



## SoTL conference 2021 abstract book

Index (arranged alphabetically according to title)

\*Click on the title to read the abstract.

\*\*PREDAC poster abstracts: [click here](#)

Title	Authors
<a href="#">‘Care-full’ learning design in the age of COVID-19</a>	Volschenk, M Brits, K Foiret, J Pinetown, D
<a href="#">A common framework to promote interprofessional collaboration at two institutions in South Africa</a>	Filies, G Muller, J
<a href="#">A community of practice to navigate uncertain times and spaces – an autoethnographic account</a>	Jacobs, AHM Barends, Z
<a href="#">A conceptual map for supervising the literature review: Insights from novice supervisors</a>	Feldman, JA Barends, Z
<a href="#">A reflective study of English Second Language teacher feedback used as a strategy to inform assessment in an Intensive English Programme during a pandemic lockdown</a>	Bishop-Swart, S
<a href="#">A space to facilitate clinical reasoning – taking clinical training online</a>	Lupton-Smith, A
<a href="#">A wise intervention to change mindsets about asking for support</a>	Du Plessis, A
<a href="#">Active online learning in a postgraduate Research in Accounting module</a>	Van Schalkwyk, O Steenkamp, G
<a href="#">Are engineering decisions ‘made’ by computers?</a>	MacRobert, C
<a href="#">Assessing the migration of activities from classroom to SUNLearn</a>	Jordaan, D van der Merwe, K
<a href="#">Assuring transformative experiential learning through monitoring and evaluation</a>	Andrews, R Comalie, R
<a href="#">Back to the drawing board: Framing South African engineering education</a>	Blaine, D
<a href="#">Being and becoming a master of Health Professions Education</a>	Volschenk, M Van Schalkwyk, S Bitzer, E
<a href="#">Being the change: Attempting to decolonise ourselves using Pinar’s cycles of currere</a>	McKay, M

<a href="#">Building capacity in research supervision: A transformative action-learning innovation</a>	Geiger, M Mji, G
<a href="#">Case management discussions in final-year Physiotherapy: Does it matter?</a>	Schmutz, AM Meyer, I Reardon, C Hanekom, SD
<a href="#">Contextualising Materials Science for engineers through an integrative learning approach</a>	Van Rooyen, M Blaine, D
<a href="#">Engineering report-writing peer learning system</a>	McGregor, C
<a href="#">Evaluation of a hybrid journal club in Anatomy during the COVID-19 pandemic</a>	Keet, K Baatjes, K Venter, R Q Wessels J Correira
<a href="#">Experiential Learning: Live-Online – transformation, relationality, and sense-making</a>	Andrews, R Roodt, K
<a href="#">Exploration of social presence in a virtual structured master’s programme</a>	Visagie, S Geiger, M Ohajunwa, C Luger, R
<a href="#">Exploring formative and summative assessment tools on Moodle</a>	Cullen, S Allie, L Talip, F
<a href="#">Exploring perceptions of stakeholders on the process of implementing a near-peer teaching (NPT) programme in Speech-Language and Hearing Therapy</a>	Visser, M Oosthuizen, H Louw, A
<a href="#">Exploring the efficacy of the epistemic assessment framework</a>	Blackie, M Arnott, G Kaschula, C
<a href="#">From didactics to datafication: A critical reflection on virtual learning environments and the production of space</a>	Bernard, T
<a href="#">Helping students navigate the intricacies of group work</a>	Krügel, M Adendorff, H Van der Merwe, C
<a href="#">How a course on wellbeing and flourishing skills changes lives</a>	Du Plessis, A
<a href="#">Impact of emergency remote teaching on postgraduate Engineering learning</a>	Goosen, N Korsten, N Wolff, K
<a href="#">Is it possible to teach social justice as a lived capability?</a>	Andrews, R Ndebele, F
<a href="#">Learning thresholds across the MPhil in Health Professions Education (HPE) at Stellenbosch University</a>	Archer, E Jacobs, C Schmutz, AM Volschenk, M
<a href="#">Let’s let them ‘cheat’! Group work in a summative setting</a>	Arnott, GE Blackie, M Kaschula, C

<a href="#">My rollercoaster teaching journey during COVID-19</a>	Slabbert, I
<a href="#">Not starting from scratch: Drawing on newcomer students' existing knowledge of popular cultural artefacts when illustrating new linguistic concepts</a>	Southwood, F
<a href="#">Observed changes in student activity during remote teaching in 2020</a>	Venter, MP
<a href="#">Online formative feedback: Forums can enhance student presence and voice</a>	Hanekom, PW
<a href="#">Pandemic pedagogy in the research setting: A postgraduate student's perspective</a>	Baatjes, KJ Layman-Lemphane, JI Keet, K Alblas, A Meyer, I
<a href="#">Pedagogical choices to integrate theory and practice: Conceptualisation and insights for literacy teacher education</a>	Barends, Z
<a href="#">Portfolios as a pedagogical choice for assessment as learning: Insights from a teacher education programme</a>	Barends, Z Jacobs, AHM Lebethe, A
<a href="#">Preparing Military Geography honours students to publish their research results</a>	Henrico, I Smit, H
<a href="#">Product or process – a chance to rethink assessment</a>	Lupton-Smith, A
<a href="#">Project-based learning in the science classroom: Teacher experiences</a>	Du Toit, A Botha, M
<a href="#">Reflection on project-based assessment in Thermofluid Dynamics 214</a>	Hoffmann, J Erfort, G
<a href="#">Service learning during lockdown – an assessment space of intentionality and possibility</a>	Lebethe, A
<a href="#">Stimulating open-ended peer learning through peer-assessed presentations</a>	Motang, N Pott, RW Wolff, KE
<a href="#">The dark side of online learning</a>	Rudman, R
<a href="#">The evolving role of an academic online mentoring programme</a>	Ontong, JM Arendse-Fourie, S Schonken, C
<a href="#">The flipped-classroom approach in Intermediary Financial Accounting: A reflection using Rolfe et al. (2001)</a>	Steenkamp, G De Laan, A
<a href="#">The new normal in engineering assessment: A faculty SWOT case study</a>	Hans, TM Wolff, KE
<a href="#">The value of e-learning in the acquisition of a clinical skill</a>	Van der Walt, L De Villiers, M Loots, R
<a href="#">Undergraduate teaching on assistive products at three South African universities</a>	Visagie, S Gubela, M Scheffler, E Ohajunwa, C Seymour, N
<a href="#">USB Teaching and Learning Landscape Project</a>	Opperman, P Chapwanya, M

