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Title: A pedagogy of care: Postgraduate Certificate in Education students' experiences

of online learning during COVID-19

Contribution type: Research

Contribution format: Presentation

Author(s): Feldman, J

Keywords: emergency remote learning, Postgraduate Certificate in Education, student

experiences, Joan Tronto, pedagogy of care

Abstract:

The focus of the presentation is the online teaching and learning experiences of Stellenbosch University students during the recent countrywide lockdown and subsequent higher education institution shutdown due to the COVID-19 pandemic. Drawing on philosopher Joan Tronto's phases of care and associated moral elements, the discussion reports on survey data from a large cohort of students in the Postgraduate Certificate in Education (PGCE) programme at Stellenbosch University and presents a discussion on the students' care needs and experiences of care during this period. The methodology employed for the collection of research data for this article was student online surveys. Of the 260 students in the PGCE course, 241 responded to the survey, providing rich data for the discussion. The aim of the discussion is not to answer the question whether the University offered the students good care during the campus shutdown and remote teaching and learning but rather to understand the experiences of the students in relation to online teaching and learning during this time. According to Tronto, one of the dangers within institutions is that of paternalism whereby one assumes that one knows what support and care are needed by those under one's care. The discussion thus argues that caring is a complex process; it shapes what we pay attention to, how we think about our responsibilities, what we do, how we respond to the world around us and what we regard as important in life. As noted by Tronto, care is about meeting needs, it is always relational and it is about creating conditions in which individuals feel safe in the world. In other words, within an institutional setting such as Stellenbosch University, a pedagogy of care as a practice needs to encompass both thought and action and involves aspects of ongoing relational care. Therefore, for those who want to engage with a pedagogy of care within higher education institution settings, the starting place is to begin caring about care.

Title: A reflection on postgraduate teaching and learning amidst the COVID-19

pandemic

Contribution type: Reflection

Contribution format: Presentation

Author(s): Baron, J

Keywords: refection, teaching and learning, COVID-19, pre-post approach,

student motivation strategies

Abstract:

The COVID-19 pandemic resulted in a change from class-based teaching to remote teaching and learning. The student population was postgraduate students in a midwifery programme. The programme content included student group presentations, prior-knowledge quizzes, lectures (PowerPoint with voice narration), postlecture quizzes and three mock tests. A 'Wall of Fame' and online achievement stars were used to motivate students during remote teaching and learning.

This experience was challenging; at times I felt overwhelmed, frustrated, anxious and helpless. The students experienced high levels of anxiety using the online platform, which translated into my being emotionally drained managing their anxieties and concerns.

The pre-post approach and the Wall of Fame assisted students' learning. This approach allowed students to work consistently and gave them direction and structure. It encouraged self-directedness and allowed students to gauge their understanding of the content and to seek clarity about the content. The quizzes and mock tests also allowed students to practise working in the online space and to become familiar with online assessment processes and built their confidence in working on the online platform. The student motivation strategies encouraged students to complete the quizzes and motivated them to work harder.

Some students were not technologically literate and experienced challenges navigating the online platform, the technology and the applications. The process was very time consuming with technology failures, revising rubrics/marking guides and creating videos, voice narrations and quizzes. Written instructions were not interpreted as intended or the students did not read the briefs or use the applications on SUNLearn. The PowerPoint presentations with voice narrations were not as effective as the Microsoft Teams meetings with the students.

Remote teaching requires you to understand the electronic platform. It will be advantageous to know the characteristics of your student population as this will inform your online approach. Lessons learnt are the following: Use more than one method of communication (audio and written). Provide training to the students about the online platform and the programmes before commencing with teaching and learning. Clearly display online help resources and ensure that they are readily available.

Title: Adapting community-engaged teaching and learning activities and practices for

the online environment

Contribution type: Reflection

Contribution format: Presentation

Author(s): McKay, M; Muller, J; Nyakatya, M; Nel, M; Smith-Tolken, A

Keywords: reflection, engaged pedagogies, communities

Abstract:

The COVID-19 pandemic forced higher education institutions to present courses online, with little preparation or time for instructors to make the transition to emergency remote teaching (ERT). Community-engaged teaching and learning methodologies (for example service learning, work-integrated learning and work-based learning) are particularly challenging to reimagine in the online space as they rely on face-to-face engagement with community partners and the physical work environment as a vehicle for student learning. With the immediate and long-term future of higher education delivery uncertain, it is likely that most courses will require online components. There is a paucity of literature on this topic, but Waldner et al. (2010) refer to outcomes such as product completion, client and student satisfaction, client/student interactions and skill building. We draw on the recent experiences of practitioners within the Medicine and Health Sciences and AgriSciences faculties at Stellenbosch University and reflect, using Schön's (1991) model for reflection-in-action for science-based professions, on two case studies in which courses were redesigned for the online space. We reflect on whether learning outcomes were met in our Centre for Excellence in Teaching and Learning modules and examine our key challenges in the online space. These two case studies indicate that even though learning in the online environment is challenging for community partners with regard to data and accessibility to smart devices, Waldner's outcomes could still be met. Community partner ('client') collaboration was imperative in designing the online intervention. 'Engagement' was possible through videos, voiceovers, voice notes and forums, and important interactions took place in the online space between facilitator and student. Practical activities were far more challenging and required a great deal of innovative thinking and careful logistics. Student feedback regarding learning was positive. As a result of the overall success of the ERT experience, some courses will move to a mixed model going forward.

Title: Africa Centre for Scholarship going online for the first time: The case of the

African Doctoral Academy

Contribution type: Reflection

Contribution format: Presentation

Author(s): Howie, S

Keywords: virtual learning, research development, scholarship development

Abstract:

Background

This presentation, using the reflective model of Rolfe et al. (2001), contemplates the experience of the first attempt by the Africa Centre for Scholarship (ACS) to provide a continent-wide School on research methods and skills training for primarily doctoral students.

A couple of days before the first Autumn School of the African Doctoral Academy (ADA), the nation went into lockdown. As the ACS' flagship programme, the impact of the pandemic was felt immediately as the Autumn School had to be cancelled. As was the case for many programmes and courses around the world, the ACS was faced with a dilemma: how to continue with the new programmes when-face-to face conferencing was not possible.

What and why?

The ACS team first compiled a scenario plan. It became obvious very quickly for a first-time virtual school that no more than two courses could be run concurrently in the same week, in contrast to face-to-face schools (6-7 courses simultaneously). After extensive consultation and planning, in July 2020, the first virtual ADA Winter School was held: 5 courses, 2 weeks and 121 delegates. Whilst greatly reduced from 17-21 courses, the team succeeded in delivering a School.

Results

However, some important lessons were learnt by both the facilitating team (such as interrogating and redefining roles and responsibilities, the differences between organising synchronous and asynchronous online learning and the best orientation of delegates and presenters) and by delegates (such as more self-organisation). This presentation reflects on the learnings from this experience, evaluation questionnaire findings from presenters and delegates (regarding curriculum, teaching, learning and organisation) and the debriefing sessions with the blended learning coordinators, tutors and ADA staff.

How did you feel and what were the lessons learnt?

This was the first time that we had been involved in organising a larger scale online learning experience. The staff were relieved at the initial success of the Winter School and that the technical, organisational and pedagogical problems could be resolved mostly. These learnings are contributing to the design and development of the ADA Online 2021 Summer School including modifications to orientation sessions, changes to support staff, preparation of discussions with presenters and achieving a balance between synchronous and asynchronous sessions. [Back to Index]

Title: Assurance of learning process at the University of Stellenbosch Business School

Contribution type: Innovation

Contribution format: Presentation

Author(s): Opperman, P

Keywords: assurance of learning

Abstract:

The purpose of this presentation is to inform the wider Stellenbosch University teaching and learning community about the assurance of learning (AoL) process followed at the University of Stellenbosch Business School (USB). The USB strategic goal – 'Grow a cutting-edge reputation' – implies that the USB retains the triple crown of international accreditations. The AoL process at the USB is an internal process designed to contribute to USB accreditations and to meet a specific requirement of the Association to Advance Collegiate Schools of Business (AACSB). Many business schools have strived to enhance the perceived quality and value of their programmes by becoming AACSB accredited (Bieker, 2014). Essentially, many versions of AoL convey the following: "Provide evidence that you are doing what you say you are doing concerning the goals, objectives, and outcomes that you have for the learner's educational experience" (Moore, 2020). The AoL process aims to understand and improve student learning and is a learning evaluation used for curricula improvement and management. The value of the process is that it assists in focusing the collective attention, examining assumptions and creating a shared academic culture dedicated to assuring and improving the quality of USB degree programmes. The USB AoL is an ongoing process whereby expectations are made explicit, appropriate criteria and standards for learning quality are set and data is gathered systematically, analysed and interpreted. Thereafter, a determination is made on how well the performance matches the expectations and the information is used to document, explain and derive useful improvements for learning. This presentation will provide more detail concerning the implementation that could benefit the broader Stellenbosch University teaching and learning community that is contemplating the introduction of comparable processes. Examples of how the quality of teaching and learning is enhanced will be provided.

Title: Beating impostor syndrome during COVID-19 and emergency remote teaching

Contribution type: Reflection

Contribution format: Presentation

Author(s): Barends, Z; Jacobs, A

Keywords: impostor syndrome, reflection, coronavirus pandemic of 2020 (COVID-19),

emergency remote teaching (ERT), vulnerability

Abstract:

An interesting comment during a recent webinar reminded us about the notion of 'impostor syndrome', which refers to a collection of feelings of inadequacy that persist despite evident success (Brevata et al., 2019; DiGuilio, 2020). Could this be the reason for our feelings of inadequacy, despite our best efforts to confidently keep up with the fast pace of emergency remote teaching (ERT)? It awakened a need to reflect since we believe in the value of reflection as a mechanism to deal with our own vulnerabilities as higher education practitioners. Furthermore, impostor syndrome is often associated with mental health, a topic that has surfaced often in the context of the novel coronavirus pandemic of 2020 (COVID-19). Reflection offered a way to exercise self-care.

We use Schön's (1991) concept of reflection-on-action, and we reflect through telling our stories of our vulnerabilities during ERT from the perspectives of our jobs as (1) lecturer and (2) academic developer. We argue that teaching and learning (T&L) (and by implication professional development) in HE communities living through traumatising times such as COVID-19 should be an endeavour that allows us to navigate our vulnerabilities. Both of us acknowledge that open dialogue could be useful for dealing with impostor syndrome as tenet of vulnerability. However, it is easier said than done.

Our aim is to show how establishing our own small circle of dialogue helped us to deal with our own vulnerabilities. Regular informal chats revealed that we were confronted with the same challenges and that both of us had no one who actually 'walked the walk and talked the talk'. Our chats evolved and became check-in sessions, and before we knew it, we had formed our own community of practice. We shared ideas and actually helped each other by 'helping each other up'.

We conclude that COVID-19 has presented an opportunity to reconsider our roles and the value that we add to our T&L and professional development environments. We do not need to feel inadequate. It is fine to feel overwhelmed (Keet et al., 2009). Our collaboration has taught us that we do indeed have agency.

(References available on request)

Title: Class recordings in a postgraduate financial accounting course: Student

perceptions

Contribution type: Innovation

Contribution format: Presentation

Author(s): Steenkamp, G; Visser, A

Keywords: podcasts, class recordings, blended learning, student engagement, student

motivation

Abstract:

Increasingly, it is becoming clear that the traditional face-to-face lecture does not actively engage all students in the learning process (Serrano et al., 2019). Several approaches could be employed to increase student engagement and motivation, including blended learning (whereby face-to-face classes are combined with online learning experiences) (Sahni, 2019). However, prior to the current emergency remote learning during the COVID-19 pandemic, limited online learning techniques were applied in postgraduate financial accounting courses at Stellenbosch University. Lecturers often did not feel comfortable with recording themselves (Watty et al., 2016) and felt that making podcasts available might decrease class attendance. However, students increasingly demand recordings of lectures to be made available as they claim that such recordings will enhance their learning. Although recordings of lectures were not usually made available to postgraduate financial accounting students, it was decided to do so for a single topic in the 2018 year. Afterwards, a questionnaire was circulated to the students to gather their perceptions on the usefulness of the recordings (a total of 129 students completed the questionnaire). It was found that most of the students used the recordings after class. The students found these class recordings extremely valuable because they could pause and rewind the recordings to focus on aspects that they had found difficult in class. Although students would prefer to have class recordings available for all topics in postgraduate financial accounting, they also felt that shorter podcasts (or snippets from class recordings) that focused on specific aspects would be even more useful that the entire recorded lecture. The students identified the following risks relating to making class recordings available: the recordings could be made available (by students) to outside parties, class attendance could decrease and there would be less human interaction. In conclusion, students felt that class recordings should not replace traditional lectures but should rather be used as supplement (i.e. a so-called blended learning approach). Thus, to encourage active learning and increase the motivation of students, lecturers should try and incorporate appropriately designed podcasts, focusing on certain aspects, in their courses.

Title: Clinical learning in MBChB V: An ideal response to COVID-19?

Contribution type: Innovation

Contribution format: Presentation

Author(s): Couper, I; Blitz, J; Van Schalkwyk, S; Fish, T; Viljoen, K; Smith, L

Keywords: curriculum renewal, self-regulated learning, service learning, context of learning,

transformation

Abstract:

Background

A new clinical module was developed to enable fifth-year MBChB students to return to the clinical training platform in the context of COVID-19. The Integrated Distributed Engagement to Advance Learning (IDEAL) rotation placed 253 students for 12 weeks at clinical sites across the Western and Northern Cape, from August 2020. The module focuses on clinical practice and learning through service, with on-site support and supervision by local clinicians.

Focus of presentation

Educational innovations in IDEAL will be described, including cocreation of the module, responsiveness to health service needs, distribution of training, the role of learning facilitators and wellbeing supporters, the use of mobile apps and integration of learning.

Description of work done

Students are distributed across 18 different health subdistricts in facilities ranging from regional hospitals to clinics but are all expected to achieve the same integrated outcomes. Learning is self-regulated, based on clinical service participation and logging of patient cases on the Vula mobile application, using a clinical reasoning framework. Local supervisors ensure that students are supported while providing care. Students are guided in their learning journey by 45 learning facilitators who meet online with them fortnightly and 27 wellbeing supporters who review students' reflections weekly.

Links to similar work

IDEAL builds on work done at the Ukwanda Rural Clinical School since 2011 and also the framework for distributed training developed as part of the Stellenbosch University Collaborative Capacity Enhancement through Engagement with Districts (SUCCEED) project.

Implications

It is critical that the value of these innovations is documented and that lessons are learnt from their implementation. A formal evaluation of the model has been initiated using an educational design research approach.

Value to fellow practitioners

We hope to emphasise the value of being able to develop responsive educational innovations by drawing not only on learning theory but also on the evidence built within our own context, over time, while including risk mitigation.

Conclusions

The IDEAL module is a live laboratory, which includes an element of risk, but it is based on sound teaching and learning principles and long-term experience. Initial feedback from students, facilitators and clinicians has been very promising.

Title: Clinical research capacity development during COVID-19: Using a '3P' design

approach to enable rapid adaption of a blended course

Contribution type: Innovation

Contribution format: Presentation

Author(s): Brodovcky, T; Moxley, K

Keywords: research capacity development, clinical research, blended course

Abstract:

The requirement for completing a research project as part of a Master of Medicine (MMed) for medical specialist registration was made mandatory from 2011 (HPCSA, 2010). This requirement has highlighted several difficulties experienced by training centres, including limited clinical research capacity amongst MMed candidates and their research supervisors.

Since formal methodological instruction is often not part of the MMed curriculum, the Research Capacity Development Office at the Faculty of Medicine and Health Sciences previously offered contact-based courses and workshops for MMed candidates. However, these offerings did not always have the desired reach because heavy clinical training schedules take priority. To accommodate flexible learning, we offered a blended Clinical Research Protocol Writing (CRPW) course in 2019. This represented our first attempt at using technology-enhanced training methods for research capacity development.

According to Miles et al. (2017), successful blended courses incorporate three essential components: instructional designers, facilitators and course participants. This course, currently in its second iteration, was timeous considering the current COVID-19 pandemic. When lockdown commenced, we had only a few weeks to adapt the course and prepare for its successful delivery using 'COVID-friendly' educational strategies.

We argue that using our '3P' approach, namely Purpose-driven, Pedagogically suited and Practical, enabled a quick and easy transition to a fully online course in 2020. We describe the components of each 'P' and discuss how these serendipitously contributed to the successful adaptation and delivery of the CRPW course during the pandemic. We also highlight our best practices, which are well aligned with those described by McGee and Reis (2014).

The COVID-19 pandemic has forcefully fast-tracked e-learning practices, and we as facilitators have reflected on our need to be flexible, resilient and open to learning. We have also learnt that having a good understanding of the challenges experienced by our course participants as well as their learning needs contributed to the success of the course. We believe that sharing these lessons might provide useful insight for others who wish to embark on similar initiatives, especially during times of uncertainty and rapid change.

Title: Cooperative learning activities in large physiology classes can improve student

performance

Contribution type: Research

Contribution format: Presentation

Author(s): Essop, F

Keywords: active learning, cooperative learning, undergraduate classes, student success

Abstract:

While the traditional didactic lecture offers some utility, it is largely instructor centred and content driven. For example, physiology students often struggle with relatively high subject loads and this usually leads to increased rote learning and 'blind' memorisation of facts. By contrast, active learning approaches are student centred and aim to engage students by 'doing' in the classroom and thinking more about what they are actually doing (Goodman et al., 2018). The social interdependence theory (Deutsch, 1949) forms the basis of active teaching and learning approaches such as cooperative learning whereby students working together in small groups are motivated to reach common goals (Johnson et al., 2014). This study therefore tested student perceptions regarding the implementation of cooperative learning elements in a relatively large undergraduate physiology class (n = 225) at Stellenbosch University and also whether it had positively impacted on their test performance.

The students freely formed small groups (n = 4) at the start of a five-week cardiovascular physiology lecture series and tackled three separate assignments over this period. This included three in-class cooperative learning sessions that were facilitated by the lecturer and teaching assistants while students also completed group work outside class. The formal cooperative learning element was not utilised as a sole intervention but was embedded within a constructive alignment framework for the course objectives, teaching and learning activities, and assessments. Three surveys were completed (start, middle and end of lecture series) to evaluate student perceptions regarding cooperative learning. The students also wrote a mid-module test and a final test after completion of the lecture series.

