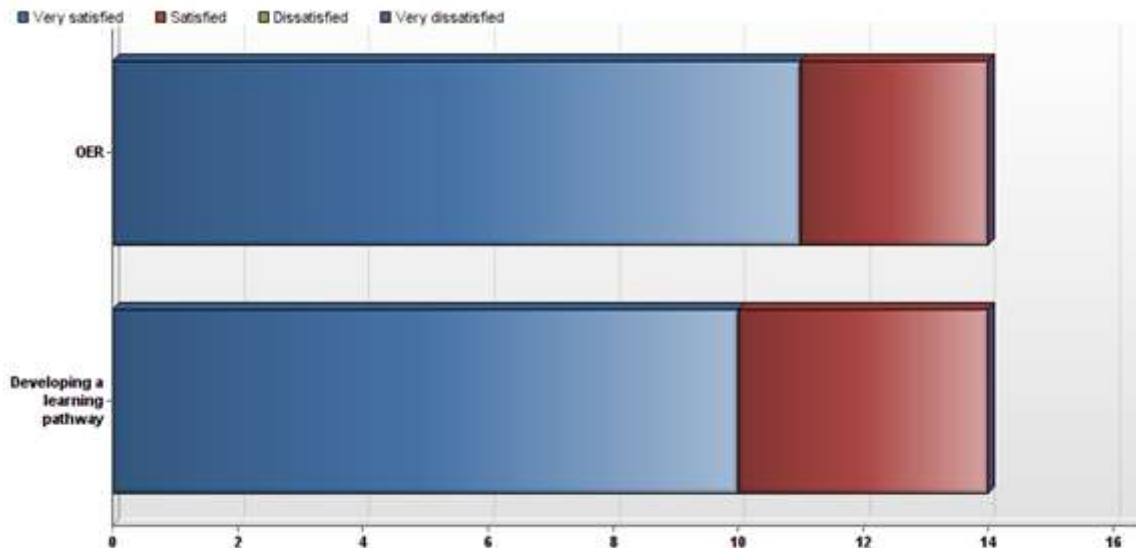


Figure 8: Workshop 1, Day 4: Applicability of the topics

4.1.8 Workshop 2: Day 4.

Figure 9 below depicts that the opportunity to create their own resources was experienced as very applicable and one participant indicated that "creating resources was the highlight of the week, perhaps the best educational session ever."

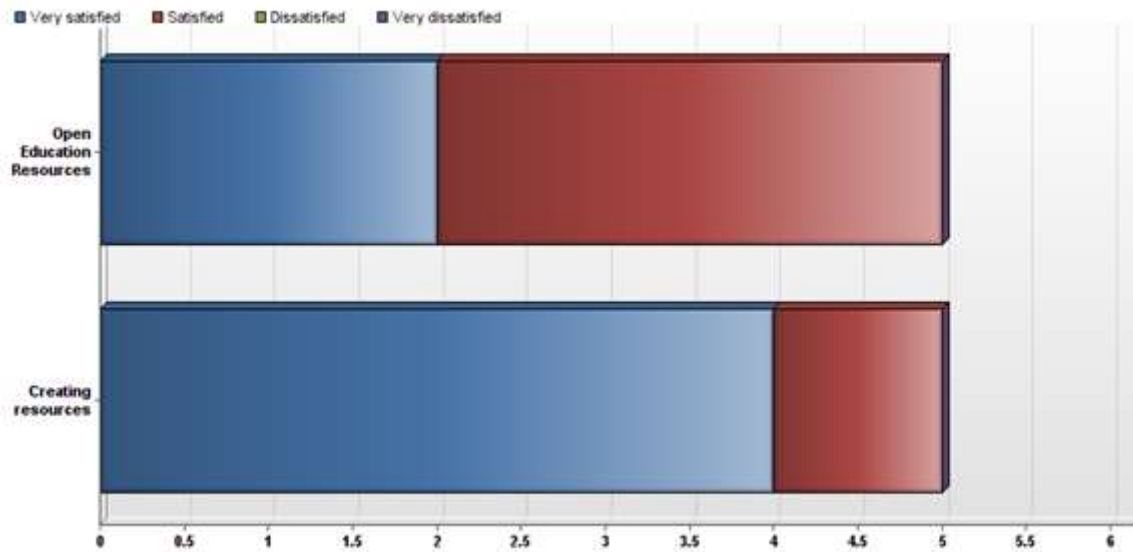


Figure 9: Workshop 2, Day 4: Applicability of the topics

4.1.9 Workshop 1: Day 5.

Seeing examples and demonstrations on how to develop a variety of digitized resources, as well as the opportunity to apply some principles that they were exposed to during the week with some assistance from the EI staff, were all positive aspects of the workshop and were well received as expressed in Figure 10 below. Ten (83%) participants indicated that they were very satisfied with working with various technologies.