<a href="#">Using graduates' experiences of the world of work to guide re-education</a>	Pott, R De Jager, M
<a href="#">Using H5P in assessment for learning: Mastering a threshold concept</a>	Le Roux, E Talip, F
<a href="#">Using the "powerful knowledge" concept towards socially just teaching and learning</a>	Ntwasa, S Blackie, M Dullaart, G Farmer, J Feldman, J Joorst, J Lesch, F McKay, MA Mlitwa, A Ohajunwa, C Loots, R
<a href="#">Variety is the spice of e-learning: Applying diverse online teaching approaches to optimise knowledge acquisition in short courses</a>	Lamb, G
<a href="#">Video e-portfolios for learning and assessment of Physiotherapy foundational practical skills</a>	Unger, M Keiller, L Manas, L

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** 'Care-full' learning design in the age of COVID-19

**Contribution type:** Reflection

**Contribution format:** Presentation

**Author(s):** Volschenk, M; Brits, K; Foiret, J; Pinetown, D

**Keywords:** care; learning technology

**Abstract:**

Globally, the COVID-19 pandemic has caused unprecedented social, economic and educational disruptions. This also holds true for Stellenbosch University's Faculty of Medicine and Health Sciences (FMHS), where the greater part of teaching, learning and assessment takes place in clinical contexts. As practising clinicians, most FMHS lecturers found themselves fighting at the coalface of the pandemic when the March 2020 lockdown restrictions dictated a shift to emergency remote teaching, learning and assessment (ERTLA). Lecturers were not only left with little time to transform face-to-face content into online offerings, but most of them also lacked innate technological capabilities for online teaching. In addition, many of the administrative support staff were inexperienced in navigating the University's online learning management system.

In this paper, the FMHS learning technologies team draw on the framework of Rolfe (2001) as we reflect on how the notion of an ethic of care (Noddings, 2012; Herman et al., 2018) guided us in navigating transitional challenges at our faculty during the initial shift to ERTLA. We share our experiences of incorporating the principles of constructive alignment and learning design to empower lecturers and administrative support staff to 'care-fully' craft accessible remote teaching, learning and assessment experiences that would address the cognitive, social and emotional dimensions of learning.

Although the transition to ERTLA proved challenging and disruptive in many ways, we learnt the importance of continually examining our practices to ensure that the methods and modalities implemented are equitable and beneficial to lecturers, administrative support staff and students. Incorporating an ethic of care into our practice as learning technologists proved indispensable for building meaningful relationships in a time of crisis, and facilitating the collaborative design of sustainable, adaptive and responsive teaching, learning and assessment experiences.

Instead of viewing the transition as an inconvenient speedbump, we recognise the opportunity it has created for the enhancement of blended-learning approaches in health professions education. Finally, we consider how an ethic of care may allow lecturers and students not only to cope with the various challenges of digitalised learning contexts, but also experience meaning and transformation as we embrace the 'new normal' of augmented remote teaching, learning and assessment (ARTLA).

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** A common framework to promote interprofessional collaboration at two institutions in South Africa

**Contribution type:** Research

**Contribution format:** Presentation

**Author(s):** Filies, G; Muller, J

**Keywords:** ICF; interprofessional education and collaborative practice (IPECP); common framework

**Abstract:**

To help address collaborative engagement and communication challenges in the healthcare system, the World Health Organisation (WHO) developed the International Classification of Functioning, Disability and Health (ICF) (WHO, 2010). The ICF is designed to conceptualise the complex interrelatedness of functioning as a dynamic interaction between persons, their health conditions and the environment. It serves as a common framework and language between professions at individual, institutional and societal levels.

This research focuses on two case studies from the University of the Western Cape (UWC) and Stellenbosch University (SU) where the ICF is used to facilitate interprofessional education and collaborative practice (IPECP), namely the World Café and the Collaborative Care Project. IPECP – learning with, from and about one another to improve collaboration and the quality of care and services – is considered essential in health professions training, and an integral part of holistic patient management (Khalil, 2018; WHO, 2010). The ICF is utilised to equip students with an appreciation of how collaboration with others improves patients' health outcomes during client/family/community-centred care (Moran, 2020).

However, how do students really perceive the ICF in relation to facilitating IPECP and transforming the way they evaluate and manage their patients? To answer this question, online questionnaires were distributed to undergraduate students from both UWC and SU involved in specific projects that made use of the ICF in 2021. The qualitative data collected was subjected to deductive content analysis using a structured matrix. At the time of abstract submission, the research was still under way, and the results will be presented for the first time at the SoTL conference.

Although this research comprises only two case studies where the ICF was used as a common framework for collaborative learning, the results may offer insight into the potential of this approach. It is argued that the integration of the ICF as a framework in health professions and social science education can be seen as a transformative tool for building a critical mass for IPECP in higher education.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** A community of practice to navigate uncertain times and spaces – an autoethnographic account

**Contribution type:** Research

**Contribution format:** Presentation

**Author(s):** Jacobs, AHM; Barends, Z

**Keywords:** community of practice; academic staff development; teaching, learning and assessment; reflection; vulnerability; autoethnography

**Abstract:**

In this presentation, we reflect on our experiences and vulnerabilities during the COVID-19 pandemic. We argue that higher education communities living through traumatising times should allow space for its members to recognise and deal with vulnerabilities. We consider how a community of practice (CoP) helped us support one another during times of heightened vulnerability and tested resilience. Our CoP made us feel less isolated and more connected. Its online format was particularly convenient, as we could participate from a 'safe' home office environment. We used the virtual space to build a collaborative network and foster a supportive relationship. Hence our research question: How did we, as academics, navigate our professional journeys through dynamic times and spaces in higher education during the COVID-19 pandemic?

We situate the idea of our virtual CoP within the work of Lave and Wenger (1991). We were furthermore guided by a conceptual framework that consists of contextual foci identified through our respective stories. Using autoethnography as a research methodology, we used our personal stories as data to describe, analyse and understand our own experiences. Campbell (2016:95) describes this as a form of "self-narrative that places the self within a social context".

It is traditionally believed that academic staff development activities are a mere component of staff development in general. The examples in this autoethnographic study disrupt this notion and embrace the discourse of collaborative partnerships and peer mentorships within CoPs as an additional layer to traditional academic staff development models. These staff development initiatives should incorporate opportunities to create CoPs and draw on their value.