Our findings reveal that the cooperative learning exercises were well received, namely positive student responses significantly increased from 60% (start of module) to 79% (end of module). Students also liked the in-class cooperative learning sessions (75% positive response) and indicated that these had enhanced their critical thinking (65-70% positive response) and test preparations (90% positive response). Moreover, their assignment scores progressively increased over the course while their final test scores were significantly higher than in previous years. The implementation of cooperative learning exercises in large undergraduate classes is therefore feasible, and it offers significant potential to improve overall student performance.

Title: Creating a new 'literacies' module for first-year students

Contribution type: Reflection

Contribution format: Presentation

Author(s): Burger, A; De Villiers, M; Swart, M; Fourie, P

Keywords: literacies, computer literacy, information literacy, research literacy, academic literacy

Abstract:

In recent years, lecturers and students in the Faculty of Arts and Social Sciences have expressed concerns about the relevance and nature of the existing computer literacy module Information Skills 172. This module is a compulsory module for first-year students in the faculties of Arts and Social Sciences, Law and Theology, with a class size in excess of 1 300 students.

Challenges include the fact that this module currently focuses almost exclusively on basic computer literacy, which is not necessarily relevant for all students. Furthermore, there are key skills for navigating a new and changing world of information that students do not necessarily gain in the current format of the module. Hence, as a component of the programme renewal process of the Faculty of Arts and Social Sciences, this module was put up for investigation and renewal.

The first stage of this investigation consisted of student surveys and focus group discussions with students who had completed the module as well as colleagues from other faculties affected by changes to it. The results of these conversations went through rounds of discussion within a programme renewal reference group, and additional expertise was bought in to aid in designing a brand-new module with a focus on four different 'literacies' identified by the programme renewal reference group during a think-tank session based on needs expressed by lecturers. The working titles of these focal literacies are computer literacy, information literacy, research literacy and academic literacy.

The new module is now at the point where it is being slotted into a semesterised timeline with a view to submission for first presentation in 2022.

The aim of this paper is to present a comprehensive overview of the process followed in renewing this module and to suggest this process as a potential best-practice guideline for future renewal actions in similar multidisciplinary modules presented to extremely large groups of first-year students.

Title: Creating communities of practice on SUNLearn during emergency remote

teaching: An example from Professional Educational Development of Academics

Contribution type: Reflection

Contribution format: Presentation

Author(s): Van der Merwe, C; Herman, N; Cattell-Holden, K; Jacobs, A; Mohlakoana, M

Keywords: networking, communities of practice

Abstract:

Networking is important in the career progression of academics (Heffernan, 2020). Furthermore, being part of communities of practice (CoP) is an enabler in academics' growth journeys towards becoming scholarly teachers (Van Schalkwyk et al., 2013). Networking, as the process of interacting with others to develop professional networks, could lead to the development of CoP when commonalities are discovered (Wenger, 1998). Creating these networking opportunities is therefore an important aspect of the Professional Educational Development of Academics (PREDAC) short course, aiming to induct new academics into the teaching and learning culture at Stellenbosch University.

During face-to-face contact, the PREDAC course usually provides multiple formal and informal opportunities for participants to network. During emergency remote teaching, a virtual space was created where participants could connect with others. The Group Choice activity on SUNLearn was utilised to enable participants to self-enrol into groups of three through choosing from a range of supplied photographs the one that represented their teaching and learning view. Private channels in Microsoft Teams were used by the groups to connect. Feedback was collected from participants after the activity.

Reflection on the activity followed guidelines by Rolfe et al. (2001). Participants seemed to value the opportunity to connect with other participants. The photograph in common provided a starting point for their conversations, and many appreciated the fact that they could interact with colleagues who shared their teaching and learning views. Learning from each other and realising that they experienced similar challenges and frustrations were seen as positive outcomes of the activity. However, many indicated that they would have liked to interact with participants who had different views and also wished for more opportunities for networking during the short course.

It seems clear that networking activities should be part of the professional learning opportunities for academics and should be incorporated earlier and at regular intervals during the course. This certainly justifies the amount of time and effort that went into the design and execution of this activity in the virtual space. It is also evident that the Group Choice activity on SUNLearn is a helpful tool to allow participants to self-enrol into groups for this kind of activity.

Title: Curriculum alignment at undergraduate level: Military geography at the South

African Military Academy

Contribution type: Research

Contribution format: Presentation

Author(s): Henrico, I; Smit, H; Henrico, S

Keywords: military geography, South African Military Academy, curriculum, Faculty of

Military Science, geography spheres

Abstract:

The importance of military geography in the curricula of military academies cannot be overemphasised because geography plays a significant role during military operations of any nature. Military geography encompasses various social science subfields, among others political science, military history, military strategy and military intelligence. It should therefore be recognised as a force multiplier in terms of educating military students and as a research avenue by both military academic and military training professionals. Military geography as a subject should not focus exclusively on the theory of geography with potential military operational application. It should much rather train soldier-academics to conform to a country's military doctrine for using geospatial information. This study evaluated the geography curricula of two military academies, abroad and in Africa, and one extracontinental civilian tertiary institution to identify generic elements needed in a fit-for-purpose military geography curriculum. The undergraduate military geography curriculum at the South African Military Academy (SAMA) was then assessed against its addressing these generic elements. Three limitations in the military geography curriculum at the SAMA were identified, namely inadequate urban geography coverage, lack of practical geographic information system (GIS) and remote sensing application, and lack of accreditation credits to professional GIS bodies in the curriculum. Solutions were proposed to address the limitations identified in the SAMA undergraduate curriculum.

Title: Decolonising an introductory course in practical theology: Some tentative

reflections

Contribution type: Reflection

Contribution format: Presentation

Author(s): Nell, I

Keywords: decolonisation, theo-drama, pedagogy, curriculum, practical theology

Abstract:

I started 2020 with 130 first-year students enrolled for practical theology and missiology at the Faculty of Theology, Stellenbosch University. The students represent 20 different denominations, 75% of the students are BCI (black, coloured and Indian) and 25% are white. Ten years ago, the same first-year class consisted of 30 students of whom 95% were white and almost all were part of the Reformed tradition. These dramatic demographic changes inevitably led me to reflect deeply on what I taught them (curriculum) and how I facilitated the learning process (pedagogy). Naturally, I had to pay close attention to decolonisation and contextualisation. The basic research question of this contribution is therefore, How does one decolonise a first-year module in practical theology and missiology? The rest of the paper is an attempt to answer this question, and I will take the following route: Firstly, aspects of the changed context will be discussed. Secondly, attention will be given to what is meant by decolonisation, with specific reference to the curriculum. Thirdly, the focus will be on a proposed curriculum that uses a theodramatic approach. Fourthly, I will reflect on the learning process (pedagogy). Fifthly, attention will be given to assessment. Finally, I will conclude with some lessons learnt along the way.

Title: Development of the Design and Analysis of Research Training framework for

clinical research capacity development

Contribution type: Innovation

Contribution format: Presentation

Author(s): Moxley, K; Brodovcky, T

Keywords: research education, research capacity development, clinical research, health

professions education

Abstract:

Research capacity development (RCD) initiatives aim to improve, through appropriate training, the capabilities of individuals to undertake quality research. Research education is a poorly established field, and RCD courses are often not explicitly grounded in pedagogical principles. Making the links between pedagogy and RCD more explicit could be advantageous for determining whether clinical research training initiatives are likely to enhance research competence. This is particularly important for medical faculties nationally that need to provide innovative and learner-centred research education.

Drawing on established curriculum development and analysis frameworks, we have proposed the Design and Analysis of Research Training (DART) framework. We used Kern's six-step approach as foundation and included additional components drawn from other health professions education and researcher development models, such as the CanMEDS and Vitae Researcher Development frameworks.

The DART framework consists of 10 components that can be used to guide the design and analysis of RCD courses. All aspects of the framework have been grounded in sound pedagogical principles to emphasise the role of education ideologies in RCD. This framework is applicable to clinical research training. Its use in the design and analysis of RCD courses could improve the quality of research training and ensure that research competences including relevant knowledge, skills and attitudes are developed amongst course participants.

This framework may represent an important contribution to the research education field. Furthermore, we are currently using the DART framework to critically evaluate our RCD courses, particularly the newly developed Clinical Research Protocol Writing course. Such analysis could provide insight for clinical RCD managers and bridge the gap between RCD course offerings and education theory.

Title: The prediction of student success: Is there an optimal package of school marks?

*Presented in Afrikaans; interpretation services available

Contribution type: Research

Contribution format: Presentation

Author(s): Burger, A; Swart, M; Fourie, P

Keywords: studentesukses, toelatingsvereistes, skoolvakke, skoolpunte

Abstract:

Agtergrond

Die skrapping van aangewese vakke vir universiteitstoelating noodsaak innoverende denke en praktyk in inskrywingsbestuur met die oog op studentesukses. 'n Voorlopige ondersoek (Burger, Swart & Fourie, 2019) het getoon dat geen enkele skoolvak 'n direkte voorspeller van sukses is nie. Vervolgens wil ons vasstel of daar dalk 'n pakket skoolvakke of -punte is wat sodanige voorspellings kan lei.

Navorsingsvraag

Is daar 'n optimale pakket skoolvakke of -punte wat kan voorspel of 'n student sukses sal behaal aan die einde van die eerste studiejaar?

Teoretiese raamwerk

Die teoretiese onderbou van hierdie studie berus op kwantitatiewe data-analise met beperkte omvang. Navorsing wys dat verskeie universiteite skoolvakke in ag neem in hulle toelatingsvereistes (University of the Western Cape Faculty of Arts Admission Requirements, 2020). Kwantitatiewe voorspelbaarheidstoetse kan goeie voorspellers van sukses in terme van skoolvakke en -punte wees (Martin, 2020).

Metode

As 'n opvolgondersoek na Burger, Swart en Fourie (2019) waar bevind is dat enkele skoolvakke op hul eie nie statisties betekenisvolle korrelasies toon met studentesukses nie, is data van daardie ondersoek herbekyk deur te fokus op vakke wat wel effens meer beduidende aanduiders van studentesukses was. Dit behels die vergelyking van vakpakkette in die eerstejaarskohort van 2016, 2017, 2018 en 2019 se toelatingspunte, hul eerstejaarsukses en hul prestasie. Hierdie analise word gedoen met die hulp van die Sentrum vir Statistiese Konsultasie en met inagname van al die relevante institusionele en etiese riglyne.

Implikasies, oorspronklikheid en belang

Die implikasies, oorspronklikheid en belang van hierdie projek stem ooreen met dié van Burger, Swart & Fourie (2019). Die resultate van hierdie ondersoek sal help aanleiding gee tot 'n toelatingsmodel wat beter artikuleer met die veranderende skoolkurrikulum. Dit versterk ook meer billike toelating en uiteindelik groter studentesukses wat belyn is met die instelling se graduandi-attribute. In 'n konteks van toegang tot hoër onderwys as spil vir aktuele gesprekke en institusionele waardevorming, is billikheid en doeltreffendheid by toelating 'n absoluut fundamentele noodsaaklikheid.

Voorlopige resultate

Die voorafwerk wys dat Wiskunde, Lewenswetenskappe, die gemiddeld, Engels Huistaal, die Nasionale Normtoets vir Gesyferdheid en Lewensoriëntering goeie voorspellers van sukses aan die einde van studente se eerstejaar is.

Title: Distance assessment for optimal resource use on the distributed platform

Contribution type: Innovation

Contribution format: Presentation

Author(s): Coetzee, F; Couper, I; Bester, J; Schmutz, S

Keywords: video assessments, COVID-19, distance training

Abstract:

The Rural Clinical School (RCS) based in Worcester places groups of 2-3 final-year medical students at district hospitals for an entire year. The students' learning is centred on patient encounters as they are trained within a longitudinal clerkship (Worley et al., 2016). Students self-select their patients and must identify key learning areas. Assessments consist of a face-to-face interview in which the student presents a patient and is questioned by two examiners using an interview scoring rubric to assess the student's knowledge and clinical reasoning. This is similar to the approach described by Burch and Seggie (2008).

Since 2013, the RCS has used video conferencing activities for lectures, clinical tutorials and patient discussions but not for assessments. During 2019, students were placed at Upington for the first time and they were assessed via video conference by examiners based at the Tygerberg and Worcester campuses.

This Fund for Innovation and Research into Learning and Teaching project set out to acquire the necessary equipment for video conference assessments and to document the examiners' and students' feedback regarding the use of distance assessments instead of face-to-face assessments. This project was expanded during the COVID-19 lockdown since face-to-face assessment interviews had to be cancelled.

The format of the assessment did not change, and the face-to-face assessments were easily migrated to the online environment. The students and examiners provided feedback on what worked and what issues required improvement. In general, examiners and students felt that the distance assessments saved time and resources and besides a few technical issues, most of them felt that these assessments were similar to or better than face-to-face assessments.

Video conference assessments, virtual objective structured clinical examinations and proctoring software were used as solutions by various medical schools across the world to overcome the challenges experienced during COVID 19 (Farooq et al., n.d.; Fuller et al., 2020; Lara et al., 2020). This project specifically evaluated the feasibility and acceptability of using video conference assessments instead of face-to-face assessments for the assessment of patient studies.

Title: Facilitating interactive large classroom workshops using Microsoft Teams

Contribution type: Innovation

Contribution format: Presentation

Author(s): Burger, H; Foiret, J

Keywords: workshops, Microsoft Teams, large classroom

Abstract:

COVID-19 has disrupted education systems across the globe with the Stellenbosch University (SU) Faculty of Medicine and Health Sciences (FMHS) being no exception. In response to the social distancing requirements necessitated by this pandemic, SU implemented a strategy of emergency remote education in March 2020. This required lecturers to rapidly transfer their teaching, learning and assessment activities to online platforms to prevent further loss of academic time. The institutional learning management system (SUNLearn) and other platforms such as Microsoft Teams were harnessed to enable this remote education strategy.

The week-long Palliative Care (PC) module was implemented in the SU FMHS undergraduate medical curriculum in 2017. It aims to equip medical graduates with the basic knowledge, attitudes and skills to provide holistic care to patients and their families facing problems associated with progressive lifethreatening illness, including care during the end-of-life phase and bereavement. The module consists of formal whole-class (300 students) lectures to teach core theoretical content and daily large-group (6 groups of 50 students) workshops in which basic communication, clinician self-care and symptom management skills were taught and practised in smaller subgroups (7-8 students) through activities such as role-playing, debates and discussions. These workshops were deemed an essential part of PC training, and therefore a solution that would allow synchronous large-group interaction as well as small-group interaction was required.

In a collaborative effort, the module coordinator and the Centre for Health Professions Education staff used the Microsoft Teams platform to host these large-group workshops by assigning channel and subchannel meetings that allowed students to synchronously join a large-group meeting with their facilitator and then move in and out of their small-group meetings to complete activities. We will describe the main barriers and enablers that were identified during the development and effective facilitation of these workshops, including rigorous preparation, data usage consideration, upskilling of facilitators and students, optimising student participation, technical support and assessment methods. Additionally, we will report on the feedback received from students and facilitators after completing this novel teaching and learning activity that represents the first case where Microsoft Teams was used to deliver large-scale classroom workshops at SU.

Title: Fostering critically conscious graduates in health professions education

Contribution type: Research

Contribution format: Presentation

Author(s): Jacobs, C; Van Schalkwyk, S; Blitz, J; Volschenk, M

Keywords: responsive curricula, health professions education, higher education, social

justice, critical consciousness.

Abstract:

In countries where the realities of health inequity, the extreme effect of social determinants of health and service in resource-constrained environments, dominate, curricula need to respond by delivering clinically competent professionals who are also critically conscious of the contexts and systems in which they will serve. Curriculum coherence, however, requires that those teaching within a particular programme have a shared set of understandings regarding the broad principles upon which that curriculum is built. A disconnect could have serious implications for achieving the curricular aims. This qualitative study, situated within an interpretivist paradigm, specifically sought to advance a social justice agenda. We explored the range of understandings that health professions education (HPE) teachers in two undergraduate programmes brought as they interpreted the principles underpinning their curricula. Thirty-four respondents, including programme coordinators and module leaders, participated in 11 focus groups and 11 individual interviews. Data were analysed thematically. Themes were clustered around what the respondents' understandings were and what they meant for students, teachers, teaching practices, curriculum development and professional identity. These participants understood the need to develop students who were not only clinically competent but also critically conscious of the contexts in which they served and the health care systems within which they practised. However, there were differing views. Some felt that 'clinical competence' should be emphasised and questioned whether it was their responsibility to address issues of social justice. Implementing curricula that seek to foster critically conscious graduates has implications for the role and identity of the HPE teacher. It raises questions about what counts as knowledge and about how far our responsibility extends in preparing students to take on the role of change agent. The role and identity of the HPE teacher is a crucial element in bridging the disconnect between the intentions of curriculum designers and the delivery of curricula. Bridging this disconnect requires engaging with issues of role and identity among both curriculum designers and HPE teachers. This seldom forms part of the process of curriculum design and points to a re-envisioning of the role of HPE centres in the process of curriculum development.

Title: From novelty to necessity: A reflective self-study of coordinating an Intensive

English Programme during a pandemic lockdown

Contribution type: Reflection

Contribution format: Presentation

Author(s): Bishop, S

Keywords: Intensive English Programme, emergency remote online teaching, teacher

professional development

Abstract:

The Stellenbosch University Language Centre offers undergraduate and postgraduate international students the opportunity to study English in South Africa through the Intensive English Programme (IEP). The IEP is a comprehensive English language course delivered in eight-week blocks from Beginner to Advanced English levels. The first eight-week block of the IEP for 2020 was in its final (assessment) week when South African President Cyril Ramaphosa announced the initial 21-day nation-wide lockdown in response to the COVID-19 pandemic. Seventy percent of the international students in the IEP opted to stay in South Africa and continue their English language classes, despite the uncertainty of a pandemic affecting their personal and academic lives.

This reflective self-study is part of the IEP coordinator's strategic planning and implementation of adjustments made to the IEP over two eight-week teaching blocks in which three ad hoc English teachers and seven international English Second Language students navigated the changing teaching and learning context from face-to-face instruction to online teaching and learning during a pandemic lockdown.

The self-reflection data includes weekly contingency planning reports submitted by the IEP coordinator to her line manager and weekly personal reflections from the IEP coordinator based on feedback received from regular meetings with the three teachers. Gibbs' (1988) reflective cycle was used as a basis for the IEP coordinator's systematic self-reflection on adjustments made to the existing contact programme in order to move to the new emergency remote online teaching and learning environment.