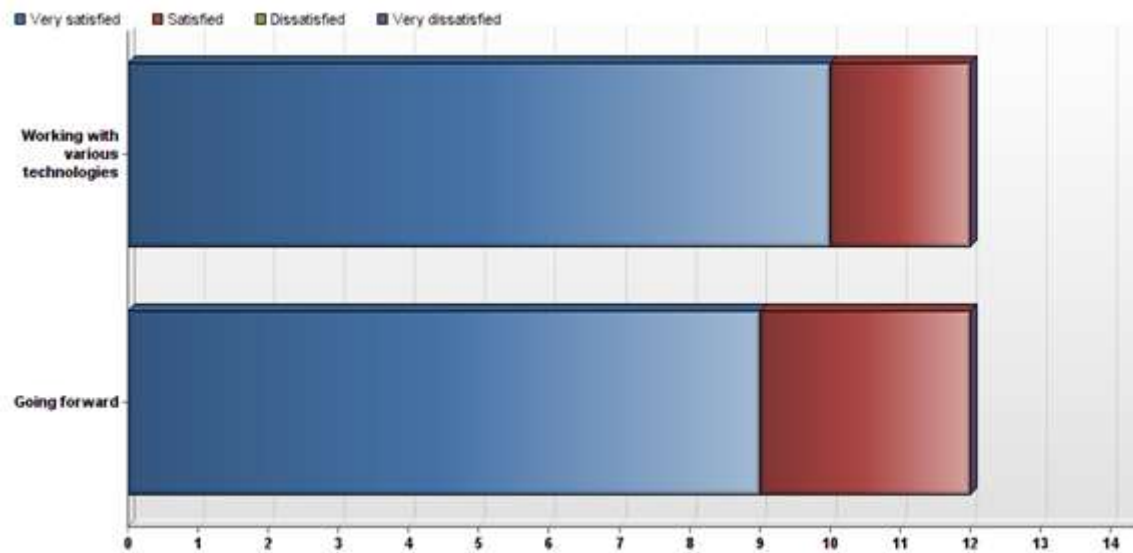


Figure 10: Workshop 1, Day 5: Applicability of the topics

5. DISCUSSION

The main aim of the Block Builders' Workshops was providing academics with the necessary skills to implement the block system which implied an active learning, student-centered approach in a blended or hybrid teaching model. Vaughn (2007) indicates that the implementation of such a blended or hybrid model is challenging for the lecturers and the students. The lecturers need support to re-design their courses to fit into this mode of

delivery. The aim of the workshops was to address this challenge. As the workshops were presented, a complete change in attitude, specifically from the clinicians that attended the training, was observed. Initially the participants were quite negative and sceptical and were not sure that the workshops would fulfil all their needs. One participant indicated the workshop as a negative experience when it was described as “going outside my comfort zone”. In the end the researchers achieved their goal of bringing about a paradigm shift when the initial scepticism turned into enthusiastic and positive attitudes as echoed by another participant: “These four days were extremely stimulating and has encouraged me to get more involved in all the facets of hybrid learning and I am motivated to share with our lecturers and non-believers in our department.” The participants realised that the hybrid and flipped classroom modes of delivery in the block system provided them with greater time flexibility and improved learning outcomes. This implied better time management and also a better understanding that the students need to take greater responsibility for their own learning in the block system since the block system requires increased student engagement. The participants also came to realise that in the block system they would have to continuously improve their teaching methodologies.

The researchers are of the opinion that although concerns regarding the lack of time, support and the use of appropriate resources were raised by the participants, the acquiring of new and improved teaching and technology skills were addressed successfully. Although there is still some concern over the risk associated with delivering a course in a blended format within a relative short time span of a block, the researchers believe the participants would be able to manage their teaching in the block system well.

As a result of the positive feedback and the changes made by the lecturers in their teaching practice, it was suggested that the workshop be rebranded and not only focus on the block system. It should be developed as an introductory workshop to the hybrid teaching model for all academic staff, including the heads of departments. This venture is supported wholeheartedly by the faculty management, and especially the Deputy Dean Teaching and Learning, and will be implemented in 2017.

6. CONCLUSION

A successful paradigm shift was obtained (cf. 5) with the support and guidance of OER Africa. The renewed efforts of faculty management to involve EI in the training of the academic staff members in preparation for the block system also proved to be successful. The block system aligns with the institution’s adaptation of its teaching strategy to that of a hybrid delivery mode. One of the challenges within the block system is to further negate the resistance to the change in this mode of teaching. Furthermore, the researchers want to instil more collaboration amongst academic staff members to drive the block system to uncharted heights. It can therefore be concluded that the Block Builders’ Workshop is effective.

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