Our joint reflections enabled us to understand our changing contexts as we journeyed through the uncertain times and spaces associated with the pandemic. Like Gabora (2003), we believe this helped us focus or defocus our attention, and navigate and understand our professional journeys. We conclude that higher education institutions should recognise and value CoPs to support the professional academic development of staff.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** A conceptual map for supervising the literature review: Insights from novice supervisors

**Contribution type:** Innovation

**Contribution format:** Presentation

**Author(s):** Feldman, JA; Barends, Z

**Keywords:** postgraduate supervision; novice supervisors; literature review; conceptual map for research and writing; action research; reflective practice

**Abstract:**

This paper discusses a research project that was conceptualised by two novice postgraduate supervisors to provide support to master's students in the writing of their literature review chapter. The project is in its design stage.

A preliminary literature search revealed that while many publications discuss the writing of the literature review chapter of a thesis, offering support and advice for both the supervisor and student, few if any discuss a developmental approach that breaks down the writing process into phases. Thus, our particular focus as novice supervisors of master's students – namely a developmental and phased as well as a reflective approach (for both supervisor and student) to the writing of the literature review chapter – has not been well researched or discussed in the literature.

We designed a conceptual map illustrating a scaffolded, three-phased approach to structuring the writing of the literature review chapter. The first phase starts with the student identifying the key concepts. The second phase invites students to research and develop three to four essays on each concept. These are submitted and discussed with the supervisor, building the student's research (finding the articles) and writing abilities (synthesising and presenting arguments) in respect of each concept. In the third phase, the student draws the essays into one coherent chapter.

As part of the research project, both the supervisor and student engage in ongoing reflective practices as the process unfolds. Thus, the research project aims to help the student build a chapter around the concepts of the study, while synthesising the literature with a clear focus from the outset.

This paper presents the conceptual map of the research project involving eight master's students who recently completed their research proposals and are now embarking on the writing of their theses. As we analyse the reflective data, we intend to continue contributing to the conversation regarding the supervision of postgraduate student thesis work.

[\[Back to index\]](#)



[\[Back to index\]](#)

**Title:** A reflective study of English Second Language teacher feedback used as a strategy to inform assessment in an Intensive English Programme during a pandemic lockdown

**Contribution type:** Reflection

**Contribution format:** Presentation

**Author(s):** Bishop-Swart, S

**Keywords:** ERTLA; ARTLA; English Second Language (ESL); English; online; assessment; feedback

**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) – a comprehensive English language course delivered in eight-week blocks from Beginner to Advanced English levels. Prior to the COVID-19 pandemic, in-person English classes ran from Mondays to Fridays, during which an English level was completed in 20 hours of in-person lessons per week and 160 contact hours per level. The first eight-week block of the 2020 IEP was in its eighth week, the programme’s assessment week, when President Cyril Ramaphosa announced that the initial 21-day nationwide lockdown would commence at midnight on 26 March.

This reflective study provides an overview of the immediate changes required to the assessment week, and later to all remaining assessments in the IEP, as English language classes for international students moved from in-person to online teaching. This overview specifically highlights the issues identified and strategies used by three English Second Language (ESL) teachers in making the necessary adjustments to existing IEP assessments as contact classes pivoted online. The feedback collected from the three ESL teachers was analysed according to Schon’s (1983) reflection framework of “reflection before, during and after a learning process” over the first eight-week IEP block immediately after the initial lockdown. This informed the changes made to the assessments of the international students who were suddenly studying English in an unfamiliar online environment. Additionally, this study offers practical suggestions of how to continue supporting English Second Language teachers to navigate and effectively adjust assessment in future online and blended-learning environments.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** A space to facilitate clinical reasoning – taking clinical training online

**Contribution type:** Innovation

**Contribution format:** Presentation

**Author(s):** Lupton-Smith, A

**Keywords:** clinical reasoning; online learning

**Abstract:**

One of the ways in which the SARS-COV2 pandemic affected the clinical training platform was by severely disrupting the placement of third-year Physiotherapy students in both 2020 and 2021. To address this disruption, an online clinical e-block of four weeks was developed for third-year students in 2020, which was subsequently continued into 2021.

Students were presented with three case scenarios and had to collaborate to plan their approach to and management of each patient, from referral through to discharge planning. Facilitators used a scaffolded approach to deliver relevant patient information to facilitate clinical reasoning during the process.

Initially, SUNLearn was used. However, the lack of real-time collaboration and feedback as well as students' inability to see the bigger picture posed a challenge to learning facilitation. Therefore, an online, interactive whiteboard tool (Miro) was introduced. A template was specifically designed to draw more strongly on the theories of constructivism, social learning and connectivism. Students worked collaboratively on the board, brainstorming aspects of the case (pathophysiology, assessment and management). This process was facilitated to help identify gaps in students' knowledge or reasoning. Students were able to appreciate the interconnectedness of activities and aspects of patient management. As one remarked: "I really enjoyed the group work on the Miro board, but the real-time feedback and engagement with the lecturer was the most beneficial aspect for me ... facilitating deeper thinking, while helping us to connect the dots of the cases."

To the best of my knowledge, there is no literature on the use of a similar tool in Physiotherapy for this purpose, although other tools, such as online discussion boards, do help facilitate deeper thinking and learning (Mącznik et al., 2015). Specific tools such as SNAPPS (Wolpaw et al., 2003) or the one-minute preceptor (Aagard et al., 2004) can help facilitate clinical reasoning, but require foundational clinical reasoning to be in place. The innovation of the template used and the Miro activity may serve as a valuable foundation to develop clinical reasoning. This level of facilitation can be created in the online space where access to the clinical platform is impeded, in conjunction with, or as a precursor to, clinical training.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** A wise intervention to change mindsets about asking for support

**Contribution type:** Innovation

**Contribution format:** Presentation

**Author(s):** Du Plessis, A

**Keywords:** wise intervention; interactive tool; asking for support; mindset change; thinking routine

**Abstract:**

Social support is considered critically important for health and wellbeing throughout life (Inagaki & Orehek, 2017). Baker (2020) identified eight reasons why people typically do not allow themselves to ask for the support they need. Understanding these obstacles to support-seeking, and knowing how to overcome them, are important for all people, including students.

According to Baker, “not asking for help is one of the most self-limiting, self-constraining, even self-destructive decisions we can make”. Therefore, it is important to overcome this tendency and master “the most important skill for success”, as Baker (2020) calls it in his book *All You Have to Do is Ask*.