Ultimately, this reflective self-study of the necessary changes made to the IEP by the coordinator during the move to emergency remote online teaching and learning provides a review of the adjustments made to the IEP, offers practical suggestions on how to continue to support teachers and their professional development, and aims to motivate programme coordinators and managers to navigate future online and blended-learning environments.

Title: Harnessing the beast: Taking COVID-19 on a cytology autonomy tour

Contribution type: Innovation

Contribution format: Presentation

Author(s): Mouton, M

Keywords: COVID-19, cytology, ARCS Model of Motivational Design, Legitimation Code

Theory, autonomy

Abstract:

COVID-19 made a dramatic entrance on the global stage in early 2020. It literally brought the world to a standstill. In South Africa, we became aware of the imminent threat as the novel coronavirus wreaked havoc in China and Europe. Unease grew into fear and later obsession. People became fixated on information about the nature and spread of the virus. Meanwhile, I had just started with my cytology lectures and my students became visibly distraught by the unfolding global events, asking many questions about the threat.

In cytology, our students do laboratory practicals – experiential learning that they find fascinating and thrilling. In contrast, they are far less enthusiastic about and engaged in learning the theory part. Cytology lectures often present the content of the textbook – purely theoretical knowledge with no or little real-world context. Real-world examples exist but are often far removed from the lived experiences of most students. However, COVID-19 presented new possibilities and a whole new perspective on the cytology concepts!

This presentation shows how COVID-19 was employed in a first-year cytology class, underpinned by Keller's (1987) ARCS Model of Motivational Design. Four aspects promote and sustain motivation in the learning process: Attention, Relevance, Confidence and Satisfaction. Therefore, I decided to employ a film that dramatically portrayed a viral infection and the 'battle' for the cell, similar to the real-world phenomenon. The autonomy dimension of the Legitimation Code Theory, which explores how knowledge practices are constructed (Maton & Howard, 2018), in this case by the lecturer in class, served as a theoretical framework. The lecture was planned by determining the target content (cytology concepts) and what lay beyond the target (COVID-19) and then deciding how to integrate these into practice by employing autonomy tours — purposeful shifts on the autonomy plane.

Current real-world events present excellent opportunities to integrate different knowledge content into pedagogy, such as teaching cytology concepts using COVID-19. This strategy harnessed the uncertainty caused by the novel coronavirus outbreak to evoke a deeper level of curiosity and engagement among the students. It also established relevance by increasing motivation through using a topic with 'present worth' and 'future usefulness'.

Title: Innovative adaptation of short courses as an emergency teaching response to the

COVID-19 pandemic: Muddy points, highlights and best practices

Contribution type: Innovation

Contribution format: Presentation

Author(s): Hendricks, L; Jessani, N; Esterhuizen, L

Keywords: short course, innovation, online, participatory, engaged learning

Abstract:

Short courses are learning programmes that provide participants with a focused content or specific skills training in a short period of time. Short courses often emphasise experiential skills to complement theoretical knowledge – the latter having greater emphasis in traditional courses. Three such short courses are offered by the Centre for Evidence-Based Health Care at the Department of Global Health, Faculty of Medicine and Health Sciences. These were all facilitated over 2 to 3 days through face-to-face workshops, and participants engaged in group work and practical exercises for most of the time. The workshops were transformed into short courses when the emergency remote teaching response to the COVID-19 pandemic was initiated. Immediately, we needed to adapt (Patricia, 2020). Online learning was no longer an option but a necessity (Dhawan, 2020). Some of the challenges that we experienced were onboarding participants and external facilitators to SUNOnline, time constraints to recording all lectures, finding suitable times for all participants to meet online for peer sessions, bandwidth constraints and electricity outages, and learning to use new software and technologies overnight. The highlights that we experienced were a new set of content ready to be delivered online; ability of global audiences and facilitators (local and international) to attend the courses, which increased their value and brought about shared learning; reduced overhead cost, which increased the number of participants; and flexibility of elearning for participants. The key lessons learnt were the following: (1) Moving workshops online increases the delivery time. (2) Flexibility is necessary regarding timing, length and approach used in the virtual classrooms. (3) Not all students engage in the virtual classroom in the same way. (4) Graphics and video content increase student engagement. (5) Prerecorded lectures and podcasts coupled with shorter live virtual sessions are considered ideal by students. (6) Weekly evaluations are key to flexible online environments. (7) More administrative hours are necessary for online short courses than for shorter faceto-face workshops. In this presentation, we will share the best practices for innovatively adapting a faceto-face practical workshop to an online short course with similar engagement and equitability in terms of Continuing Professional Development accreditation.

Title: Institutional obstacles to authentic transformation at Stellenbosch University

Contribution type: Research

Contribution format: Presentation

Author(s): Jonker, A

Keywords: curriculum transformation, academic literacy models, institutional culture,

transformation, decolonisation

Abstract:

Twenty-six years after the advent of democracy in South Africa, higher education is still characterised by deeply entrenched inequalities of the past. One of the key obstacles to authentic transformation has been identified as the dominant institutional culture in the administration, management, research and teaching practices at universities that undermines such transformation (Myers & Picard, 2007).

Within academic departments, the dominant conviction is still that students need to be inducted into the disciplinary conventions so that they can learn to think like a sociologist, psychologist or political scientist, as proposed by academic socialisation approaches. According to Lea and Street (2006), academic socialisation approaches posit that subject fields and disciplines use various genres and discourses that remain relatively stable for the construction of knowledge; hence, students who familiarise themselves with the basic building blocks of a particular academic discipline will be able to reproduce its discourse. Lillis (2006) makes a further distinction between academic socialisation approaches whereby the development of writing involves implicit induction into disciplinary conventions and approaches whereby induction is explicit. The assumption is that through this induction process, students will eventually assimilate or acculturate into the disciplinary and subject-based discourses and genres.

The criticism raised against these approaches is that they assume that the academic context is a relatively homogeneous culture whose practices can be learnt in order to gain access to university. These approaches do not acknowledge the variety of communities of practice within the academic context (Lea, 2004).

In this paper, I shall examine the Higher Education Development model described by Myers and Picard (2007), which marks a shift in focus away from developing 'the underprepared student' to highlighting the need for changes in policy and practice within institutions. The assumption is that the student is no longer regarded as the only one who must adjust to meet the expectations of academic study; the academic institution must also change to meet the diverse needs of students.

Title: Interpreting science: Discoveries in translation

Contribution type: Research

Contribution format: Presentation

Author(s): De Jager, S; Lötter, R; Southey, P

Keywords: interpreting, meaning making, pedagogy, reflection, assessment

Abstract:

With the move to emergency remote teaching at Stellenbosch University (SU), the Language Centre's Interpreting Service has shifted from live interpreting to providing interpreted podcasts and videos. Lecturers now have the unusual opportunity to review the interpreted product of their lectures. This presents an opportunity for the Interpreting Service and lecturers to collaborate on a project of comparative assessment of the translated lecture.

In this presentation, two interpreters (Sanet and Risha) and a physics lecturer (Philip) reflect on independent assessments of one of Philip's translated podcasts through the lens of the reflective framework of Rolfe et al. (2001). We present a side-by-side comparison of the interpreters' and lecturer's assessments and discuss questions such as, Did the Afrikaans students receive the same benefit from the translated lecture as the English students did from the original? Were the same learning outcomes addressed and explained? What improvements could be made?

The results and ensuing discussion highlight two important issues:

- (i) The perception of interpreting is often inconsistent with the quality of the interpreted product the interpreted lecture is frequently compared to a pedagogical ideal instead of considering the limitations of the original lecture on which the translation was built. This may stem from a perception of interpreting as a 'word-making' process as opposed to a 'meaning-making' process.
- (ii) The assistance that interpreters can provide to lecturers in producing a quality pedagogical product is underutilised. When lecturers view their lecture through the eyes of an interpreter, it forces them to examine the clarity, coherence and overall quality of meaning of every sentence. Interpreters can therefore be considered as the first line of "does this make sense?".

The SU Teaching and Learning Policy (2018:2) emphasises that knowledge "is a shared endeavour". We see the interpreting service as an obvious yet untapped resource for the enhancement of teaching and learning at SU. It is important then that we foster closer relationships between lecturers and interpreters as collaborative 'meaning makers' — our presentation will make a few suggestions as to how we might achieve this.

Title: Learning to sit in silence: Reflections on online teaching strategies

Contribution type: Reflection

Contribution format: Presentation

Author(s): Delport, S

Keywords: teaching strategies, online, postgraduate, writing skills

Abstract:

Since 2001, the Writing Lab has presented various academic writing workshops to postgraduate students. The workshops rely heavily on the facilitators' interaction with the participants and the participants' interaction with each other to create a safe space for the participants where they feel comfortable to try out their academic voices without fear of judgement or ridicule. Therefore, the workshops have always taken place face to face and the facilitators often depended on participants' nonverbal cues to gauge their levels of engagement and understanding.

When the lockdown was announced, the Writing Lab redesigned all its workshops so that they could be conducted online. One of the challenges that we, the facilitators, faced was not being able to rely on participants' nonverbal cues. When we asked a question, we did not know whether participants were silent because they were thinking, typing an answer in the chat box or had difficulty with the question. During previous workshops, we could 'read' the participants' nonverbal cues and either rephrase the question or wait for them to respond.

Since the online workshops are all recorded, I could revisit the sessions and reflect on my own and my cofacilitators' teaching strategies. For example, I noticed that after asking a question, we tended to wait less than 30 seconds before rephrasing the question or offering possible answers, which was not enough time for participants to consider the question and formulate a response. We had to learn to sit in silence.

After each session, I would write down my reflections on the teaching strategies that I had used successfully before, such as uncomfortable silences, to prompt responses from the participants and to decide how I could adapt these strategies for the online environment. Reflecting on the teaching strategies that I use in the online space has helped me to realign my teaching practice with the Writing Lab's pedagogical approach. From participants' feedback, it appears that the Writing Lab's workshop facilitators can still create a safe space for participants to interact with each other and develop their academic voices.

Title: Learning to teach without school-based experience: Conundrums and

possibilities in a South African context

Contribution type: Research

Contribution format: Presentation

Author(s): Robinson, M; Rusznyak, L

Keywords: initial teacher education, COVID-19, situational and relational learning,

pedagogical reasoning, teaching practicum

Abstract:

COVID-19 and the national lockdown saw initial teacher education students in South Africa moving at short notice to online learning, with teacher educators facing the task of adapting their teaching to an online modality as well as maintaining the academic integrity of their modules. Schools too were closed, creating the possible scenario that new teachers might graduate with little or no practical exposure to the classroom. A previously unheard-of question emerged, namely whether immersion in schools was nonnegotiable in learning to be a teacher.

The key pedagogical challenge was that of constructing practice-focused learning that could emulate a good-quality school-based experience but would not be dependent on actual time in schools. Located within long-standing debates about the relationship between theory and practice in teacher education (Ord & Nuttall, 2016), the paper outlines some conceptual and practical debates that emerged in South Africa during this time. Three analytic concepts form the frame of reference: situational learning, relational learning and pedagogical reasoning (Robinson & Ruzsnyak, 2020). Further conceptual framing is offered by the South African policy on teacher education (DHET, 2015) that distinguishes between learning-from-practice (drawing on case studies, video records and so on to theorise practice and form a basis for learning) and learning-in-practice (teaching in authentic classroom environments). As universities struggle with how to provide school-based exposure during the COVID-19 period, the idea of learning-from-practice may begin to receive greater attention than in the past. How this might impact on the design and location of teacher education programmes in South Africa will be a question worth tracking into the future.

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Robinson, M. & Rusznyak, L. 2020. Learning to teach without school-based experience: Conundrums and possibilities in a South African context. *Journal of Education for Teaching*. https://doi.org/10.1080/02607476.2020.1800408

Title: Life happens: Designing a video game for learning (in 2020)

Contribution type: Innovation

Contribution format: Presentation

Author(s): Adendorff, H; Pretorius, C; Rootman-Le Grange, I

Keywords: game-based learning, learning facilitation, tutor training

Abstract:

Becoming a legitimate knower in science usually happens through developing a specific 'insight' or learning the accepted methods and/or objects of study of your field. Science courses thus tend to focus on the mastery of the objects and methods of study. Becoming a legitimate knower in the field of teaching, in contrast, requires developing the right disposition or 'gaze', typically through prolonged immersion in specific literature or interaction with legitimate knowers. It thus stands to reason that becoming a legitimate STEM (science, technology, engineering and mathematics) teacher would require both the correct insight for your scientific discipline and the 'cultivated gaze' privileged by the field of teaching.

We have previously (SoTL, 2018) showed that the Science Learning Facilitation short courses, aimed at tutors, are designed for insight development, valorising content or theory over disposition. We concluded that these online courses needed to include more opportunities for developing a cultivated gaze but found that their short online format was not conducive to this. Game-based learning offered a potential solution. In 2020, we thus embarked on developing a video game to address both the cognitive and affective outcomes of our short courses. We chose a situational rather than the more typical transactional design. In situational designs, play happens in the player's mind while transactional designs treat the game and the player as separate entities, with play happening at the interface between the two.

In this paper, we will give you a sneak peak of how we tried to translate this into elements of play. We will also expand on why we chose to design our own game. Drawing on Self-Determination Theory, Legitimation Code Theory and Upton's work on situational design, we will reflect, using the reflective model of Rolfe et al. (2001), on some of our choices and experiences along this road. The value of video games in supporting learning of various kinds has been the subject of a growing body of knowledge. We hope to add to this conversation and the conversation about becoming STEM teachers by delving into the design choices involved in this project.

Title: Mathematics teachers' perceptions of a practice-based teacher professional

learning programme

Contribution type: Research

Contribution format: Presentation

Author(s): Jeram, R; Philander, C

Keywords: teacher education, professional learning, practice theory, practice-based teacher

professional learning, theory-practice gap

Abstract:

When the current literature on teacher education is surveyed, one criticism is beginning to appear as a crucial factor in why teacher education activities are generally not enhancing the practices of teachers and improving student learning. This criticism is mainly aimed at the inability of these activities to influence teaching positively because the activities are mainly linked to theory with no link to teachers' practice within the teachers' context. Literature on teacher education is beginning to focus on teacher professional learning as a mechanism to reduce this theory-practice gap and thus impact positively on teachers' practices within the classroom (Ball & Cohen, 1999; Ball & Bass, 2000; McCormack et al., 2006; Opfer & Pedder, 2011; NEEDU, 2012; Akiba & Liang, 2016). In South Africa, the Advanced Diploma in Education (ADE) is a Level 7 postgraduate teacher qualification, registered on the South African National Qualifications Framework (NQF), developed in accordance with the Minimum Requirements for Teacher Education Qualifications (MRTEQ) policy for teacher education programmes. Utilising an innovative approach called practice-based teacher professional learning, the objective of the ADE is to fulfil a recognised need of providing a well-rounded, broad education that equips currently serving teachers with the subject content knowledge base, pedagogical theory and methodology that will enable them to demonstrate competence and responsibility as academics and professionals, thus minimising the theorypractice gap within teacher education. Utilising Guskey's (2002) framework for evaluating professional development, this paper, which forms part of a longitudinal study, attempts to answer the following research question: What are mathematics teachers' perceptions of being on a practice-based professional learning programme called the ADE: Mathematics Teaching? The sample is made up of teachers who are Intermediate Phase (grades 4-6), Senior Phase (grades 7-9) and Further Education and Training Phase (grades 10-12) mathematics teachers. Using an interpretative qualitative approach, the initial findings from semistructured interviews indicate that teachers' perceptions of the programme are positive and that the knowledge and skills learnt could support them in minimising their own theorypractice gaps.

Title: More than writing? Working online with student writers in 2020

Contribution type: Reflection

Contribution format: Presentation

Author(s): Richards, R; Lackay, A; Delport, S

Keywords: writing, care, wellbeing, student success

Abstract:

The Writing Lab works across all faculties. We offer a range of writing workshops to postgraduates and one-to-one consultations to all students. We reach over 4 000 students a year through our activities, and since 2001, these activities have been almost entirely face to face.

At first, the COVID-19 pandemic online migration was extremely stressful. From mid-March to the end of April 2020, we moved all our offerings online. This entailed familiarising ourselves with and adjusting to Microsoft Teams while remaining true to our collaborative pedagogy. Our workload increased dramatically because our systems needed to be overhauled to meet the crisis. Some systems had to revert to being manual at this time. We cancelled the workshops for April so that we could do the necessary research and preparation to move our workshops online. We also needed to consider how our consultants (who are postgraduates themselves) and student writers would manage data costs and access us. Working in physically different locations while functioning as a team took some agility. While this was happening, we were receiving daily panicked messages from students about their studies, being off campus and feeling out of their depth.

Initially, we were unsure about whether we could retain our pedagogical approach. We were also very concerned about the wellbeing of our students and consultants. However, our pedagogy is essentially a pedagogy of kindness and respect, which is especially useful under our present circumstances. We are finding a different type of inclusivity online: more people can join the workshops, and different ways of interacting on Microsoft Teams can lead to more participatory rather than face-to-face discussions. We have also started building in reflection time for ourselves and time to deal with our emotions.

Our paper uses Schön's reflection-in-action and reflection-on-action to consider our experience as Writing Lab practitioners moving from face-to-face teaching to online work during the pandemic. We also reflect on future action.

We miss sharing a physical space with our writers. Something is definitely lost in the online space, but we found that we could play different roles beyond teaching by using a continued practice of care.

Title: Pandemic pedagogy: Transition to a virtual journal club in anatomy

Contribution type: Research

Contribution format: Presentation

Author(s): Keet, K; Correia, J; Venter, R; Baatjes, K

Keywords: anatomy education, online learning, COVID-19 pandemic, journal club

Abstract:

Background

The postgraduate journal club, a module in the honours programme, aims to improve scientific communication and critical appraisal of articles and has conventionally been run in a face-to-face manner. The COVID-19 pandemic necessitated an abrupt conversion to online teaching and learning. An asynchronous approach was not considered optimal for the learning objectives of the club. Instead, a synchronous virtual journal club was deemed appropriate. Online journal clubs are popular in medical specialties but not commonplace in anatomy sciences, and it is not known how students perceived this concept. The study aimed to develop, implement and appraise the virtual journal club by exploring the perceptions of the participating students.

Methods

A qualitative exploratory design within an interpretive/constructivist paradigm was followed. Ethical approval (N20/05/056) and institutional permission were obtained. After ensuring optimal connectivity by students, a synchronous journal club was developed with an asynchronous channel for continuing discussions after the virtual contact session. A questionnaire was administered via the SUNLearn learning platform with 21 questions centring around students' experiences and the content discussed in both face-to-face and online sessions. Responses were analysed through thematic analysis by following the six-phase process of Braun and Clarke (2006).