Interestingly, Taylor and colleagues (2004) identified differences in various cultural groups’ willingness to seek social support. They found that Asian-Americans from traditional collectivistic cultures requested less social support than their European-American counterparts from more individualistic cultures. People from collectivistic cultures may request less social support for fear of straining relationships, feeling burdensome, losing dignity or disrupting group harmony (Baker, 2020). This finding may also have implications for culturally diverse student populations and their help-seeking behaviours.

To examine this further, an interactive internet-based tool was designed for students to explore eight common personal barriers to asking for support, and to learn about help-seeking behaviours that could help them overcome these obstacles. After completing this exercise, students were challenged to record possible shifts in their mindset via the “I used to think ... Now I think” thinking routine from Harvard’s Project Zero (Ritchhart et al., 2011). This routine helps students reflect on their thinking about asking for support, and to explore how and why that thinking may have changed.

Altogether 99 Extended Degree Programme students participated in a pilot run of this “wise” intervention in 2021. Students explored approximately 3,5 (out of 8) obstacle-solution pairings each. The most commonly cited obstacle was “I don’t want to bother other people” (65,83%). More black than white students indicated a positive mindset shift on this specific obstacle (which aligns with international findings).

Recommendations include broadening access to the tool, and integrating it with the University’s online onboarding programme for newcomers.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Active online learning in a postgraduate Research in Accounting module

**Contribution type:** Innovation

**Contribution format:** Presentation

**Author(s):** Van Schalkwyk, O; Steenkamp, G

**Keywords:** active learning; online learning; student engagement; digital acumen; critical thinking

**Abstract:**

Chartered Accountancy education offered by universities in South Africa has traditionally been characterised by passive face-to-face (F2F) approaches. According to research, introducing online teaching as well as employing active-learning techniques could potentially enhance student learning, engagement and motivation (Sugahara & Dellaportas, 2018). Such approaches could also facilitate the development of digital and critical thinking competencies in students, the importance of which is increasingly emphasised by the South African Institute of Chartered Accountants (SAICA) (Keevy, 2020; Terblanche & De Clercq, 2020; Viviers, Fouché & Reitsma, 2016). In response to this, a more traditional and passive F2F lecture week (included in a postgraduate course on Research in Accounting) was redesigned during the COVID-19 pandemic to be presented fully online, based on the active-learning principles found in Laurillard's Six Ways of Learning (Laurillard, 2012). Afterwards, a questionnaire was administered to investigate the perceptions and experiences of both students and lecturers on whether the redesign had led to improved learning and competency development, as well as increased engagement and motivation.

Most respondents felt that online learning had not enhanced student learning and understanding, nor led to students being more engaged and motivated. In fact, many students mentioned that the F2F environment had motivated them more and allowed for easier communication with lecturers. Had it not been for the COVID-19 pandemic, students would have preferred to attend F2F classes (or a combination of F2F and online classes). However, online learning did improve students' digital acumen – a competency important to SAICA. On the flip side, most respondents felt that active learning (when compared to passive learning) had resulted in enhanced student learning and understanding, and students being more engaged and motivated. Active-learning tasks accompanied by feedback were viewed as most useful by students. Furthermore, respondents believed that active learning developed students' ability to think critically (another competency required by SAICA).

The results of this study are important to lecturers seeking to design courses that engage and motivate students, enhance learning, and allow the development of the competencies required of the accountants of the future.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Are engineering decisions ‘made’ by computers?  
**Contribution type:** Research  
**Contribution format:** Presentation  
**Author(s):** MacRobert, C  
**Keywords:** computers; judgement; decision making; geotechnical engineering

**Abstract:**

Aspiring professional engineers need to demonstrate an ability to make decisions. Decisions are guided by judgement and informed by experience, expertise, reasoning and/or analysis, each of which is subject to biases and errors (Hammond et al., 1987; Parkin, 2000). Understanding how engineers think is crucial, as failures are often attributed to engineers rather than methods (Sowers 1993).

To investigate the perception that decisions are overly biased, and thus ‘made’, by computers, geotechnics practitioners were observed while carrying out a slope stability analysis based on a failure (Blight, 2010). An individual paper-based interview was developed to present material with environmental validity and in a neutral way, to avoid priming participants to the actual outcome.

Participants made decisions about safety following three activities: an initial note-taking exercise, an intermediary step where the problem had to be sketched, and, finally, completing a computer calculation. While modelled on practice, participants only had a short period of 30 minutes to complete the exercise, which increased the chances of human error. Participants ranged from students to experienced consultants (57 in total).

An accurate assessment at the predominantly intuitive note-taking and sketch stages did not translate into correct predictions, despite high confidence being placed in these answers. However, final predictions were highly correlated to the analytical computer calculation, despite low confidence being placed in this answer by most participants, except novices. These results broadly align with the cognitive continuum theory (Hammond et al., 1987).

Aids to decision making form a hierarchy from pattern recognition, through reasoning (informal language-based logic), to calculation (formal symbolic logic) at the apex (Margolis, 1987). This hierarchy is evident in the correlation between answers and activities, but not in the confidence placed in each activity and its answer. However, the distribution of confidence reflects industry dogma that theory should be questioned in light of common sense and experience (Terzaghi, 1961).

While this is perhaps reassuring, most participants, including experienced participants, could not identify that failure was imminent, and were confident in their final predictions. Correct computer models are essential to engineering; however, even expressing low confidence in wrong models was not enough to overcome the persuasiveness of computed answers in this study.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Assessing the migration of activities from classroom to SUNLearn

**Contribution type:** Innovation

**Contribution format:** Presentation

**Author(s):** Jordaan, D; Van der Merwe, K

**Keywords:** foreign-language learning online; emergency remote teaching, learning and assessment (ERTLA); learning design; SAMR (substitution, augmentation, modification and redefinition) model

**Abstract:**

This presentation describes the migration of face-to-face (F2F) classroom activities to online activities during the shift to remote teaching brought on by the COVID-19 pandemic. The module concerned is a second-year intermediate language module for beginner learners of a foreign language.

The aim is to discover the affordances of SUNLearn and the innovations made in redesigning F2F activities for the online space. Particular emphasis is placed on the learning design changes and innovations made to activities as well as summative and formative assessments.

A shift in thinking had to take place as to how activities were designed and students' time was spent. Apart from the radical change of turning the sit-down written summative assessments into online assessments, the more challenging and interesting changes involved the augmentation of activities and the development of more formative assessments in the course. Certain activities that used to be in-class activities, such as group work or writing paragraphs, now had to be turned into asynchronous 'homework'. In the online space, the line between homework and classwork activities becomes blurred. What is 'homework' when everyone is at home all the time?

The presentation uses a customised Learning Designer tool (see Laurillard, 2018, for a description) to quantify and illustrate the changes made to the module. The innovations are analysed through the lens of the SAMR (substitution, augmentation, modification and redefinition) model for online learning (Puentedura, 2006; Hamilton et al., 2016). The Learning Designer tool and SAMR model are explored in terms of their usefulness for this type of investigation.

The research offers at least two identifiable benefits: Firstly, other foreign-language lecturers could build on the innovations and reflections presented here. Secondly, should Stellenbosch University's foreign languages become part of the institution's hybrid module initiative in the future, it is important to reflect now on how to optimise the delivery of foreign-language learning online.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Assuring transformative experiential learning through monitoring and evaluation

**Contribution type:** Innovation

**Contribution format:** Presentation

**Author(s):** Andrews, R; Comalie, R

**Keywords:** monitoring and evaluation; experiential learning; social transformation

**Abstract:**

Monitoring and evaluation (M&E) provides ways to engage educators in active learning and reflection (Mayana, 2020). By connecting M&E to the Theory of Change (ToC), it becomes possible to evaluate the theories that motivate programmes and initiatives aimed at social change. The ToC is focused not just on determining whether an intervention is effective, but also on explaining what methods the intervention uses to be effective, and how it will lead to expected intended outcomes (Vogel, 2012).

Monitoring may be defined as “an ongoing process by which stakeholders obtain regular feedback on the progress being made towards goals and objectives” and is an important information source for experiential learning evaluation. Evaluation, in turn, is defined as “the systematic collection of information to make judgments, improve program effectiveness and/or generate knowledge to inform decisions about future programs” (Patton, 2017).

M&E leads to evidence-based decision making, which is critical for good governance and accountability in higher education (UNESCO, 2016). One of the main purposes of M&E in education is to ensure the provision of equitable and quality education for all. Quality education is a multidimensional concept that takes into account the quality aspects of input (human, material and financial), process (teaching-learning and effective management practices) as well as outputs and outcomes (the learning outcomes and quality of results) (IIEP, 2007). These notions are directly linked to the imperatives of access, success and redress in the National Plan for Higher Education (NPHE, 2012).

The Stellenbosch University Co-Curriculum Office recognises that M&E forms the bedrock of quality assurance in the design and implementation of sustainable education transformation initiatives, and is considered one of the ten critical components needed to bring about a transformative student experience (Cavanaugh, et al., 2014). The Office aims to develop clear, attainable outcomes and goals for education transformation, and flexible strategies for achieving these. Goals are accomplished through ongoing communication with experiential educators regarding roles, expectations and progress, as well as documenting programmatic success and areas of potential enhancement. The Co-curriculum Office looks forward to sharing the findings of the 2020 M&E process with the SoTL conference participants.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Back to the drawing board: Framing South African engineering education

**Contribution type:** Reflection

**Contribution format:** Presentation

**Author(s):** Blaine, D

**Keywords:** programme review and renewal; social justice in teaching and learning; transforming the curriculum

**Abstract:**

Engineering curricula across the globe are internationally accredited by the engineering qualification standards outlined in the Washington Accord for degree programmes. In South Africa, the Engineering Council of South Africa (ECSA) is the government-mandated registration and accreditation body. All engineering programmes in South Africa submit themselves to regular, rigorous requalification visits (every four years) to maintain international relevance. The programmes are evaluated in terms of upholding their quality and alignment with graduate attributes or exit-level outcomes ranging from technical engineering and problem-solving abilities, and foundational mathematics and science competence, to professional skills such as teamwork, ethical behaviour and communication (ECSA, 2020). While these qualification standards allow graduate engineers to move seamlessly across borders when working in the international market, there is still room to design curricula that are globally relevant, but locally responsive. In fact, internationally, engineering programmes are being called on to produce “global engineers” who are able to operate in multicultural, complex environments, adapt solutions and approaches to solve context-specific engineering problems, and can do so respectfully, honourably and ethically (Streiner et al., 2015; Trevelyan, 2019).

The underlying research question for this paper is how engineering education should be conceptualised for the South African context, and the factors and people to be considered when reflecting on this problem. Mezirow’s transformative learning theory is used as a framework for this reflection, where the primary focus is on process and premise reflection (Mezirow, 1995). In considering this problem, Waghid and colleagues’ (2018) African philosophy for education is used as an underlying framework to design a transformative student experience by purposefully creating spaces to include and empower less-dominant groups, engender an ethos of ubuntu through reflection on the connectedness and social responsibility of engineers in society, and promote other ways of knowing, being and doing that can co-exist. This concept aligns well with core engineering principles, namely that a complex problem can be solved in a multitude of ways, each influenced by the design criteria that are chosen and prefaced when approaching the problem.

[\[Back to index\]](#)



[\[Back to index\]](#)

**Title:** Being and becoming a master of Health Professions Education

**Contribution type:** Research

**Contribution format:** Presentation

**Author(s):** Volschenk, M; Van Schalkwyk, S; Bitzer, E

**Keywords:** health professions education; master's studies; professional identity; postgraduate supervision; landscapes of practice

**Abstract:**

The master's degree in Health Professions Education (MHPE) has become the credential of choice for health professions educators who wish to improve their educational effectiveness (Tekian et al., 2014). When undertaking MHPE studies, candidates typically embark on a dual career pathway situated in two epistemologically and ontologically distinct fields of study (WFME, 2016). This implies a shift from thinking within the realm of the more exact sciences towards the field of social sciences. It also requires constructing new educator identities that are, ideally, well integrated with students' existing professional identities. Currently, however, little is known about the construction of a professional identity during MHPE studies.

This study responds to the question: How do health professions educators involved in MHPE studies perceive the construction of their educator identities? An interpretive, multiple case-study design was employed, involving qualitative data generated through narrative interviews and self-portrait drawings across two data collection periods. The data revealed three major themes, foregrounding the learning experiences, identity construction, and workplace contexts of health professions educators. Findings show that, as master's candidates navigate their learning trajectories towards becoming educational scholars and leaders across disciplinary boundaries, they experience multiple tensions, which cause them to construct their identities in new and unpredictable ways.