Results

Data coding and theme generation are ongoing. The preliminary perspectives of students are that the journal club is beneficial to their current work as well as to their future careers as academics. Although an initial adjustment to the online environment was required, all students enjoyed the sessions and would consider continuing in a hybrid format after lockdown. Students perceive the content as relevant and apply the skills obtained to their research. A further advantage is the convenience of participating from the home environment. Limitations include loss of visual cues, with individuals interrupting one another or periods of silence.

Conclusion

Despite the abrupt transition, students adapted rapidly to the online format and found the sessions beneficial and relevant to their studies. There are no reports of virtual journal clubs in anatomy, making our approach unique and innovative. In future, a hybrid approach to the journal club will be considered.

Title: Patient-centred care: The patient's perspective – a mixed-methods pilot study

Contribution type: Research

Contribution format: Presentation

Author(s): Archer, E; Turner, R

Keywords: empathy, communication skills, medical students, patient voices

Abstract:

Background: Patient-centeredness is a broad concept, a moral philosophy. Patient-centred care can be viewed as the actions of patient-centeredness. One of the most pertinent actions that a health care practitioner can utilise to deliver patient-centred care is empathic communication (Levinson et al., 2010). While many medical programmes include empathetic communication skills as part of their curricula, the recipients of this care are often not asked about the relevance of this teaching (Epstein et al., 2005).

Aim: To determine whether the Western constructs of empathy were relevant in our context and also whether there were any parts of the medical interview during which participants felt that it was especially important to be communicated with in their home language.

Methods: This was a mixed-methods pilot study using an explanatory sequential design. The setting was two urban communities within the City of Cape Town. Participants who would typically make use of public health care facilities and who were first-language Afrikaans or isiXhosa speakers were conveniently sampled for the survey (n = 120). A subgroup of participants was invited to take part in a follow-up focus group discussion to add clarity to the survey responses (n = 40).

Results and conclusion: Western constructs for empathy appear to be relevant within our multicultural context. Patients want to be able to communicate with their doctors and to understand the cause of their problems as well as the management plan. The emphasis on empathy as an essential skill points towards the importance of training doctors in empathic communication. Finally, while the numbers in this pilot study were too small to be generalisable, it was evident that patient-centred care was not perceived to be implemented in some public health care facilities attended by the participants, which resulted in their feeling unseen and disrespected.

Epstein, R.M., Franks, P., Fiscella, K., Shields, C.G., Meldrum, S.C., Kravitz, R.L. & Duberstein, P.R. 2005. Measuring patient-centred communication in patient-physician consultations: Theoretical and practical issues. *Social Science & Medicine*, 61(7):1516-1528.

Levinson W., Lesser C.S. & Epstein R.M. 2010. Developing physician communication skills for patient-centered care. *Health Affairs*, 29(7):1310-1318. DOI: 10.1377/hlthaff.2009.0450

Title: Perceptions on blended learning and its effective implementation at Stellenbosch

University

Contribution type: Research

Contribution format: Presentation

Author(s): Van Wyk, R; Boleslawsky, J; Padayachy, S; Olyn, C

Keywords: blended learning, CA2025, student perceptions, accounting students, change

management

Abstract:

Increasingly, students prefer blended learning courses, which combine aspects of traditional face-to-face classes and online learning (Owston et al., 2013), as blended learning allows increased flexibility and autonomy (Blocher et al., 2002). As a result of the 2020 coronavirus crisis, Stellenbosch University resorted to online learning methods for most students, including those studying to become chartered accountants (CAs) at the School of Accountancy (SoA). The South African Institute for Chartered Accountants (SAICA) is also challenging universities to change their current curriculums for prospective CAs to enable alignment with the new CA2025 Competency Framework (SAICA, 2018). The primary objective of the present study was to evaluate the perceptions of SoA students on online learning and the implementation thereof during the coronavirus crisis. The secondary objective was to provide possible amendments pertaining to online teaching techniques that could be included in a blended learning approach by the SoA in future years to improve the effectiveness of its teaching programme and to facilitate the development of the competencies prescribed by the CA2025 Competency Framework. Electronic questionnaires containing multiple-choice, true/false and open-ended questions were administered to all third-year and honours-level SoA students during 2020. Quantitative data was analysed statistically, while qualitative data was analysed by identifying common themes. We found that SoA students had a very positive perception regarding online learning and its implementation at the SoA. The students enjoyed asking questions using the online discussion forum (this was perceived to be a nonthreatening method), and the asynchronous nature of online learning allowed them to work through the material at their own pace. After the coronavirus crisis has passed, students would like to have faceto-face classes combined with some components of online learning. Implications for the SoA and the wider academic community are that students enjoy some aspects of online teaching and that these aspects could be integrated into a blended learning model of teaching prospective CAs, which would facilitate the development of the competencies required by the CA2025 Competency Framework.

Title: Privacy legislation, innovative teaching practices and emergency remote teaching

Contribution type: Innovation

Contribution format: Presentation

Author(s): Toi, J

Keywords: privacy, data protection, POPIA

Abstract:

Privacy is a human right, but as academics, how do we give effect to that right in the lecture hall, in the streamed virtual session and across the variety of digital platforms that we and our students may use? Recently, two significant events have forced us to reconsider our answers to this question:

- 1. On 26 March 2020, South Africa implemented a national lockdown in response to the COVID-19 pandemic. Public universities, as a result, "had little choice but to embark on wide-scale emergency [remote] teaching and learning to salvage the 2020 academic year" (Universities South Africa, 2020).
- 2. On 22 June 2020, the Presidency of South Africa announced that the Protection of Personal Information Act (4 of 2013) (POPIA) would commence in full on 1 July 2020, with all South African organisations required to comply with the Act by 1 July 2021 (The Presidency of the Republic of South Africa, 2020).

Within this context, how do we balance our students' right to privacy, our personal right to privacy, and our teaching and learning responsibilities? Thankfully, POPIA is a principles-based piece of legislation "that is designed to be applied intelligently to many unique situations, rather than to provide a fixed set of rules that must be applied universally" (De Stadler & Esselaar, 2015). Through an examination of relevant legislation, academic literature and professional literature, coupled with practical experience in the development of privacy programmes and initiatives, the author has identified several privacy-related questions that each lecturer should consider during the development and implementation of innovative teaching practices (whether online or not) and when reviewing existing practices. To round out the discussion, the author further discusses the practical measures that a lecturer can take to help "manage the risks to the rights and freedoms of natural persons resulting from the processing of personal information" (Article 29 Data Protection Working Party, 2017) while building and demonstrating compliance with privacy legislation.

Title: Problem-based learning online: Moving ahead or leaving behind?

Contribution type: Reflection

Contribution format: Presentation

Author(s): Lupton-Smith, A; Unger, M; Schmutz, S

Keywords: problem-based learning, emergency remote teaching

Abstract:

Problem-based learning (PBL) affords students the opportunity to develop skills including problem solving, clinical reasoning, self-directed learning and teamwork, all essential for clinical practice (Barrows, 1986; Norman, 1988). COVID-19 forced the suspension of clinical physiotherapy. PBL could provide third-year physiotherapy students the opportunity to develop some of these skills in the absence of clinical practice. With the rapid move to emergency remote teaching, PBL was moved online. Given that online teaching and learning will remain for the foreseeable future, we reflect on our experience of taking PBL online using the reflective model of Rolfe et al. (2001) to improve future offerings.

An online model employing synchronous and asynchronous activities including discussion forums, shared documents, meetings and assignments was used. Hands-on practical sessions were replaced with activities such as video analyses or self-recording of students' performing techniques/delivering classes. A blended model of facilitation including remote meetings, engagement on forums and working documents, and feedback on the final product (students' solution to the problem) guided the process.

PBL online was well received by students. However, it is uncertain whether benefits such as development of critical thinking and reasoning were achieved. Students were still heavily focused on knowledge rather than understanding and application of knowledge as was evident in their final products, facilitator feedback and assessments (modified essay questions). Because of the rapid move online, there was a risk of insufficient time for students and facilitators to adapt to the new online environment. Cases were delivered at a rapid pace in order to complete the year within reduced timeframes, leaving little room for deeper learning. We recognise that some students were potentially left behind and/or saturated. The lack of clinical exposure (minimal to none) was evident in the students' difficulty in gaining understanding of the contextual problems presented.

Looking ahead with hindsight, PBL online requires more time than the traditional face-to-face delivery and careful design of activities to allow students time to adjust and to engage towards deep learning. We found context to be a cornerstone in student learning, and when it is not available in real life, it should be thoughtfully woven into the design of online activities.

Title: Reading in and for the PhD: Learning the rules of the game

Contribution type: Reflection

Contribution format: Presentation

Author(s): Tshuma, N

Keywords: reading, PhD, discipline, discourse

Abstract:

Reading in and for the PhD is a complex process. It entails not only learning how to read disciplinary texts but also consideration of where and how to find these texts, how to assess their quality, how to identify and connect the key authors and how to use these authoritatively to support the arguments and claims made in the dissertation. Research shows that bachelor's and master's degrees do not adequately prepare doctoral scholars for the kind of reading that they have to do at PhD level and that they do not automatically acquire this set of practices at the start of their terminal degree. While doctoral scholars do eventually acquire these practices tacitly through interactions with their supervisors and peers, the current lockdown has made this difficult to accomplish.

Research shows that the focus of most supervisors and research in the field has been on writing at doctoral level and that supervisors do not see reading support as their primary responsibility. I will attempt to challenge this notion in my presentation by showing that a focus on reading actually aids the writing process as well. I will also show that explicitly supporting reading at doctoral level is critical for this lockdown period as doctoral scholars do not have ready access to their supervisors and peers.

The specific question that I will tackle in this reflective presentation is, What is the supervisor's role in supporting reading at PhD level? Through the lens of Gee's (2008) concept of discourses, I will frame reading as a performance of the doctoral discourse, an acquired and 'apprenticed' set of practices. I will reflect on practical approaches that help students to learn the 'rules of the reading game' in order to become accepted as legitimate members of the doctoral discourse. The supervisor's role in supporting reading will be foregrounded, and the presentation will include reflective questions to assist other supervisors in reflecting on their role in this process.

Title: Reflection on interpreting podcasts: An inclusive and multilingual approach

Contribution type: Reflection

Contribution format: Presentation

Author(s): Van Zyl-Bekker, S

Keywords: podcasts, interpreting, inclusive, multilingualism

Abstract:

With the stringent regulations introduced by the government's National Coronavirus Command Council in March 2020 to curb the spread of COVID-19, traditional classes at Stellenbosch University were cancelled, forcing lecturers to resort to emergency remote teaching, mostly in the form of podcasts.

As a result, podcasts also replaced real-time face-to-face simultaneous classroom interpreting to ensure multilingualism in the classroom and to facilitate teaching and learning. As an educational interpreter, I will reflect on real examples and difficulties that occurred during this time that I have experienced while podcasts were completed. These reflections provide insight into how podcasts can possibly be improved by incorporating the principles of traditional lectures and real-time classroom interpreting into them to improve and facilitate sustainable teaching and learning even more effectively.

The most important factor in successful interpreting (multilingual podcasting) and translated PPT-slides is an understanding of the subject-specific terminology and a relationship of trust and cooperation between the lecturer and the interpreter/podcaster. If the interpreter does not understand the content, it is impossible to make meaning; therefore, she/he cannot facilitate effective teaching and learning. A professional relationship between the interpreter and the lecturer is imperative in making meaning, even more so without any nonverbal clues during communication. In order to translate content-specific material, the interpreter must first and foremost understand the content and the context of the learning material. If the interpreter experiences certain aspects of the lecturer's podcast as challenging, the student might experience the same challenges. Examples of these challenges can be speech delivery, audibility and sound quality of the podcast, length of the podcast and layout of the slides and the soundtracks accompanying each slide.

Reflection on these difficulties could prove to be helpful in developing a sustainable hybrid learning model and strategies for improvement of academic delivery whereby podcasts and traditional classes are combined to facilitate teaching and learning in a multilingual classroom.

Title: Reflections of Writing Laboratory consultants on online consultations during the

COVID-19 pandemic

Contribution type: Reflection

Contribution format: Presentation

Author(s): Nyeleka, S; Moodley, N

Keywords: innovation, reflection, professionalism, technology, consultations

Abstract:

During the COVID-19 pandemic, innovation at Stellenbosch University's (SU) Writing Laboratory has become opportunistic. The presentation explores the meaning of innovation for students and writing consultants from the perspectives of two student writing consultants at SU's Writing Laboratory where innovation is understood in two ways: technological communication and professionalism.

Firstly, technological communication highlights that the dynamic of virtual consultations is an opportunity for both consultants and students to learn new ways of interacting and perhaps to unlearn the old normal. During COVID-19, innovation through online infrastructure has magnified the importance of active participation and compassion. This is because virtual platforms such as Skype, Microsoft Teams and Zoom are very different from the physical contact and engagement of the actual Writing Laboratory space. Furthermore, innovation in online communication also speaks to a heightened experience and feelings of anxiety around computer illiteracy for both writing consultants and students.

Secondly, the notion of professionalism has redefined the relationship between students and consultants as well as between coordinators and administrators in the Writing Laboratory. Regarding student professionalism, some students miss their writing consultations due to oversleeping, technological difficulties and data expenses; the consultant only discovers these reasons when the student is absent and the consultation passes. Such circumstances indicate the necessity for open communication among students, writing consultants, coordinators and administration in the virtual collaboration of a writing consultation, as would be the case during physical writing consultations. Innovation has therefore emphasised the significance of professionalism that also stands alongside understanding, punctuality and transparency.

Therefore, in the context of working at the Writing Laboratory under COVID-19 conditions, technological communication and professionalism are an attempt at innovation that tries to recreate the lived experience of a contact consultation through virtual platforms.

Title: Repurposed student educational videos: A useful archive for online learning

material

Contribution type: Innovation

Contribution format: Presentation

Author(s): Von der Heyden, B

Keywords: videos, practical learning, near-peer

Abstract:

Video podcasts represent an established blended-learning microtool by which online teaching can be effectively transmitted (Park & Kim, 2018; Ahmad, 2017). Previously (Von der Heyden, 2017), the benefits of video learning content were explored from a near-peer learning perspective (Williams & Fowler, 2014) and from a technological pedagogical content knowledge development perspective (Koehler & Mishra, 2009). In the present contribution, the usefulness of student-developed video material as a rich resource of practical and field experiences is explored. The results highlight that this repository of material is invaluable in exposing students to real-world examples and experiences of the applied aspects of geology, particularly in this unusual time in which neither practical contact sessions nor field excursions are possible. The benefits associated with the repository include that it is student centred (i.e. available in a style and language that is easily accessible to university-level students), that associated legal ramifications have been considered (signed declarations) and that it is well archived and editable. Videos being well archived and editable are important for situations in which the learning value of the original student videos was not of sufficiently high standard or the videos did not contain sufficient content to meet the curriculum requirements. Student feedback indicates that the use of video podcasts strongly enhances the students' experiences of applied aspects of earth sciences during online learning, especially when used in concert with more traditional online contact sessions. The results presented herein thus highlight the need for a sufficient depth of field-orientated video footage to augment student learning of applied sciences, especially in circumstances where practical exposures are not possible. Given the potential for future pandemics, it is advised that other practical-intensive disciplines start to develop their own extensive and well-archived repositories of video material and that the University consider special cloud storage facilities to ensure the material's long-term security.

Title: Revisiting teaching in teacher education: Reflecting on the Curriculum Studies

module

Contribution type: Reflection

Contribution format: Presentation

Author(s): Botha, M

Keywords: self-reflection, teaching, teacher education, curriculum

Abstract:

As lecturer in the Postgraduate Certificate in Education programme responsible for Curriculum Studies, I endeavour to provide good teaching to promote effective learning in teacher education. Traditional lecture-centred approaches dominate teaching in this module; therefore, students' involvement in learning becomes passive. Students do not critically engage with the topics addressed during normal lectures, which was amplified during the COVID-19 pandemic lockdown. The question why students are struggling to engage critically with content became important. My self-reflective praxis, framed by the 19th-century canonical curriculum question of what knowledge is of most worth (Spencer, cited in Broudy, 1982), was prompted by whether this curriculum was conducive to modern-day student needs.

As reflection is considered crucial in the field of teacher education (Clará, 2015), I started this journey of self-reflection steered by the reflective model of Rolfe et al. (2001) that asks "What?", "So what?" and "Now what?" in an effort to find ways to guiding students in preparation for the yet unknown teaching future.

Using a constructivist approach, students were exposed to the topic of assessment, an ever-present reality in teacher education (Le Grange et al., 2015) and one of the many facets/skills required in promoting effective learning. Students were tasked to engage with relevant documents regarding assessment, for example the National Protocol for Assessment, and to design summative assessments of learning according to these prescriptions in preparation for school assessment.

Although a constructivist approach was attempted, students still struggled to engage critically with the curriculum, their own learning and dialogue with the "knowledgeable other" (Vygotsky, 1978:86), the educator, amplified by the current distance learning environment.

As educator, I feel responsible for curriculum improvement/change whereby students invest in constructing their own learning, preparing as teachers of/for the future. Due to forced distance learning, critical engagement became challenging and did not succeed as anticipated. Curriculum changes empowering students in shaping their education and promoting active learning through instructional strategies such as reflection and problem-based designs are imperative for addressing what knowledge and skills are worth.

I embarked on this journey of self-reflection, revisiting teaching and what knowledge was of most worth in teacher education and becoming a change agent preparing a new generation of teachers for an unknown future. [Back to Index]

Title: Spiritual fitness, resilience and experiences of online learning: A case study of

students and staff of the South African Military Academy

Contribution type: Reflection

Contribution format: Presentation

Author(s): Van Diemel, R

Keywords: spiritual fitness, resilience, online learning

Abstract:

The COVID-19 pandemic had a profound effect on higher education, forcing lecturers, students and other stakeholders to face a sudden transition from residential or face-to-face lectures to online learning. While most, if not all, traditional universities in the country were closed for several weeks, the Faculty of Military Science of Stellenbosch University remained open.

Moving online halfway through the semester forced the lecturers to think critically about online learning, completing the curriculum in ways that addressed course-learning goals while dealing with students' and their own anxieties. Student anxiety was compounded by the abrupt shift of all courses to online — many of them having lecturers with little experience of the pedagogy of online learning — along with sudden life changes: losing the support system of face-to-face social interactions and being under lockdown rules that prevented them from leaving the campus during the semester recess period.