Drawing on the theory of landscapes of practice (Wenger-Trayner et al., 2015), new insights into the sociocultural dimensions of becoming a master in Health Professions Education (HPE) emerge. These include the impact that postgraduate study and disciplinary workplace contexts have on the professional learning, identity and practices of emerging educational scholars and leaders in HPE. The findings from this study suggest that health professions educators "straddle the boundaries" of diverse communities of practice, and that MHPE course facilitators and research supervisors would benefit from new conceptualisations of the disciplinary workplace as a site of professional socialisation and evolving professional identities.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Being the change: Attempting to decolonise ourselves using Pinar’s cycles of currere

**Contribution type:** Reflection

**Contribution format:** Presentation

**Author(s):** McKay, M

**Keywords:** educational leadership; reflection; transforming the curriculum; science, technology, engineering and mathematics (STEM); currere

**Abstract:**

For the past decade, students and some academics have been calling for the decolonisation of university structures and cultures, including curricula (Vorster & Quinn, 2017), having noted that the discourse of transformation failed to lead to real change in higher education. Le Grange (2021) observes that, despite substantial literature concerning decolonisation of curricula in South Africa, little has been written about individual responsibility for this process – Fanon’s “necessary condition for decolonisation”, from which no one is exempt. Currere is defined as “an ongoing project of self-understanding in which one becomes mobilised for engaged pedagogical action”, leading to reconceptualised curricula (Pinar, 1975). The currere framework is a rigorous, methodical process that includes four steps or benchmarks: the regressive, the progressive, the analytical and the synthetic. This framework was used by Le Grange (2021) to document his own decolonial project.

Having acknowledged that I too “take in coloniality on a daily basis” (Le Grange, 2021), as well as my own privileged demographic, I used the currere framework to reflect autobiographically on my educational experiences. In analysing past, present and future life history and practice, I was able to imagine future possibilities and new ways of thinking about science education. I hope to use this as a “jumping-off point” for a broader project: conversations around decoloniality between colleagues in STEM disciplines at Stellenbosch University.

My experience, which aligns with Le Grange and Pinar, is that deliberate interrogation of one’s own journey in multiple cycles of currere results in transformation of the self and, ultimately, of the way our curricula are viewed.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Building capacity in research supervision: A transformative action-learning innovation

**Contribution type:** Innovation

**Contribution format:** Poster

**Author(s):** Geiger, M; Mji, G

**Keywords:** first-person action research; research supervision capacity development; scholarship of research supervision; transformative action learning

**Abstract:**

The rising numbers of admissions to the master's programme in Human Rehabilitation Studies (coursework) require an increasing number of research supervisors for the research assignment component of the course. Apart from the challenges relating to class size and workloads of individual potential supervisors, the available supervisors are diverse in terms of their own research experience, supervisory experience (including number and nature of master's students previously supervised), basic teaching and learning philosophies, as well as past personal experiences of being supervised during their own master's and/or PhD studies.

Therefore, the purpose of this project in progress was to develop an innovative system of structured and contextualised transformative action-learning opportunities for the team of supervisors, regardless of (yet sensitive to) their diverse baselines or starting points.

A first-person action inquiry approach, where the innovators/inquirers themselves were the participants (Marshall, 2016), was applied. The participants comprised a team of eight research supervisors with diverse research expertise, experiences, supervision approaches and learning cultures, who supervise or co-supervise the research assignments in the Human Rehabilitation Studies master's programme. They became co-constructors of a process for research capacity development, including two reflective virtual workshops and an online discussion forum. These allow team members to share learning from formal supervisory information sessions and courses offered elsewhere in the Faculty of Medicine and Health Sciences or Stellenbosch University more broadly, and to ask questions on theoretical and/or procedural issues pertaining to research supervision (such as ethics submissions, preparations for examinations, etc.). In addition, the process enables them to collaboratively develop an online template to structure the process of supporting/nurturing research supervisors, and to develop resources specific to their context.

The innovation may also be useful in other contexts with similar needs for research capacity development. Outlines of the workshops and a template of the structure of the discussion forum may enhance the transferability of the concept for application in other settings.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Case management discussions in final-year Physiotherapy: Does it matter?

**Contribution type:** Reflection

**Contribution format:** Presentation

**Author(s):** Schmutz, AM; Meyer, I; Reardon, C; Hanekom, SD

**Keywords:** case management discussions; clinical training; assessment

**Abstract:**

During 2020, in response to the disruption caused by the COVID-19 pandemic, modifications were introduced to the Clinical Physiotherapy 474 (CPT) module. The pandemic affected rehabilitative services and support, and posed challenges to assessment for learning. Previously, students were assessed through direct observation. One of the modifications was the inclusion of remote case management discussions (CMDs) as part of assessment. Utilising Rolfe and colleagues' (2001) model for reflection, we review what was done, the lessons learnt, and the implication for future module developments.

The CMDs afforded students a learning opportunity to focus on the continuation of patient care in the health system. Learning was supported by lecturers conducting remote facilitation. Students prepared four different patient cases in preparation for the CMD presentation. Assessment was done remotely using Microsoft Teams and a set rubric. This further contributed to the recording of tests and moderation.

Paramount to the CMDs was students' reflection on their own knowledge gaps, the health system and their role in it. The remote CMDs guided students towards self-directed learning in an inclusive way. Students managed their patients holistically and could develop various skills during the preparation of their CMDs. However, the void left by the absence of the direct observation test cannot be ignored. It is further important to note that additional support was needed for unforeseen technical and logistical issues.

On the whole, the CMD presentations were a useful tool to implement as part of the assessment package for students to achieve the module outcomes, offering students the opportunity to develop a holistic view of patient management across different levels of health care. The additional assessment also affords students the unique opportunity to reflect on their own development as they identify their own professional role and learning needs, and direct their learning.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Contextualising Materials Science for engineers through an integrative learning approach

**Contribution type:** Innovation

**Contribution format:** Presentation

**Author(s):** Van Rooyen, M; Blaine, D

**Keywords:** integrative approach; theory-rich modules; semantic wave; critical thinking; emerging paradigm

**Abstract:**

Theory-rich modules are often presented according to the traditional paradigm (Felder, 2021) – in siloed format, with segmented learning occurring across several topics and activities. This disjuncture stifles critical thinking and forces students to rote-learn theory, with little consideration given to connections between segmented concepts and to real-life contexts. This paper aims to assess whether integrative methods assist in establishing links between different concepts and assessments in the second-year module Materials Science A244.

This conceptual paper describes a course framework design that involves a visual-based, integrative approach (Kipper & Rützmann, 2012) aimed at developing critical thinking to help students contextualise their understanding of organised topics and highlight generalisations and relationships between those topics. Legitimation code theory semantics (Maton, 2013) is used as an analytical tool to create broader semantic waves that describe the “connection of the dots” between abstract theory concepts with weak semantic gravity (SG), and more contextualised assessment activities with strong SG, including practicals and case studies.

Methodologically, this project adopts a qualitative, design-based research (DBR) approach aimed at continuous, iterative improvement of Materials Science – a method that stems from several previous projects involving programme renewal. This will be implemented through a comprehensive, integrated graphic organiser that visually traces the roadmap for the module, and explicitly highlights the connections between topics and activities. The infographic also includes direct links with assessments, including case studies. Case study quizzes, which are formatively assessed, combine theory-based questions with reflective survey questions on how the approach benefited students’ understanding of module content, if at all.

As part of ongoing programme renewal for this module, small focus groups will be created consisting of students repeating the course. A series of reflective student feedback surveys will be provided to these groups, in which the current course structure will be assessed against the previous year’s emergency remote teaching format in terms of its effectiveness in helping students understand module content. It is anticipated that the integration of concepts and assessments as well as the semantic motion from concepts to concrete case studies will have a positive effect on repeaters’ grasp of the module theory.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Engineering report-writing peer learning system

**Contribution type:** Innovation

**Contribution format:** Presentation

**Author(s):** McGregor, C

**Keywords:** peer assessment and learning

**Abstract:**

In the experiment design component of a final-year Engineering module, students are assessed against a graduate attribute. The module requires students to both design an investigation and write a report, both of which have “final product” and “ongoing process” features, which are significantly different (Shay, 2005). This is a high-stakes assessment for which they appear to be unprepared. In the 2020 academic year, nearly half the class failed their assessment.

In 2021, a peer review component as proposed by Venables and Summit (2003) was added as a formative assessment, where each member of a peer group grades a draft of the report and provides written feedback. The intent here was to build both “process” and “product” capabilities founded on sociocultural approaches to learning (Vygotsky, 1978). After the peer review, the students were given a chance to improve the quality of their report, which is then submitted for summative assessment.

The failure rate for the summative assessment dropped significantly from nearly half in 2020 to just over a quarter in 2021. Some students still clearly struggled with the investigation component, while others fail in report writing. A comparison of formative (peer review) and summative assessment grades reveals a large performance gap as well as problems with self-perception of ability (Kruger and Dunning, 1999).

The challenge for students in Engineering report-writing is to separate “process” and “product” conceptually. This challenge is exacerbated by very large class sizes, which make it virtually impossible for lecturers to provide meaningful feedback on report assignments. The pedagogical consequence of this limited scaffolding throughout a student’s study career is evidenced by the poor Engineering report-writing skills of a significant fraction of the final-year student cohort. The experience through this work shows that peer assessment has the potential to contribute significantly to addressing this challenge.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Evaluation of a hybrid journal club in Anatomy during the COVID-19 pandemic

**Contribution type:** Innovation

**Contribution format:** Presentation

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

**Keywords:** COVID-19; Anatomical Sciences; postgraduate education; journal club; emergency remote teaching

**Abstract:**

The COVID-19 pandemic disrupted tertiary education worldwide, and postgraduate training was no exception. It is compulsory for students in the programme Bachelor of Science Honours (BscHons) in Anatomy to participate in a journal club. The goals include the development of scientific communication and critical appraisal skills. Journal club covers a range of topics such as scientific writing, research ethics, and relevant topics in Anatomical Sciences. Two publications are circulated in advance, which are then discussed at the bimonthly meeting.

In 2020, the journal club abruptly transitioned from in-person to synchronous meetings on Microsoft Teams, with a WhatsApp group used for asynchronous discussions. From the thematic analysis of an open-ended questionnaire completed by students, the two themes of virtual format and content emerged (Keet et al., 2021). It appeared that students adapted rapidly to the change in format, forming a virtual community of practice.

The journal club continued in a hybrid format in 2021, with several changes. The now Master of Science students who attended the journal club in 2020 each hosted one session. When restrictions were lifted between the second and third waves of the pandemic, some of the meetings were held in person.

Semi-structured interviews were held with the 2021 cohort. The questions centred on students' positive and negative experiences of the content and format of the journal club. Thematic analysis is ongoing, and preliminary findings support the continuation of a community of practice, with the added element of near-peer mentoring. Participants were satisfied with the online journal club, and particularly enjoyed the assignments. They did, however, suggest revising the scheduling of certain topics to coincide with the activities of the academic year. The few in-person sessions were also well received, providing support for the feasibility of a hybrid format.

To date, there are no published reports of anatomy journal clubs, whether in-person or online. Online journal clubs were reported for some medical specialities before the pandemic and seemed to increase in popularity during the pandemic (Aulakh et al., 2020; Hughes et al., 2020; Slantetz et al., 2020). The findings could serve as guidelines for implementing hybrid journal clubs in a postgraduate Anatomical Sciences setting.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Experiential Learning: Live-Online – transformation, relationality, and sense-making

**Contribution type:** Innovation

**Contribution format:** Presentation

**Author(s):** Andrews, R; Roodt, K

**Keywords:** experiential learning; online; relationality; transformation; sense-making

**Abstract:**

The COVID-19 pandemic (NICD, 2020) irrevocably altered living, working and being in the world. Globally, face-to-face teaching and learning has shifted to online learning (Aristovnik et al., 2020). In higher education, the pandemic led to heightened uncertainty, insecurity, and time and academic pressures. The higher education sector in South Africa experienced an illumination of existing socioeconomic disparities, exposing gaps in access to e-learning (Mpungose, 2020). This resulted in critical shifts in teaching, learning and assessment approaches (Staunton et al., 2020).

Experiential educators, who provide experiential learning (Kolb & Kolb, 2009) and training opportunities in the co-curriculum, experienced challenges when face-to-face activities shifted online in compliance with COVID-19 national protocols. They quickly discovered a gap in their technological capabilities.

The co-curriculum project at Stellenbosch University (SU) was confronted with the challenge of delivering a transformative student experience in the online space (O’Sullivan, 2003; Mezirow, 2008). This necessitated a shift to experiential learning that focused on building connections, inclusion and belonging online.