The main aim of the study was to explore the impact of spiritual wellbeing and resilience on staff's and students' experience of online learning during the coronavirus pandemic.

Research objectives

To address the main research aim, this study pursued the following research objectives:

- 1. Exploring staff's and students' perception of their spiritual wellness.
- 2. Determining staff's and students' levels of resilience.
- 3. Determining the relationship between spiritual wellbeing and resilience.
- 4. Establishing the impact of spiritual wellness and resilience on staff's and students' overall experience of online learning.

Theoretical framework and empirical objectives

This study was guided by three theories, namely the theory of online learning, the theory of spirituality and the theory of resilience. The theoretical framework informed the following empirical objectives, namely to determine

- the level and value of spirituality in a sample of students and staff of the South African Military Academy;
- the level of resilience of students and staff;
- the relationship between the spirituality and resilience of students and staff; and
- the value of support by the offices of the General Commanding and Dean.

Take-home message

The management of the South African Military Academy has a duty to nurture military students to spiritual and resilience maturity.

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Title: Stellenbosch University's Private Students Organisation blended engagement

model

Contribution type: Innovation

Contribution format: Presentation

Author(s): Sieberhagen, M; Georgiades, J

Keywords: blended model

Abstract:

In 2020, the COVID19 lockdown forced students back home and away from their student communities. The Stellenbosch University (SU) Private Student Organisation (PSO) Office took this opportunity to move to a blended virtual community model to engage students and connect them to each other, enabling and continuing the PSO community experience around the country. The feasibility of a blended model was investigated for student communities at SU, both during the national lockdown and after the lockdown will be lifted. The PSO Office staff, in collaboration with the PSO student leadership, developed a virtual community template. The template was adapted and personalised by each PSO community's leadership to offer support and engagement with the following themes: academic support, sports and lifestyle, culture, sustainability, critical engagement, mentoring and mental health, and leadership development. The core intentions were to support and connect students to each other and SU during the COVID-19 lockdown. The virtual engagement template was used to map out and plan the virtual offerings for the duration of the lockdown. Various online engagement platforms were utilised, according to the needs of each theme, namely Microsoft Teams, Zoom, Facebook, Instagram, WhatsApp, SunSurvey and more. The outcome of the virtual offering was overwhelmingly positive. Students showed a willingness and a need to engage during this period of isolation. In some instances, engagement with the virtual offerings online was significantly higher than what the PSO Office had previously experienced on campus. This has resulted in the PSO Office's pursuing a direction where a blended community model will be at the forefront of the current and future planning. The blended model has resulted in more engagement from students through various platforms that will continue after lockdown as it enables more students to benefit from the support and resources that the PSO community offers. In addition, the blended community method can be implemented throughout various structures and can provide students and staff with more versatile engagement options to connect.

Title: Strategies to teach graduate attributes: A scoping review

Contribution type: Research

Contribution format: Presentation

Author(s): Louw, A; Schultz, T

Keywords: graduate attributes, teaching strategies, scoping review

Abstract:

Background

The Canadian Medical Education Directions for Specialists (CanMEDS) is a framework that describes seven roles that a health professional should be able to fulfil to demonstrate minimum threshold competence upon completion of an undergraduate health sciences degree. The Faculty of Medicine and Health Sciences, Stellenbosch University, adopted the CanMEDS roles as graduate attributes that can be taught, demonstrated and assessed as achievable competencies in a curriculum.

Research question

Which teaching strategies do health professions education institutes use to teach the respective graduate attributes?

Theoretical framing and literature review

A scoping review was conducted using the scoping review methodological framework proposed by Arksey and O'Malley (2005) and Levac et al. (2010) and further refined by the Joanna Briggs Institute Reviewer's Manual (2020).

Methods

During the scoping review, the databases Proquest, Pubmed, Scopus, Eric and Webofscience were searched for published peer-reviewed literature on strategies to teach the CANMED roles from 2005-2020. After an initial search, the search was repeated according to specific keywords identified to capture only the articles relevant to the research question. Two reviewers followed an iterative process to screen articles to be included in the review for full-text reading and then data charting and analysis.

Implications

We retrieved 277 articles. After reading titles and abstracts, duplicates were removed and relevant articles from the reference lists were added. Full-text articles were read, and a total of 102 articles met the inclusion criteria for data charting and analysis. The competencies of communicator, professional and scholar were most reported on while the competencies of advocate, leader and manager were represented less in the published literature.

Results and conclusions

We identified over 20 different teaching strategies, grouped into five themes: individual skills development, clinical-related strategies, learning from others, group work and curriculum delivery. The identified teaching strategies were tabulated to show the different teaching methods used to teach the various graduate attributes. What also stood out in terms of the development of graduate attributes was the explicit mentioning of personal identity development, empathy, mentoring and ethics that curriculum planners should consider when planning a curriculum.

Title: Student motivational and course feedback in a virtual learning environment: The

perspective of military students

Contribution type: Innovation

Contribution format: Presentation

Author(s): Pretorius, A

Keywords: flipped classroom, progress tracking, feedback, motivation, virtual learning

environment use

Abstract:

As lecturer in the Faculty of Military Science (FMS), I teach undergraduate and postgraduate students in both the residential and distance mode, also called telematic education (TE). Residential students are full-time students, and distance students are part-time students. All FMS students are military personnel, and in particular, all my students to date have been uniformed South African National Defence Force members. This situation creates unique challenges for students and staff. However, technology advances provide significant opportunities not only to address modern teaching and learning (T&L) challenges but also to improve the effectiveness and efficiency of T&L. Active diagnostic capabilities for T&L can now provide proactive indicators of student success in addition to feedback on areas for improvement.

As part of my virtual learning environments (VLEs), students complete the research consent e-form in the VLE (see online tool). Additionally, students complete the learning management system feedback form after each topic (see the online tool) and the course feedback form after the course (see SUNLearn questionnaire). These provide sufficient feedback to improve and redesign certain aspects of the course on a weekly base to improve T&L efficacy in the course.

Additionally, to gauge students' motivational perceptions throughout the course, I request them to complete the pre-, mid- and post-course motivation feedback form. This tool is based on the Motivated Strategies for Learning Questionnaire (Pintrich & De Groot, 1990). Motivation refers to the process by which a learner initiates and sustains goal-directed learning activity (Pintrich & De Groot, 1990). It involves students' beliefs that they are able to perform the task and that they are responsible for their own performance. Measuring student motivation is complex as it consists of the student's sense of value, expectancy and emotional beliefs (Zusho et al., 2003). These are encapsulated in the questionnaire with the aim of providing feedback to the lecturer regarding student motivation as part of at-risk student identification. The student responses from two courses are presented as demonstration of its use.

This presentation aims to give feedback on the student experiences from these courses with the aim of aiding other developers and lecturers in their own endeavours to facilitate learning during the COVID-19 restrictions.

Title: Students on a screen: Reflections on journalism education during lockdown

Contribution type: Reflection

Contribution format: Presentation

Author(s): Jordaan, M; Groenewald, A

Keywords: emergency remote teaching, practice-based education, journalism education,

postgraduate

Abstract:

After President Cyril Ramaphosa had declared a national state of disaster to combat the spread of COVID-19, higher education professionals had to adapt – dramatically and abruptly. The concept of 'emergency remote teaching' (ERT) became part of the everyday vernacular of lecturers, also at Stellenbosch University (SU). Hodges et al. (2020) explain that ERT "involves the use of fully remote teaching solutions for instruction or education that would otherwise be delivered face-to-face or as blended or hybrid courses and that would return to that format once the crises or emergency has abated".

As journalism educators at SU, we also had to rapidly adjust our approach to teaching and learning. The BA Hons Journalism degree at Stellenbosch University has a strong heritage of being a "typical vocational journalism school programme" (Rabe, 2018:9). The success of the programme is heavily reliant on practice-based teaching and learning, class interactions and input from industry professionals.

In this presentation, we will reflect on our experience of ERT in the journalism honours programme at SU. Despite the move to this teaching mode being necessitated by the pandemic and resultant lockdown, we were determined not to dilute the overarching outcomes of our programme. As course convener and journalism practice lecturer respectively, we thus spent a great deal of time brainstorming the best way to engage our students as well as the industry professionals involved in the programme. In the end, we used a combination of synchronous online teaching (via Microsoft Teams), self-directed learning (via readings, PowerPoint presentations and assignments) and one-on-one coaching in an attempt to achieve similar outcomes to what we would have during in-person contact sessions on campus.

We are currently gathering feedback on ERT from the students' perspective. With this presentation, however, we will reflect on our personal and pedagogical responses to this teaching mode. By critically reflecting on our department's successes and failures, we aim to show insight into our own educational approach during this time of crisis. In addition, we can contribute to a better understanding of how to present parts of an inherently practical programme in online spaces.

Title: Teaching in a time of learning: A medicine rotation reimagined

Contribution type: Reflection

Contribution format: Presentation

Author(s): Conradie-Smit, M; Van Wyk, G; Marais, E; Irusen, E

Keywords: medicine, medical teaching, reflection

Abstract:

The COVID-19 pandemic has had far-reaching consequences (Cucinotta, 2020). We wish to reflect on the impact of the pandemic on medical education and to find lessons learnt that will shape our teaching practice going forward (Ferrel, 2020). Final-year medical students returned to campus at a time that South Africa had 48 285 confirmed cases of COVID-19 (Republic of South Africa, 2020). This posed to be a challenge pertaining to various aspects in the Department of Medicine, and the rotation had to be reimagined.

The anxiety levels of students were at a peak as they were concerned about their own health and safety in addition to other factors, including the quality of their teaching and learning (Van der Walt, 2020). Students, however, realised the importance of continued learning on the clinical platform. Policies instituted had to be viewed in the setting of medical education. Personal protection of students and patients was a priority.

Learning opportunities, for example teaching ward rounds, had to be restructured to adhere to requirements, necessitating innovation and exploring of new techniques. This was long overdue.

Assessment practices had to be revisited as the examinations previously conducted in medicine were not feasible during this time and were not sustainable even before the pandemic. Drastic change was instituted to adhere to the assessment policy of Stellenbosch University whilst ensuring safe practice (Stellenbosch University Assessment Policy 2021). Many of these changes will continue going forward, for example the use of a portfolio examination and the use of a promotion system.

Online teaching and learning escalated, and lecturers and clinicians previously adverse to or incompetent in this modality were forced to upskill (Rose, 2020; Shenoy, 2020). The many lessons learnt will forever change the landscape of medical education in our setting.

The adaptations to this programme are a work in progress and need to be evaluated, criticised and adjusted going forward, but any inertia was eliminated by this pandemic (Akers et al., 2020).

Title: The changing role of the departmental chair during a pandemic

Contribution type: Reflection

Contribution format: Presentation

Author(s): Le Cordeur, M

Keywords: departmental chair, changing role, challengestraining, online tuition

Abstract:

The COVID-19 pandemic has changed the world as we know it irrevocably. Universities had to make huge changes to their tuition methods overnight. Lecturers instantly had to adapt their modules and programmes. Face-to-face teaching instantly changed to online tuition. Due to a lack of facilities such as internet access, computers and data, thousands of computers had to be acquired hastily and transported to students while the University made data available to students. Eventually, online tuition started on 20 April. It was not without problems. Many lecturers were not ready for online classes. This brought a unique challenge to the fore: in an instant, lecturers were stripped of their traditional position in a lecturer-student relationship, which left many lecturers unarmed and vulnerable. Many lecturers had to be trained, a process that continues. In this whole process, the role of the head of the department took on a new role: from a position of power (giving orders and monitoring) to that of a facilitator, trying to keep lecturer-student relationships intact.

In this paper, I will reflect on a year that posed unprecedented challenges for the Department of Curriculum Studies but more so for me as departmental chair. I will conduct this reflection by using Kolb's (2015) reflective model, also referred to as 'experiential learning'. The basis for this model is our own experience. In my reflection, I will strive towards developing understanding of the impact that the COVID-19 pandemic had on our actual teaching experiences. This contains four key stages: (1) our concrete experience; (2) reflective observation from the point of view of chairing a department; (3) conceptualisation of what has happened to us and how we have negotiated the negatives and retained the positives; and (4) our own experimentation as to how we have responded to the challenge of online tuition and successfully converted it into an opportunity for renewal of teaching. In particular, I will share the challenges that I experienced as the head of the biggest department in the Faculty of Education and what steps I took to overcome those challenges as we moved towards a new normal.

Title: The evaluation of emergency remote learning assessment for first-year and

second-year mainstream mathematics courses

Contribution type: Reflection

Contribution format: Presentation

Author(s): Howell, K; Adendorff, H: Rootman-Le Grange, I

Keywords: assessment, ERT, mathematics

Abstract:

The COVID-19 pandemic has forced us to replace our face-to-face interaction with students during Semester 1 and 2 and the foreseeable future with what is now called 'emergency remote teaching, learning and assessment' (ERT). ERT has required that we rethink assessment, including how we assess, why we assess and what is the best way to assess in this new environment.

There is literature that supports the validity of online assessments (Hewson, 2012), yet setting online assessments that are capable of protecting the integrity of the process is very challenging in the first-year mathematics courses. Simply reproducing the approaches used in sit-down assessments in the online space is often not an option since many resources are available on the internet, including sites and applications where complete solutions for problems can be requested. This necessitated a change in the way that we assessed student learning this year, for example reducing the marks that students would usually have received for process steps. This simple decision resulted in new and interesting discussions around setting an assessment. We believe that this new conversation is important and valuable and opens the doorway for further critical discussions, in and beyond science, about assessment decisions that are often taken for granted.

In this talk, I take an example of a particular topic that we normally assess and discuss how the conversation has changed with the introduction of ERT. This serves as the motivation for a research project that we will begin early next year in which ERT assessments of the first- and second-year mainstream mathematics courses offered at Stellenbosch University during 2020 will be investigated.

Title: The time when we reveal our true selves: Research, internationalisation and

transformation in teaching during the COVID-19 crisis

Contribution type: Reflection

Contribution format: Presentation

Author(s): Andrason, A

Keywords: crisis, research, internationalisation, transformation

Abstract:

According to its 2040 vision, Stellenbosch University aspires to "be Africa's leading research-intensive university, globally recognised as excellent", with transformative equity that "redress[es...] the inequalities of the past and [...] reposition[s] the University for the future" as its core value. This translates into three principles that constitute the pillars of our University and should be reflected in all our teaching activities: research focus, international cooperation and decolonial transformation.

This talk argues that the presence of the three abovementioned principles in our teaching need not necessarily be entirely suspended due to the crisis of COVID-19. The pandemic – or any other potential emergency – does not unavoidably lead to limiting or eliminating the link that teaching aims to have with research, internationalisation and transformation. This link may be preserved if teaching-related research, internationalisation and transformation are reimagined and adjusted to the changing circumstances.

To demonstrate this possibility, I review a number of activities that I have implemented during the COVID-19 State of Disaster, which have allowed me not only to maintain but also expand the elements of research (designing a third-year course that culminates with a scholarly paper and launching a new research project conducted with master's students), internationalisation (inviting scholars from Israel, the United States of America and Spain as guest lecturers and expanding my workshops to partner with tertiary institutions in Africa) and transformation in my teaching (designing decolonised curricula by stimulating multilingualism and translanguaging, by institutionalising African languages and by drawing the content of lectures from indigenous knowledge systems). I reflect on these activities within the translanguaged third-culture queer-kid philosophy that combats the uniformisation of learning, its hierarchal, authoritative and uncontextualised character, and the oppressive architectures (physical or virtual) in which it takes place.

To conclude, I view the principles of research, internationalisation and transformation as unalienable from my teaching even in this time of crisis. Crises afford us opportunities to reimagine our relationship with comfort. Rather than treating them as insurmountable obstacles, I view them as inspirations for change. While I cannot change reality, I can choose to adjust to it and change myself.

Title: Training for transformation: Opportunities and challenges in developing a new

remote training site for health sciences students

Contribution type: Research

Contribution format: Presentation

Author(s): Muller, J; Reardon, C; Hanekom, S; Bester, J; Coetzee, F; Dube, K; Du Plessis, I;

Couper, I

Keywords: rural, undergraduate, clinical, training, distance education

Abstract:

In 2018, Stellenbosch University's Ukwanda Centre for Rural Health led a faculty initiative to expand undergraduate health professions training to a new site, nine hours' drive from the health sciences campus in the sparsely populated Northern Cape Province of South Africa in the town of Upington. This was part of a faculty strategy to extend undergraduate health sciences training into an underresourced part of the country where there was no medical school. During 2019, the first year of implementation, four final-year medical students undertook a longitudinal integrated clerkship at this site while final-year students from other programmes undertook short five-week rotations, with plans for extending rotations and including more disciplines in 2020. The aim of this study was to understand stakeholder perceptions regarding the development of Upington as a rural clinical school training site and how this influenced existing services, workforce sustainability and health professions education.

We used a case study approach whereby the system under scrutiny was the training site as a whole. Interviews and surveys were used to collect data from 63 participants between January and November of 2019. Triangulation of data collection and analysis contributed to the trustworthiness of the data and credibility of the findings. The SUCCEED Framework for distributed health professions training (Van Schalkwyk et al., 2020) was used during analysis.

The perceptions of three key groups of stakeholders are reported: (1) DHS Hospital and Academic Programme managers; (2) supervising and nonsupervising clinical staff (DHS Hospital); and (3) students from three undergraduate programmes of the faculty. Four themes emerged regarding the development of the site. The themes included the process of development, the influence on the health service, equipping a future workforce and the future vision of the initiative.

This presentation provides data to support the value of establishing a rural clinical training platform in a resource-constrained environment. The influence of the expansion initiative on the current workforce speaks to the potential for improved capacity and competence in patient management with an impact on producing a rural-oriented future workforce. The implications for health professions education will be discussed.

Title: Transition to emergency remote teaching and learning: Reflections of first-year

accounting students

Contribution type: Reflection

Contribution format: Presentation

Author(s): Ontong, J; Mbonambi, S

Keywords: emergency online learning, first-year students, pandemic, socio-economic impact

Abstract:

This reflection aims to provide insight into first-year accounting students' perceptions of socio-economic challenges encountered during the transition to emergency remote teaching and learning (ERTL) by Stellenbosch University. For this, the Context, Actions, Results and Learnings (CARL) framework is used (The University of Edinburgh, 2018).

The COVID-19 pandemic resulted in the ceasing of in-person lectures, and residential universities delved into unchartered territory with ERTL (BUSINESSTECH, 2020; South African Government, 2020). Courses were facilitated through online platforms to salvage the academic year (Lehong et al., 2019). The move to ERTL was implemented as an immediate response to a crisis whereby residential universities had to adapt their pedagogical methods (Hodges et al., 2020).

Inequalities that existed were expected to be exacerbated by the transition to ERTL (Shoba, 2020; Statistics South Africa, 2019). To understand potential socio-economic hurdles to ERTL, a questionnaire was disseminated. This questionnaire included obtaining online lecture content preference and determining whether students felt that they could conceptualise knowledge (Fosnot & Perry, 1996). The home environments of students and availability of resources such as internet connectivity, computers and smartphones were also surveyed.

From the results, it was evident that the transition to ERTL offered some benefits as students could pause online recordings, learning at their own pace; however, some students struggled to adapt to the impersonality of online lectures. Although resources such as data and laptops were provided to students, this did not address all the issues as students in rural areas noted lack of internet coverage as an obstacle to ERTL resource access. The reflections highlighted that an environment conducive to study was often lacking as some students struggled with noisy environments and having to balance chores and other responsibilities.

ERTL has presented certain obstacles. Lessons learnt are that lecturers should reflect on the context of their students. Lack of access to resources and unfavourable home circumstances may pose a hindrance to effective online learning. Potential lecturer interventions include reducing the amount of synchronous learning during ERTL to allow for asynchronous learning, levelling the inequality field. Developing of work programmes, course content and assessments to provide students with an equitable learning approach is an area for future discussion.

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Title: Unintended benefits of an e-block toward clinical competence in physiotherapy

Contribution type: Reflection

Contribution format: Presentation

Author(s): Schmutz, A; Lupton-Smith, A; Unger, M

Keywords: clinical e-block, transition, peer learning

Abstract:

Lockdown Level 5 abruptly halted clinical training on the platform after only five weeks, threatening graduate competence and compliance with the mandatory 1 000 hours of workplace-based learning (World Physiotherapy, 2020). Clinical physiotherapy was rerouted online, and using the reflective model of Rolfe et al. (2001), we reflect on our e-block that aimed to ensure that our students would still reach a high level of competence and preparedness for their Community Service year amidst much uncertainty and flux.

As the COVID-19 responsive platform could no longer accommodate our clinical programme, we developed integrated rotations versus field-specific rotations and set off preparing students for this by creating online activities. We capitalised on what we had and tapped into students' own experience. Students who were considered 'field experts' by their peers set about collaboratively designing learning material as gathered through their first rotation experience and led smaller group activities that culminated in a coconstructed bank of multipurpose resources, including recommendations for coping with the setting and across areas of personal and professional growth. A 'permission to feel' forum at the start of every day acknowledged each student's perception of the learning of the day and created space for emotional connection to it. Asynchronous forum and synchronous Microsoft Teams meetings hosted critical case discussions, some paper based and others video-recordings of lived patient experiences. Students were encouraged to debate issues of inequity and social injustice, and students' creativity was challenged when they were tasked to develop an infographic for patient advocacy and education.

Students reported "personal and academic growth" and felt "better able to cope and prepare for" the remaining rotations. However, they recognised the absence of concurrent real-world exposure and how that influenced their ability to develop "comprehensive treatment plans beyond goal setting". COVID-19 made us use what we could have used before to facilitate students' transition from the classroom to the platform. Although clinical competence is yet to be determined, we learnt that the process of engagement and exploring trumps the product and that building relationships with students and among students must be prioritised.

Title: Using a mobile application to support clinical exposure mapping

Contribution type: Innovation

Contribution format: Presentation

Author(s): Schmutz, A; Lupton-Smith, A; Unger, M; Hanekom, S

Keywords: clinical learning, mapping clinical exposure, mobile application

Abstract:

"Learning in a clinical context is foundational in the training of health professionals; there is simply no alternative" (Nordquist et al., 2019). During the COVID-19 pandemic, the clinical context transformed rapidly and directly impacted physiotherapy services and clinical training. Within this new reality, we reframed clinical learning opportunities, student support strategies and assessment.

The Division of Physiotherapy at Stellenbosch University is responsible for adhering to the minimum standards and requirements set by the Health Professions Council of South Africa (HPCSA) to enable graduation of clinically competent entry-level physiotherapists. Therefore, we faced the challenge to find a way to plot and plan the clinical exposure of students in real time while they completed their required clinical hours.

Pre-COVID-19, students trained according to the traditional rotation-based model, completing short rotations across four core physiotherapy disciplines. Engagement with clinicians proved that a diagnosis-based approach would not be feasible during the pandemic, and we moved towards a patient-centred approach whereby the admission diagnosis was of less concern. We revisited the core competencies for entry-level physiotherapists and developed a 'MasterPlan' aligned with the HPCSA and the SU Physio profile. We adapted an existing clinical referral pathway mobile application, Vula, and introduced the app to track student exposures on the platform and to map these in relation to the MasterPlan.

The adaptation of the clinical learning model necessitated alternative student support strategies. Students were remotely supported by a mentor who received weekly Vula student reports and assisted them in developing a self-directed learning plan toward the MasterPlan. Site supervisors provided direct supervision at the patient's bedside whilst academic experts facilitated case-based learning through remote communication using Vula.

The Vula application has resulted in a tracking system of student clinical exposure as well as identifying affordances available across clinical sites, therefore informing decisions about future clinical placements. We proceed with research to evaluate the Vula implementation on student learning and toward the future use thereof and possible refinement of the engagement of students with academic experts.

Title: Using e-portfolios to teach Foundation Phase Mathematics Education

Contribution type: Reflection

Contribution format: Presentation

Author(s): Lebethe, A

Keywords: e-portfolio, preservice teachers, mathematics education

Abstract:

Prior to the national lockdown, my teaching methodology framed teaching as a profession of practice. I attempted to enable students to become competent practitioners by applying theoretical frameworks in practice. Working virtually meant finding a learning medium that modelled enquiry, practice and enthusiasm for teaching mathematics whilst maintaining student efficacy. Schön's (1983) reflection framework offered a structural lens to reflect on my teaching so that I could examine my assumptions, professional understanding, choices and beliefs. This process has prompted questions that would otherwise have remained silent.

I designed an e-portfolio Foundation Phase Mathematics Education module, consisting of exercises linked to the module outcomes and straddling theory, mathematics content and mathematics pedagogical content knowledge (Ball, 2005). Students received an exercise per week on SUNLearn and at the end of the learning period submitted their exercises as a Portfolio of Evidence. The intention of the portfolio was that it remained a primary resource that could be extracted, updated, enhanced at any time and used during job interviews or whilst teaching. These portfolios contributed to the summative assessments and were weighted at 5%. The content of the portfolios could be transferred and used to inform other assessments.

The result was a combination of a working and hybrid portfolio. Students found the detailed explanation of design guidelines and freedom of expression encouraging and sent me informal e-mails on their experience.

I needed a systematic collection of student learning and a glimpse into student motivation. The intention was to have a diverse set of information and questions to ensure that students worked for a minimum of six hours per week. The materials aimed to encourage self-instruction, hold attention and stimulate.

Exhausted! To transform existing material into online/distance learning material within the available timeframe was crazy. On the upside, the portfolios received were highly organised, easy to navigate through and showed critical thought. Reading through the portfolios provided me with a holistic insight into the academic journey of the students. In future, I would like to redesign the materials far more consciously with a deeper constructivist instructional design approach. This would allow for more systematic reflection, initiation and ownership.

Title: Value attached on what to teach and assess: Gauging own learning

Contribution type: Reflection

Contribution format: Presentation

Author(s): Khoza, M

Keywords: computer literacy, critical reflection, digitally supported learning and teaching,

peer teaching

Abstract:

The importance of digital literacy and of students' acquiring different digital literacy strategies in the 21st century cannot be overemphasised. COVID-19 compelled higher education institutions to digitally support learning and teaching. This presentation is a critical reflective opportunity to gauge my own teaching of a Computer Literacy (Word, Excel and PowerPoint) course at the Faculty of Military Science. This course is part of a first-year 12-credit CIS 114 module. The course was planned to be presented through a webbased application, Skills Assessment Manager (SAM), over six weeks. A presurvey revealed that prior learning was problematic due to the vastly diverse schooling systems that students came from (Mayet, 2016). Tasks were created on SAM in which 63 first-year students observed, practised and applied knowledge and skills learnt at their own pace and in their own time, but face-to-face class attendance was compulsory. Reports retrieved from SAM were used to identify aspects that students commonly struggled with. As a result, the first 40 minutes were used to teach identified aspects and the last 40 minutes were used by students for observation, practice, application and submission of mandatory tasks. When South Africa went into lockdown, I realised that the planned six-week tasks could not be covered because students were divided into two groups in order to adhere to COVID-19 protocols. I was compelled to reflect on the value that was attached to what I had to teach and assess, and how I assessed. Cyclical steps proposed by McNiff and Whitehead (2010) were employed to ask myself what I had done, why I had done it, what I had learnt and what the impact was of what I had learnt in the course on an ongoing basis. Instead of continuing with tasks created on SAM, students were required to create an eight-minute presentation in which they taught MS Office for final submission (Whitman, 1988). A rubric was used for self- and peer marking. Preliminary findings reveal that peer teaching promotes cognitive processing of information. What I would do differently is to involve students in the development of the rubric and to assign different weightings. This would provide students with similar reflective steps that enhance learning.

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Title: Peer-peer learning in wine marketing

Contribution type: Reflection

Contribution format: Poster

Author(s): Adams, J; Hess, L; Prior, K

Faculty: Faculty of AgriSciences

Abstract:

The teaching and learning of an applied science such as agricultural science consist of learning facts, figures, rules, laws, formulae, problem solving and basic scientific principles of concepts, and explanation of concepts and observed phenomena (Darko et al., 2015). Thus, it is important that teachers use the appropriate pedagogy to ensure a thorough understanding and effective learning of a particular learning task and the development of the skills required. However, due to the one-directional teaching approach and the lack of out-of-class learning opportunities, AgriSciences students tend to be less involved in learning and teaching. Consequently, effective learning and acquiring of the necessary skills are not achieved. To address this, peer-peer learning opportunities were designed, including an online discussion forum, PowerPoint presentation videos and an experimental field trip. The online discussion forum was implemented for a wine marketing module for final-year students at Elsenburg to discuss innovations to improve marketing at wine farms in a post-COVID-19 industry. Overall, the students engaged well and gave positive feedback. They mentioned that it was more convenient for some students to engage in online discussions than lectures. They enjoyed the flexibility to contribute at any time during the day. However, they experienced limited access time for engagement due to Eskom load shedding. The lessons learnt from this are that students can be trusted to work autonomously and that they seem to enjoy discussions amongst themselves online whilst producing insightful recommendations. Online forums are a powerful learning method providing a clear layout and comfortable environment for students to easily connect and engage. However, discussion sessions should be timetabled to encourage active student engagement. Designing new learning opportunities for the challenges identified in AgriSciences teaching and learning helped us to explore different methods of teaching, using technology and encouraging peer learning. We look forward to implementing the other two learning opportunities and believe that it will direct AgriSciences students to take ownership of their learning process.

Title: Enhancing students' grasp and application of complex calculations in winemaking

processes through the flipped-laboratory approach and peer support

Contribution type: Reflection

Contribution format: Poster

Author(s): Buica, A; Du Toit, W; Setati, M

Faculty: Faculty of AgriSciences

Abstract:

Viticulture and oenology students often struggle to perform complex calculations associated with the practical aspects of the winemaking process. These calculations have to consider the desired outcome, the juice composition and the phenomena occurring between these two stages (chemical reactions, dissolution, equilibrium, etc.). While reflecting on the module storyboards, we identified a gap in how we teach the calculations. We aimed to address these challenges by integrating learning opportunities for students to work on various complex calculations more frequently. The approach will be applicable to wine chemistry and microbiology modules.

Our integrated approach will encourage active learning through the following: (1) Online problem-solving assignments and group discussions in which students will be given different scenarios in which they will calculate inoculations, SO₂ additions, acid adjustments and so forth. The students can discuss their challenges with the lecturer or demi during the actual practical. (2) Flipped-laboratory approach whereby the students have to watch video demonstrations followed by the actual wet-lab session. Before performing the analysis, the students will have to answer questions on potential problems and sources of error for the methods, alternative methods, expected experimental outcomes and so forth. (3) Hands-on practical during which the students will be given written instructions (manual or SOP), do the experiment and then compare the theoretical answer to the question with the actual result obtained through practice. This approach will be trialled in the Oenology 454 module, and feedback will be obtained from students through online surveys and from student assistants through one-on-one discussions. The CARL (Context, Actions, Results and Learnings) reflection framework will be used to assess programme integration and highlight areas of improvement.

For the students, the expected outcomes are improved ability to link theory to practice, discovery of which type of learning suits them best and awareness of the alternative methods and potential problems encountered in practice. For the teachers, a better integration of various resources available for teaching and learning and creation of additional opportunities for student success will be attained.

Title: Incorporating agronomy practical activities into online learning

Contribution type: Reflection

Contribution format: Poster

Author(s): Liwani, U; Sehlakgwe, P

Faculty: Faculty of AgriSciences

Abstract:

Agronomy is the science, technology and management of crop production. Due to the practicality of agronomy, we came up with learning opportunities whereby students could gain practical knowledge through online teaching.

We reflected on two learning opportunities and used the CARL (Context, Actions, Results and Learnings) framework as a model of reflection (The University of Edinburgh, 2018). In the first learning opportunity, students investigated different crop protection practices currently applied by wheat farmers in South Africa. Students had to indicate whether the practices would be feasible in 2030 based on what they had learnt in class about the implementation of crop protection practices and had to submit an assignment report.

In the second learning opportunity, students were given an assignment divided into two parts. In Part 1, students investigated the soil sampling and analysis methods used in South Africa as well as soil nutrient requirements for onions and potatoes. The lecturer and farm technicians collected the soil samples for students. In Part 2, students were divided into four groups and had to interpret the results and discuss whether the soil would be suitable for planting onions and potatoes. A factsheet together with recommendations for assessment was submitted.

In both tasks, most students demonstrated understanding. These results were positive considering that the institute did not have an existing online platform, which meant students had to master using multiple learning platforms.

Feedback from the students suggests that the tasks aided their practical and analytical knowledge of the modules to an extent and were partially effective in bridging the gap. Students were not fully exposed to field practical work required in both learning opportunities, and there was a general lack of skills from students in investigating and presenting literature in a clear and concise manner.

Online teaching and learning with podcasts, discussion forums, videos and online classes had a negative and positive impact on the implemented learning opportunities, especially for practical-based sections. Lecturers will endeavour to improve students' ability to investigate and present their findings. Provision must be made for students who are struggling either with online learning or a lack of resources.

Title: Twenty-first-century learning: Keeping up with Gen Z

Contribution type: Reflection

Contribution format: Poster

Author(s): Le Roux, M; Phiri, E

Faculty: Faculty of AgriSciences

Abstract:

Generation Z (Gen Z), born between ca. 1995 and ca. 2012, is said to be constantly online and in need of on-demand entertainment and communication. Thus, the traditional methods of lecturing, which often occur in monotonous environments, can lead to challenges for both the lecturer and Gen Z students. For example, students find it difficult to grasp key concepts in STEMI (science, technology, engineering, mathematics and innovation), such as in the case of Genetics 314. We noted that many students were not understanding the complex terminology. To circumvent this, we integrated social media as a learning opportunity for students. The idea is to integrate blogs and hashtags from Twitter, Facebook and Instagram into lectures, allowing the students to cross-reference what is currently happening in the world of genetic modification. For example, during e-learning lectures, every 10th slide contains an appropriate hashtag connected with a social media platform. This prompts the students to consult social media and to evaluate what is currently trending on the topic. This contextualises the complex concepts that they are learning, and thus, they can understand the real-life applicability of genetics. This has shown to motivate the students, and they tend to engage more frequently with their peers and lecturers. However, it is understandable that social media in the context of learning can be regarded as a distractor to pedagogy. Nonetheless, higher education courses need to be designed to be more suitable for 21st-century learning, emphasising the use of digital media. Students are the future of a thriving economy, which will require of them to navigate various digitised tools and social networks, allowing them to access, manage, integrate, evaluate and create information. Therefore, social media can serve as catalysts for improving conceptual understanding by Gen-Z students.

Title: Reflections on the virtual simulation of a multistakeholder environmental

decision-making role-play

Contribution type: Reflection

Contribution format: Poster

Author(s): Grenfell, S; Spocter, M; Williams, S

Faculty: Faculty of Arts and Social Sciences

Abstract:

A virtual environmental decision-making role-play was developed to provide third-year geography and environmental studies students with insight into the complexities of decision making in integrated water resource management. The reflective framework of Rolfe et al. (2001) was used in this process. The learning opportunity was designed to bring together social and environmental perspectives while ensuring that students actively considered the roles and responsibilities of different organs of state. The online role-play centred on the contentious issue of historically allocated *leiwater* (irrigation water) rights in the water-scarce Karoo town of Prince Albert and encouraged student engagement with the views of multiple stakeholders through four phases.

The problem-based learning approach allowed students to work on an authentic task in a real-world setting, which enabled them to experience challenging, real-world stakeholder engagement with the aim of working towards the resolution of a problem through agreement. A scaffolding approach was adopted whereby tasks progressed from simple to complex through several phases. Direction from the educator decreased, and the students took on more task responsibility as the task phases progressed. Stating and then defending stakeholder positions ensured active student participation and thus deep learning, as indicated by the quality of student interactions online. Attention to time management by the educator resulted in successful facilitation of the discussion phases and allowed students the opportunity for further reflection on the exercise in an essay assignment.

Student feedback highlighted an appreciation of meaningful class interactions in a virtual environment while also indicating a high level of student engagement in considering the complexity of socio-environmental decision making. While students handled the role-play exercise with excitement and relative ease, they struggled to embed their experience within relevant literature in the final reflective essay. In future, additional guidance on this aspect will be necessary.

Rolfe, G., Freshwater, D. & Jasper, M. 2001. *Critical reflection in nursing and the helping professions: A user's guide*. Basingstoke: Palgrave Macmillan.

Title: Thinking through analysis: Reconciling the literary and the historical

Contribution type: Reflection

Contribution format: Poster

Author(s): Loggenberg, K; Van der Rede, L

Faculty: Faculty of Arts and Social Sciences

Abstract:

Some students struggle with practising close analysis, particularly in attempting to understand the juncture of the literary and the historical. This learning opportunity aimed to facilitate their thinking about the extreme violence of the Ethiopian Red Terror through their analysis of the literary texts. Students enrolled for The Quotidian During Times of Terror in Ethiopia (English 348) seminar were assigned to a group, each correlating with an extract from the text. Each student was asked to prepare an analysis of the extract. During the seminar, each group presented its analysis; thereafter, the class tried to collate the contributions into a coherent, overarching reading of the poem as a whole. Upon reflection with students, it became apparent that although they had found the exercise productive, the demands being placed on them academically as a consequence of emergency remote teaching had resulted in a relatively superficial level of engagement: students simply aimed to complete the task rather than engage with it thoughtfully. Although a blended approach was taken with regard to the medium of engagement (SUNLearn and Microsoft Teams were used), reflecting on the experience of students has prompted us to consider revising the timeline of the learning opportunity to allow for more substantial engagement by students, allotting two lessons for this activity rather than one. In part, this is a reflection on the ethics of pedagogy, following the rhythms of Schön's (1987) reflective framework. Although I was satisfied with students' participation in the task, I was disappointed by their lack of care in relation to their written reflections. To redress this, we convened a feedback session via Microsoft Teams. Thus, reflection was a collaborative process with the students, who responded positively to the learning opportunity before, during and after the activity.

Title: Rethinking historical empathy and the holocaust

Contribution type: Reflection

Contribution format: Poster

Author(s): Halsall, T

Faculty: Faculty of Education

Abstract:

When my Postgraduate Certificate in Education class wrote its mid-semester test for history education, I noted a lack of understanding and empathy regarding the Holocaust. The Holocaust research task that I will implement will be centred on the Holocaust interlaced with historical empathy. Both entities (the Holocaust and historical empathy) are very important elements of history education, and as future teachers, students need to have a clear knowledge and understanding of the Holocaust and how to teach it effectively using empathy. The choices in this new assessment have been underpinned by the reflective framework of Rolfe et al. (2001). The authors begin with identifying the problem. The problem identified in this case was a gap in understanding of the concept of historical empathy and how it could be used to teach the Holocaust. As the Holocaust is a morally sensitive topic within education, a more significant understanding of the Holocaust was needed. As a lecturer, it is my duty to ensure that the gap in understanding experienced by the students (and future teachers) is addressed. The second component of the reflective framework of Rolfe et al. (2001) is "So what?". This is linked to my assessment task because it focuses on two main aspects: broader issues that could arise from the situation and what I based my actions on. Because of the controversy and subsequent sensitivity surrounding teaching the Holocaust as well as South Africa's apartheid past, future teachers need to address the topic in a sensitive way. If they do not, broader issues such as Nazi sympathising or racial insensitivity could accidentally be perpetuated. The new assessment task is underpinned by two main reasons: First, because of the COVID-19 lockdown, the students were unable to go on the planned excursion to the Holocaust and Genocide Centre in Cape Town. Second, many of the tests that I graded showed a significant lack of understanding and empathy regarding the Holocaust. The final component of the reflective framework of Rolfe et al. (2001), "Now what?", pertains to the changes that I need to make to address the identified shortfalls that can be avoided for next year.

Rolfe, G., Freshwater, D. & Jasper, M. 2001. *Critical reflection in nursing and the helping professions: A user's guide.* Basingstoke: Palgrave Macmillan.

Title: Design thinking: Promoting active learning within an Environmental Education

programme

Contribution type: Reflection

Contribution format: Poster

Author(s): Davids, D; Rinquest, E

Faculty: Faculty of Education

Abstract:

Environmental Education (EE) first found expression in the South African curriculum with a principle statement being included in the *White Paper on Education and Training*, calling for environmental education to involve an active learning approach and to be "integrated across all phases and levels of the education and training system" (Department of Education, 1995). Stellenbosch University's Faculty of Education includes an eight-week EE component for first-year preservice teachers, with approximately 200 students taking this class. The main purpose of this module is to equip teachers with foundational knowledge of EE and pedagogies that can be integrated into their subject specialisations in their future classrooms.

With the COVID-19 disruption, many of the activities, such as field trips, needed to be redesigned as they would not be effective in an online space. Using the reflective framework of Rolfe et al. (2001), I asked myself how I might find a way in which students could engage in active learning, which is enquiry based, despite the fact that everyone was in their hometown.

Guided by a framework for active learning (O'Donoghue, 2001) and inspired by the possibility of increased relevance of situating learning activities within the community of the student, I designed activities that mirrored human-centred design thinking (Ux) (Stanford Design School, n.d.). Students were guided in synchronous and asynchronous activities, framed around solving an environmental problem in their own community. Students participated in information seeking, enquiry encounters, reporting on issues, brainstorming solutions and prototyping ideas for future implementation, ending with a 60-second pitch wherein each student had to 'sell' her/his solution.

Some students initially struggled using new technologies such as the MURAL boards (online collaborative learning space) and Zoom Breakout rooms. However, after an adjustment period, this approach succeeded in creating active learning that was collaborative, authentic, situated and engaging. This was evident through the student feedback that was collected.

The Ux process complements the existing EE frameworks well. I foresee these activities finding a permanent place in my teaching as they were not only problem based but also solutions orientated, and to me, this creates the impact that EE wishes to have.

Title: Moulding the future: Clay work for experiential learning

In memory of Eduardo Shimahara

Contribution type: Reflection

Contribution format: Poster

Author(s): Loots, R

Faculty: Faculty of Economic and Management Sciences

Abstract:

The Diploma in Sustainable Development, presented at the Lynedoch Ecovillage, follows a place-based, experiential pedagogy that is embedded in nature. At the start of the 2020 academic year, diploma students engaged in a collective intention-setting exercise using clay.

Clay is a nonverbal, multisensory tool with a deep history in cultural and spiritual expression. Since clay is literally 'of the earth', it can facilitate visceral human-nature experiences (Sholt & Gavron, 2006). This learning activity will be discussed using Gibbs's (1988) reflective cycle.

Approximately 80 students (first, second and third year) were asked to model their big question, dream or intention for the year using clay. The energetic chatter slowly evolved into a quiet, reflective process as the piece of 'earth' took shape in their hands. In this way, working with clay provides instant sensorimotor feedback to the brain, allowing a deep integration of psychological and physiological experiences (Elbrecht & Antcliff, 2014).

Students reflected on the collective clay exhibition and were surprised by the unconscious material that was revealed through the tactile experience. We observed that shared values and themes around self-actualisation and purpose emerged through symbolism.

The concretisation of intentions in clay created a tangible, collective learning experience that students continue to draw from. During a virtual check-in session during emergency remote teaching, we used the memory of the clay pieces to reconnect students with their initial intentions and shared sense of purpose. This created an opportunity to reimagine their futures during the uncertainty of the COVID-19 pandemic.

Experiential activities such as clay work facilitate learning that is "of mind, body and soul" – a crucial component of transformative learning (Sustainability Institute, 2020). In future, we will repeat this clay activity at the end of the year as a reflection and future-casting exercise.

Title: Learning during COVID-19: Active participation and continuous feedback

Contribution type: Reflection

Contribution format: Poster

Author(s): Kelly, L; Mbonambi, S; Samuels, A

Faculty: Faculty of Economic and Management Sciences

Abstract:

The objective of our investigation was to reflect on the hurdles encountered and overcome during emergency remote teaching (ERT) (Hodges et al., 2020). This reflection is based on the reflective framework of Rolfe et al. (2001) and is divided according to the framework's three questions: "What?", "So what?" and "Now what?". We deal with these questions in three sections: defining the nature of the problem and its impact on our teaching objectives ("What?"), describing the knowledge developed and the actions taken ("So what?") and suggesting how this knowledge can be applied to improve teaching ("Now what?").

In terms of the problem, we identified two issues. The first was that some ERT modalities caused reduced active participation by students, resulting in little proactive engagement with learning material unless prompted by the lecturer. The second was a lack of continuous feedback from lecturers to students throughout the year to enable them to learn from their mistakes. To address this problem, three approaches were formulated in line with the principles of the DeLTA (Designing Learning, Teaching and Assessment) framework (Stellenbosch University, 2020).

In the first approach, reflective questions were used to test the principles of the topic in class. Each student's answer was considered, and individual feedback was provided on each answer. The second approach had students participate in multiple-choice polls on SUNStream (live interactive classes), and explanations of theory crucial to the course were discussed for each answer. The final approach was through live Microsoft Teams classes, encouraging student participation through anonymous questions posed by both lecturers and students, therefore promoting collaboration, active learning and continuous feedback (Khalid & Azeem, 2012).

In these cases, the lecturers designed the classes to encourage student engagement and to help them conceptualise knowledge beyond the regurgitation of information, thus promoting the constructivist learning approach (Khalid & Azeem, 2012) as well as providing continuous feedback to students. Student feedback was positive and indicated increased virtual interaction. The significance of this, outside the context of ERT, is that classroom techniques can be modified to promote collaboration among students with different learning styles to foster in-class engagement (Phillips, 2005).

Title: Reflections on the shift to emergency remote teaching

Contribution type: Reflection

Contribution format: Poster

Author(s): Godfrey, R; Ngwenya, M; Nkosi, W

Faculty: Faculty of Economic and Management Sciences

Abstract:

Background

The COVID-19 pandemic has brought about unprecedented disruption and far-reaching implications for the higher education sector. The pandemic resulted in an abrupt lockdown, leading to the shutdown of universities and immense pressure on institutions to provide alternative teaching and learning strategies to salvage the academic year. Emergency remote teaching (ERT) was implemented as a key response to the coronavirus pandemic, offering a temporary shift to noncontact learning.

Purpose

The purpose of this research was to explore the experiences of three Stellenbosch University lecturers as they attempted to deliver quality teaching and learning through the implementation of ERT strategies. The reflective model of Rolfe et al. (2001) was used to frame the lived experiences through reflexive writing techniques that were guided by "What?", "So what?" and "Now what?" reflexive writing questions.

Reflections on the shift to emergency remote teaching

[Reflexive writing according to Rolfe et al. (2001)]

What?

To provide temporary access to instruction and instructional support during an emergency or crisis through the implementation of ERT.

So what?

Implementation of emergency remote teaching

In efforts to provide students with adequate learning opportunities, several teaching and learning strategies were implemented, including the following:

- · The Microsoft Teams platform was used to create a virtual classroom experience.
- · Synchronous and asynchronous chat and discussion forums were used to simulate a classroom environment.
- · Slides with the lecturer's narrative served to provide guidance on and further explanation of complex concepts.
- · Enquiry-based and problem-solving teaching methods were incorporated into teaching activities.

Assessment opportunities

Challenges:

- · Overall, students' attendance was low.
- \cdot Students were not adequately prepared for ERT.
- \cdot $\,$ Preparations for ERT required a great amount of time and effort.
- · Load shedding, poor internet connection and finding a quiet environment proved to be challenging at times.
- · Negative first-time lecturer experience was compounded by ERT.
- · A lack of adequate feedback mechanisms to gauge the process of teaching and learning was experienced.
- · Replication of work occurred.

Lessons learnt

- · Student engagement was considered imperative for optimal learning experience.
- · ERT prompted lecturers to rethink their teaching and learning approaches and pedagogies.
- · Implementation of efficient and effective working processes could eliminate replication of work.

Now what?

ERT has disrupted teaching and learning within the higher education sector and has highlighted the importance of blended learning. ERT has prompted higher education to think differently about its teaching and learning pedagogies and to adopt novel teaching and learning practices that may enhance students' learning experience. [<u>Back to PREDAC abstracts index</u>]

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Title: Seeing is believing: Bridging semantic ranges through online visualisation

interventions

Contribution type: Reflection

Contribution format: Poster

Author(s): Babafemi, A; De Jongh, C; Fataar, H; Mkhaliphi, T; Van Rooyen, M

Faculty: Faculty of Engineering

Abstract:

Problem visualisation is a core component of 'cumulative learning' (Maton, 2013) within several engineering disciplines and serves as a vehicle for movement to more contextual understanding of a concept. Through the reflective framework of Rolfe et al. (2001), we identify the core visual interventions (VIs) applied to the emergency remote teaching, learning and assessment (ERT) conditions experienced during the COVID-19 pandemic to bridge theory and practice within first- to third-year drawings, strength of materials, machine design and manufacturing system design modules.

These modules share visually based threshold concepts that are frustrating to grasp by 'low visualisers' through static visual presentations in a traditional class setting. ERT offered the ideal opportunity to use the SUNLearn platform to convey various VIs including online video lectures of mechanism motions, structural member deformation and the impacts of loading and boundary conditions. Furthermore, VIs included model-building demonstrations using paper representations of descriptive geometry and orthographic projections, 3D-printed mechanisms, pin models for linkage kinematics and structural member constructions. Assessment-type VIs included online quizzes, subsequent forum discussions and open-ended assignments that tested context-dependent problem solving regarding the linking of models with real-life interpretations.

Legitimation Code Theory semantics (Maton, 2013) help to visualise the semantic motion between abstract theory (weak sematic gravity [SG-]) and contextual practice (strong semantic gravity [SG+]). VIs with SG+ such as representations, models and real-life elements (Pott & Wolff, 2019) enable cumulative learning through linking mathematical formulations, geometric principles of objects, structures and mechanisms, for instance, with practical applications (Walls, 2016). Such contextual connections are vital for future graduate employability and effective communication in the workplace through open-ended problem solving (Wolff, 2020).

Anecdotal evidence through feedback forms indicate that students consider VIs useful to their learning. This is especially true for 'DIY' video model demonstrations in which students can replicate the model at home using available materials/objects. The inability to interact physically with the models is a limiting factor with online VIs, and data-light consideration should be given to the differential technology/internet capabilities of a diverse student body. In such cases, in-class model interaction would be more useful.

Reference list

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Walls, R.S. 2016. Teaching structural analysis and design: Evaluation and student feedback on various techniques and interventions. In: Zingoni A. (Ed.), *Insights and innovations in structural engineering, mechanics and computation*. Cape Town: Taylor & Francis. pp. 2169-2174. Wolff, K. 2020. *From principle to practice: Building knowledge in higher education: Enhancing teaching and learning with Legitimation Code*

Theory. Routledge. [Back to PREDAC abstracts index]

Title: Using online platforms to facilitate student engagement during times of disaster

Contribution type: Reflection

Contribution format: Poster

Author(s): Fisher, C; Mapholi, Z; Theart, R

Faculty: Faculty of Engineering

Abstract:

The past few years have seen a trend towards larger class sizes, resulting in more tasks being performed online. The COVID-19 pandemic resulted in an immediate shift towards emergency remote teaching (ERT) (Hodges et al., 2020). However, most ideas and concepts for effective online learning do not extend to large class sizes (800+ students). Hodges et al. suggest that the objective of ERT is not to recreate a robust educational ecosystem but to focus on access to content and support. This focus recognises that learning is both a cognitive and a social process.

Through online content, larger groups of students can be reached; however, providing individualised student support remains challenging. With a decline in student engagement, we cannot deliver the help and assistance required. To combat this, an online version of the 'flipped classroom' (Bishop, 2013) was implemented. Weekly online content was provided, with the lecture periods being used as a Q&A session on SUNLearn. During the practical session, students can post questions on Microsoft Teams. As students may be shy, they can either post their question and engage with other students/tutors or they can post "I need help" and receive a private message from a tutor with the option of screen sharing.

However, we have noted a decline in engagement on Microsoft Teams. Further investigation has revealed that most problems are being solved by students on WhatsApp groups, which is a positive form of greater peer collaboration that has been shown to enhance student engagement (Zepke, 2010). The more complicated questions are still posted on the online forums, effectively making the lecturer a facilitator of learning instead of the go-to guru. It is still concerning that only 600 of 857 students have joined Microsoft Teams. Despite this, the average for A1 decreased from 62% last year to 54% this year, which is still respectable due to the different format used in the test.

Several notable improvements have been observed in using Microsoft Teams, such as improved widespread communication with the class, fewer repeated questions and prevention of tutors' coding for the students.

Title: Joint first-principles and real-world contexts in teaching the foundations of finite

element analysis

Contribution type: Reflection

Contribution format: Poster

Author(s): De Koker, N

Faculty: Faculty of Engineering

Abstract:

Engineering students completing their third year should be comfortable consolidating and applying their foundations in mathematics and physics in unfamiliar and variable contexts (NQF Level 7; SAQA, 2012) rather than only using predefined recipes in problem solving. Engineering Informatics 314 introduces BEng Civil Engineering students to the theoretical foundations of finite element analysis (FEA), material that most engineering programmes only cover at postgraduate level. Presenting FEA in an undergraduate programme therefore requires careful attention to students' groundwork in mathematics and physics.

While ostensibly focussed on the theoretical formulation of FEA, the module provides an opportunity to consolidate and incorporate the material from earlier modules in the context of unifying principles, which Maton (2013) calls 'cumulative learning'. Along with a still nascent foundation in mathematics and physics, key bottlenecks in student comprehension include applying the material learnt in previous modules in a new setting, translating real-world problems into model representations that can be probed numerically or analytically and appreciating the engineering context of the module.

The semantic plane, a dimensional instrument of Legitimation Code Theory, helps to differentiate concepts and practices in terms of density of meaning and dependence on context. With Mezirow's transformative learning theory (Kitchenham, 2008) applied in the framework of the semantic plane, the course was examined and redesigned to place greater emphasis on consolidating the foundations in mathematics and physics that students bring from previous years.

The guiding motivation for the module is to develop students' appreciation of the unifying principles that form the foundation of the FEA method. This emphasis is anchored using a real-world FEA example for context and orientation via repeated traverses of the semantic plane, switching between principles and applications. As students progress, their increased conceptual span and depth will enable their initial perception of the reference example as a 'black box' to be transformed into one of a 'glass box', whereby they understand the engine behind the FEA result.

References

Kitchenham, A. (2008). The evolution of John Mezirow's Transformative Learning Theory. *Journal of Transformative Education*, 6:104. DOI: 10.1177/1541344608322678

Maton, K. (2013). *Knowledge and knowers: Towards a realist sociology of education*. New York: Routledge. South African Qualifications Authority. (2012). *Level descriptors for the South African National Qualifications Framework*. Pretoria: South African Qualifications Authority.

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Title: Learning as a social activity: Leveraging social interactions to enhance learning

Contribution type: Reflection

Contribution format: Poster

Author(s): De Klerk, D; Garner, K; Motang, N; Schoeman, J

Faculty: Faculty of Engineering

Abstract:

First-year engineering modules focus on fundamental concepts and practices. Since these early modules form the building blocks of the overarching engineering degree, it is imperative that students understand and apply these fundamentals consistently and effectively. Unfortunately, the traditional passive learning approach is not sufficient to ensure the required level of understanding for all students. In contrast, peer-to-peer engagement adds an active layer to the learning process and could be utilised to build competence (Zepke & Leach, 2010).

With the use of the Legitimation Code Theory (LCT) social plane (Maton, 2014) as an analytical lens, it is possible to begin exploring the social element of teaching and learning. The social plane demonstrates different levels of legitimate expertise, which give rise to particular 'gazes'. The students, coming from diverse backgrounds and with different zones of proximal development (Kozulin, 2002), will be located over a spectrum on the social plane. This diversity is particularly prominent in the junior years when class sizes are larger, posing further obstacles to student-lecturer engagement. Various stakeholders, with different locations on the social plane, could therefore be used as mediators to scaffold the students' learning.

In this project, three initiatives were explored to improve the understanding of a threshold concept in first-year engineering modules. Two of the initiatives encouraged peer-to-peer interaction in the form of informal group work in a class 'quiz night' and peer assessment of an oral presentation.

Both initiatives encouraged student feedback and discussion and drew on the well-reported benefits of cooperative and peer interactions (Smith et al., 2005). The third initiative was implemented in the online learning environment to facilitate the engagement of students with lecturers and student assistants. In all three cases, the LCT social plane proved to be a useful analytical lens for exploring how to better structure and understand interactions with the various stakeholders to improve engagement with the particularly difficult concepts and procedures (Chickering & Gamson, 1987). It has also proved to be particularly helpful for personal reflections by illuminating how student-lecturer interactions evolve as educators themselves move along the LCT social plane.

Title: Intuitive slope stability initiative

Contribution type: Reflection

Contribution format: Poster

Author(s): MacRobert, C

Faculty: Faculty of Engineering

Abstract:

The reflective model of Rolfe et al. (2001) is used to reflect on an intuitive slope stability initiative under development.

What?

The epistemic plane, a tool within the Legitimation Code Theory framework (Maton, 2014), is ideal to evaluate teaching practices. Previous research in process engineering has shown that while students find it easy to deal with standardised approaches, they struggle with problems that require open-ended approaches (Tadie et al., 2018). Similar observations have been made in civil engineering. Slope stability is taught in Geotechnique 354 by considering static equilibrium of sloping soil masses. Due to the number of variables involved, the problem is statically indeterminate (Bishop, 1955). Consequently, considerable teaching time is spent on procedural aspects. Students tend to focus on these steps rather than developing conceptual understanding and situational awareness.

So what?

An online activity was developed to assess slope stability without applying procedural knowledge (MacRobert, 2018). Students were given a series of figures showing key principles of a slope's stability (height, angle, strength and water table) and asked to guess whether the slope was safe. This decision required situational insight (repeated exposure to similar procedural results) or personal knowledge (repeated exposure to real slopes). Student performance was poor (M = 49%, M = 11%) in contrast to practising engineers (M = 68%, M = 10%) in whom these knowledge areas can develop.

As very few practising engineers are exposed to actual failed slopes where all underlying conditions are known, their better performance is likely due to repeated exposure to procedural results. The next stage of the online activity was therefore to expose students to 150 slopes, asking them to first guess and then presenting them with correct procedural results. Students had to work through three training sets of increasing difficulty. Performance improved significantly after these training sets to reach the level of practising engineers (M = 64%, SD = 11%).

Now what?

The online activity was developed on a closed learning management system at the University of the Witwatersrand. An open-access version has been developed to extend this to the larger community and to facilitate continued research under SEEPIE-ING-14765.

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Title: Bridging the gap between theory and practice: An interactive module

Contribution type: Reflection

Contribution format: Poster

Author(s): Botete, M; Cupido; L; Grobler, J; Grootboom, L

Faculty: Faculty of Engineering

Abstract:

The integration of theory and application is vital in the fields of applied systems and modelling. It has been observed that engineering students often struggle to link theoretical concepts with practical applications. By mastering the ability to connect abstract theories with functional outputs, graduates could operate effectively in industry and solve real-world problems. The objective is to develop a strategy that addresses this gap from an engineering education perspective. An interactive module framework is developed based on the Legitimation Code Theory dimension of autonomy (Maton & Howard, 2018) to create pathways that integrate theoretical concepts into real-world applications. The framework shows lectures and tutorials that link directly to project or practical outputs, hyperlinked online resources, access to a booking system for scheduling and a holistic outline representation of the module while simultaneously developing the reflective prospect.

A case study of an online tutorial is utilised. It serves both as a demonstration of the concept and a qualitative indication of student engagement in the subject. The latter can be used by the educator to identify areas of concern, thus reviewing the module content. The framework is not without its drawbacks. Certain aspects can be introduced with ease, but technological difficulties as simple as just access to online content can provide frustrating obstacles.

Challenges exist with the gathering of resources that will support different learning styles. Overcoming those challenges will require a considerable time investment during the module development stage, but it would be worth the improvement Quizzes and questionnaires might be easier to develop, but linking tutorials of difficult subjects to an even more complex module can be a challenging task.

The intention is not for the module to be a one-size-fits-all solution but rather to be a reflective guide to provide a projection of how theory and practice link. The idea is that each educator would make the solution their own for their respective modules, thus producing less dull lectures and more enlightened and reflective students.

Reference

Maton, K. & Howard, S.K. (2018) Taking autonomy tours: A key to integrative knowledge building. *LCT Centre Occasional Paper 1* (June): 1-35.

Title: Transforming student report-writing practices in an undergraduate engineering

curriculum: Why many engineering graduates cannot write good reports.

Contribution type: Reflection

Contribution format: Poster

Author(s): McGregor, C

Faculty: Faculty of Engineering

Abstract:

In the Experiment Design component of a fourth-year module in the Department of Mechanical and Mechatronic Engineering at Stellenbosch University, students are expected to design an open-ended investigation and are assessed against Engineering Council of South Africa Graduate Attribute #4, namely to demonstrate competence to design investigations and experiments. This is a 'high-stakes assessment' for which they appear to be 'unprepared'. In the 2020 academic year, nearly half the class either failed on their first attempt for the assessment or barely achieved the minimum pass grade (50%). Whilst some students clearly struggled with the investigation component, the most significant problem was the lack of ability to articulate the aim, justification and method behind their investigation in a concise and coherent manner, or in other words, to write a professional engineering report.

Considering society's need for successful engineering graduates, this problem was reviewed using Mezirow's Transformative Learning Theory, with this as the 'Premise Reflection'.

The 'Content Reflection' entailed a high-level analysis of the undergraduate programme that showed that the students' only official training in report writing is the Professional Communications 113 module in the first year; in all other modules, the assumption is that students should know how to write reports.

Three factors are then hypothesised to contribute to the poor report-writing skills of fourth-year engineering students:

- What they have learnt in Professional Communications 113 has been mostly forgotten by fourthyear students.
- Very large classes make providing meaningful feedback on report assignments virtually impossible for lecturers.
- Most assignments that are submitted as reports are not assessed on a 'report' dimension, or the standard set is too low.

These findings led to a 'Process Reflection' on how best to support student learning whereby an approach to building their abilities was designed using the following:

- 1. Model good and bad report writing using case studies in online quizzes.
- 2. Build capabilities through peer assessment of the draft report.

Title: Teaching health practitioners differently

Contribution type: Reflection

Contribution format: Poster

Author(s): Ayele, B; Hoosain, M; Kloppers, M; Musekwa, E; Runciman, P

Faculty: Faculty of Medicine and Health Sciences

Abstract:

Background

Students at the Faculty of Medicine and Health Sciences (FMHS) are typically trained to be competent practitioners through experiential and practical teaching and learning (T&L). This was largely impossible during 2020 due to COVID-19, creating the challenge in the FMHS of teaching prospective health practitioners without access to patients. This poster will capture our innovations and learnings in moving to online T&L with undergraduate and postgraduate students at the FMHS, using the Gibbs (1988) reflective cycle.

Step 1: What happened?

Electronic material was created to support online T&L. This included videos about assistive devices, video assignments of students assessing family members, self-study tasks, video tutorials, recordings of lectures, quizzes and online tests.

Step 2: Feelings

We were concerned about the students' ability to engage with content and to practically apply knowledge in the absence of in-person teaching sessions and patient contact. The reduction in face-to-face demonstration with patients may influence students' future clinical skills.

Step 3: Evaluation

Students enjoyed the online learning experience: 'fun' aspects such as music in videos and pacing their own learning. Student engagement increased with the changes in T&L. Students requested more integration of theoretical and applied concepts, and simpler evaluation of the learning experience. Students reported being better able to learn from each other (Philips, 2005).

Step 4: Analysis

Teamwork is an important component of T&L (Johnson et al., 2007). Supportive teaching materials such as videos and recordings can assist both lecturers and students. Student feedback on T&L experiences was insightful and helpful (Angelo & Cross, 2011). The language of teaching and evaluation material was sometimes a concern in meeting all students' needs.

Step 5: Conclusion

Transition to online T&L was a positive experience for students and lecturers. The value of using real patients in T&L is well documented, but this was challenging in 2020. Creativity in T&L is valuable and can enhance learning (Smith et al., 2005). All lecturers found it well worth the effort of setting up online T&L activities.

Step 6: Action plan

The banks of digital T&L material will be enhanced and expanded for future use. We will continue to develop our skills to better incorporate online T&L into our modules.

Title: Enhancing 'constructive alignment' in law modules: Utilising the IRAC framework

Contribution type: Reflection

Contribution format: Poster

Author(s): Cilliers, I; Kotzé, T; Strohwald, A

Faculty: Faculty of Law

Abstract:

This poster is centred on the application of the IRAC (Issue, Rule, Analysis/Application and Conclusion) framework in learning activities in property law specifically and in law modules in general as a means of enhancing constructive alignment. Constructive alignment entails aligning intended learning outcomes (ILOs) with teaching and learning activities and assessments. The property law course framework sets out clearly formulated ILOs. In particular, students are expected to identify the correct theory for a set of facts and should be able to apply the relevant theory to a factual scenario.

The challenges in the module were twofold: Firstly, the module currently does not provide adequate learning activities. Secondly, students struggle with structuring legal arguments and applying theory to a set of facts in assessments as required by the ILOs. This points to a gap and a lack of alignment between the ILOs and the assessments.

In order to address these challenges, two steps were taken: First, an online formative assessment in the form of application-based questions was made available to students. The questions were formulated to mimic summative assessments. Second, students were introduced to the IRAC framework and instructed to use it in completing the formative assessment. The memorandum for the assessment also followed the IRAC framework.

Based on the feedback received from colleagues and from students using an online questionnaire, it is clear that the IRAC framework finds application not only in property law but in other law modules too. The overwhelming majority of students (90%) indicated that IRAC was an effective framework for answering application questions, and 96% of students indicated that they would use the IRAC framework in future in answering questions in all their law modules.

Therefore, our finding is that learning activities coupled with the use of the IRAC framework ensure better alignment between the ILOs and assessments, thereby enhancing CA in law modules. It is recommended that in future, multiple learning activities should be created and that students should be introduced to the IRAC framework from the outset.

¹ Biggs J "Enhancing teaching through constructive alignment" (1996) 32 *Higher Education* 347-264. See also Biggs J "Aligning teaching for constructing learning" (2003) *The Higher Education Academy*. Retrieved from http://www.heacademy.ac.uk/assets/ documents/resources/resourcedatabase/id477_aligning_teaching_for_constructing_learning.pdf; Biggs J & Tang C *Teaching for quality learning at university* (2007) Berkshire, England: Open University Press.

Title: Implementing remote teaching and learning opportunities during COVID-19:

Adapting challenges into opportunities

Contribution type: Reflection

Contribution format: Poster

Author(s): Fokala, E; Miggels, A

Faculty: Faculty of Law

Abstract:

The pandemic threw us into the deep end of our teaching experience and philosophy. We had no previous experience in remote teaching but had to adapt swiftly and offer remote lectures to hundreds of students. Alvizo taught criminal procedure to about 240 students while Elvis taught international law to about 250 students. The number of students meant that we had to be attentive and engaging throughout the lectures to, at the minimum, generate a similar feel to contact teaching. As portrayed on our poster, some of the teaching and learning tools that we included in our lectures were podcasts, slides (PPT), Microsoft Teams, continuous assessment and student consultations. The aim of our poster presentation is to shine the light on these remote teaching tools, to discuss how we used the tools in our modules, to highlight the challenges that we faced and to discuss how we adapted these challenges into opportunities. As can be noticed on our poster, we have also indicated the reasons why we opted to use these tools, the aim and outcome of our remote teaching approach, and the conclusion and implications of our approach. The method that we used in designing our poster was a reflective approach. According to FutureLearn, a reflective approach is a process whereby lecturers scrutinize their teaching practices, analysing how a module was taught and how the teaching approach might be improved or changed for better learning outcomes.²

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² For details on the reflective approach, visit https://www.futurelearn.com/courses/learning-teaching-university/0/steps/26381 (accessed 13 September 2020).

Title: Creating opportunities for reflection: Writing skills support

Contribution type: Reflection

Contribution format: Poster

Author(s): Van der Merwe, K; Welman, L

Faculty: Faculty of Military Science

Abstract:

Despite higher education recognition of the full value of intervention measures and reflection for students to create an environment for 'learning by doing' (Gibbs, 1988), they still lack the capacity and clear guidelines for dealing with the challenges of various methods. This abstract focuses on the value of a reflective exercise through the resubmitting of an essay for my second-year students in military geography and how this will contribute to their learning process and ultimately foster academic performance. With reference to a specific curriculum assessment framework (template, questionnaire, peer reviews, assessor remarks or feedback), students are enabled to enjoy the fruits of continuous dialogue and engagement to increase their interpretation and performance and ultimately to build confidence for future assignments. After assessing the students' original essay submissions, it was apparent that the main problem that students had with their essay writing related to structure and flow. An intervention was designed to assist students with their writing skills. It was an optional activity. A template for an essay plan was devised for students to reevaluate the structure of their essays. Students then had the opportunity to rework and resubmit their essays and to complete a feedback form on their experience of the reflective exercise.

Ten out of 20 students decided to take part in the exercise. Overall, it proved to be of value for both the students and the lecturer. Although students rated the experience of reflecting on their essay as challenging, the task was still rated as valuable. Because of their positive attitude and willingness to resubmit and to engage with their peers, they learn from mistakes and understand the requirements of writing an essay. Learning is an integrative and a continuous process whereby both negative and positive feedback can contribute to learning (Dweck, 1999). Proper and collective planning (by both students and lecturer) can pave the way for inclusive learning and reflection to create a platform for high levels of commitment that will boost students' performance in the future.

Title: How to teach science concepts

Contribution type: Reflection

Contribution format: Poster

Author(s): Botha, E; Hoefnagel, M; Ngxande, M; Peer, N; Zininga, T

Faculty: Faculty of Science

Abstract:

At an undergraduate level, students are still moving away from school teaching methodologies (usually quite prescriptive). At secondary level, students are examined on their knowledge of facts. At tertiary level, they are often presented with abstract concepts and need to learn to apply certain rules/ideologies in order to draw concrete conclusions. Conversely, they need to place factual knowledge in a more abstract or broader context. For example, they may have access to textbook information but have not yet learnt to answer broader questions and apply this knowledge to real-life problems. We see a gap between concrete factual knowledge and broader, more abstract theory with science undergraduate students. In order to close this gap, we evaluated the application of the reflective framework of Rolfe et al. (2001). In science, for example the fields of computer science, mathematics, biology and chemistry, students find it hard to connect concepts with solving problems. Transforming a concept into a working solution needs time and understanding.

Across several scientific disciplines, we try to bridge the gap between concrete factual knowledge and more abstract theory in two ways: (1) We try to teach abstractions by presenting them concretely through many simple examples that can best explain the theory behind each concept. This starts with a simple example and builds up to a more complex real-world example. Having to explain the concepts in different ways could be a solution. We tried using different techniques in solving this problem. For example, in computer science, having live coding sessions that seek to break down a complicated concept into simple workable examples has been helpful, as seen in the feedback from the course evaluation. Another example in chemistry is teaching the importance of unit conversion as a standard international practice that has consequences in drug administration. Having to uncover the real-life implications of the concepts that are taught helps students to draw logical conclusions. (2) We encourage students to reformulate facts from different angles by asking more theoretical or abstract questions and having them answer using the facts that they have learnt.

For best results with students, weekly quizzes that test their understanding of concepts and one-on-one discussions have been useful to identify gaps in knowledge and understanding. Further emphasis is placed on the way that tests are set as well as discussions with students. The feedback from students' performance also influences how much time is spent on various topics during lectures. Furthermore, feedback regarding learning opportunities has been positive. We see that across different disciplines, the one theme that stands out is using real-world context to build a bridge.

Title: Preaching on a biblical gang rape

Contribution type: Reflection

Contribution format: Poster

Author(s): Wepener, C

Faculty: Faculty of Theology

Abstract:

In Judges 19, a woman is gang raped, killed, cut into 12 pieces and sent to the tribes of Israel. The text is in the biblical canon and must be preached on. Not only the so-called texts of terror are challenging. All the texts from ancient foreign contexts pose this challenge. In homiletics (the art of preaching), students must use their hermeneutical skills and fuse the horizon of meaning of an ancient text with the horizon of meaning of their current context. The aim is interpretation and the composition of a message for today. It is my task to teach students how to do this, which is quite challenging. The largest part of the module Practical Theology 314 is related to all the variables that should be taken into consideration in the art of preaching; however, the second-last learning opportunity, one lecture, is specifically devoted to the crossing of the bridge between text and context and the decisions pertaining to what must be said and how it should be executed. The challenge was addressed by (A) a lecture dealing with theory, augmented by (B) an online activity in which students critiqued an existing internet sermon on Judges 19 (they were provided with a rubric to identify how a preacher technically and artistically did what was discussed in the lecture) and (C) a tutorial in which they did a role-play of the text and thereafter reflected on their own efforts regarding the interpretation of the text. In this whole process, I used the reflective framework of Rolfe et al. (2001) to reflect on my approach to this teaching and learning challenge. The lecture, tutorial and online activity assisted students to understand what needed to be done and how it could be done inappropriately. Feedback was received by means of an e-mail questionnaire, and the overall feedback was positive, which was quite satisfying. I have learnt that a combination of teaching content, learning by doing and reflection on how others did it can assist students in understanding what is expected of them. I will apply this insight to similar challenges in all my modules.