Drawing on the work of Boyer (2006), which speaks to online collaborative learning, as well as Cranton and Torrisi-Steele’s (2021) work on transformative learning in an online environment, the Co-Curriculum Office created a number of interventions and opportunities for experiential educators. The recent CRC-approved Designing for Transformative Experiential Learning module presented one such opportunity for both students and staff to pick up critical skills in designing online transformative experiential learning opportunities.

The Co-Curriculum Office also partnered with the International Network of Universities (INU) Intercultural Learning Global Engagement (ILGE) group in navigating the online international intercultural experiential learning space. This presented an opportunity for us to learn from, and contribute to, experiential learning online in a global context. These opportunities are now being made available to experiential educators in various higher education institutions through the experiential learning community of practice.

Experiential Learning: Live-Online, being an emergent initiative of the Co-Curriculum Office, provides a pragmatic approach to developing critical skills and capabilities, and sharing knowledge and expertise, while growing an online experiential learning community of practice, thereby delivering on SU’s Vision 2040.

[\[Back to index\]](#)



[\[Back to index\]](#)

**Title:** Exploration of social presence in a virtual structured master's programme

**Contribution type:** Research

**Contribution format:** Poster

**Author(s):** Visagie, S; Geiger, M; Ohajunwa, C; Luger, R

**Keywords:** social presence; virtual teaching and learning; graduate programme

**Abstract:**

Virtual education allows many who cannot enrol in conventional programmes an opportunity for further study, and promotes equity in graduate education (Joiner et al., 2020). The experience of social presence positively affects students' achievements in, and satisfaction with, virtual programmes (Kim et al., 2016). Therefore, virtual education programmes must purposefully incorporate strategies that nurture social presence (Volschenk et al., 2020).

Social presence is the extent to which people perceive one another as "real", connected and belonging to a group during virtual interaction. It comprises six facets – presence, respect, connect, belong, identify and intimacy – which develop on a continuum (Lowenthal & Snelson, 2017).

This study explored whether students in a virtual structured master's programme at Stellenbosch University indeed experienced social presence. The 17 students who enrolled for the master's programme concerned in 2021 constituted the population for this qualitative descriptive study. Data was collected via anonymised e-mail feedback, and semi-structured interviews were conducted with ten purposively sampled students. A combination of deductive and inductive thematic analysis was done. Triangulation, member checking and inputs from a reference group were added to enhance trustworthiness.

All participants appear to have experienced "virtual presence" and "respect". "Connecting", "belonging" and "social identity" were experienced to varying degrees, while "intimacy" was not achieved. Some participants were barely there. Others developed connections that provided encouragement and stimulated a sense of familiarity with colleagues, despite never having met in person. Participants felt that the example set by facilitators as well as the virtual contact week were important catalysts in the development of social presence.

It is concluded that some participants developed the connections needed for social presence. Others were reticent to make themselves virtually visible, and required structured opportunities to overcome their hesitance.

Based on these findings, it is recommended that facilitators include synchronous tutorials, virtual office hours and small-group work in online teaching. Students can also develop a social calendar, where information such as birthdays could be shared. These recommendations could strengthen the rest of this particular virtual programme as well as other graduate programmes with online components in the broader Stellenbosch University environment. A future study could explore what strategies are most effective in facilitating social presence.

[\[Back to index\]](#)

**Title:** Exploring formative and summative assessment tools on Moodle

**Contribution type:** Research

**Contribution format:** Presentation

**Author(s):** Cullen, S; Allie, L; Talip, F

**Keywords:** summative; formative; assessment; strategies; Moodle

**Abstract:**

As a result of the impact of COVID-19 on institutions of higher education, there has been increased interest in the use of online platforms for teaching and learning. However, many have questioned whether subject matter competence can sufficiently be measured with digital technologies on these platforms (Gikandi et al., 2011). With this in mind, how can one effectively assess students using Moodle functionality in an online setting?

This work aims to provide insights into assessment strategies that are universally applicable, but tailored to the Stellenbosch University (SU) context. This is done by examining specific tools available on the SU learning management system (LMS) Moodle, and how these can be leveraged for effective online assessment. This promises to be particularly useful to SU colleagues attending the SoTL conference, who would be able to practically apply the suggested strategies in their practice. Thus, this work contributes to both a greater understanding of the use of technology in education, as well as practical solutions that can be implemented in hybrid-learning or blended-learning classrooms.

When building formative assessment, HTML5 Package (H5P) provides an opportunity to ensure that learning occurs continuously. This can be done using complex elements such as interactive video and branching scenarios, which facilitate adaptive learning, or simple elements such as drag-and-drop and fill-in-the-blanks. As more institutions shift from traditional teaching modes to online learning, there has been an increased focus on leveraging formative assessment, which focuses on assessment *for* learning rather than *of* learning (Luckritz Marquis, 2021).

To assess students' summative learning, in turn, the Moodle Workshop tool is recommended. This allows for assessment phases, which can include peer assessment, facilitator assessment, and use of artificial intelligence technology to assess how accurately students assess one another. While formative assessment is vital for learning, there is still space for summative assessment practices in online pedagogy best-practice.

Finally, other Moodle tools such as quizzes, forums, assignments and the lesson tool are briefly examined with regard to their potential for formative and summative assessment.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Exploring perceptions of stakeholders on the process of implementing a near-peer teaching (NPT) programme in Speech-Language and Hearing Therapy

**Contribution type:** Research

**Contribution format:** Presentation

**Author(s):** Visser, M; Oosthuizen, H; Louw, A

**Keywords:** near-peer teaching; Speech-Language and Hearing Therapy

**Abstract:**

Near-peer teaching (NPT) has been recognised as a valuable and effective approach to learning and has been incorporated into courses in various ways. This peer-assisted learning strategy involves teaching by student teachers who have one or two years' more experience than the learners (Ten Cate & Durning, 2007:592). However, the process of developing and implementing such a programme may be challenging.

The purpose of this study was to reflect on and document the process of developing an NPT initiative. The programme consisted of a subject-specific workshop offered to second-year students in a Speech-Language and Hearing Therapy (SLHT) course, followed by three NPT sessions along with the first-year SLHT students. A qualitative, interpretivist research design was employed to identify the key considerations in developing an NPT programme. Altogether 35 first-year and 34 second-year students participated in eight focus group discussions after completing the NPT sessions. The reflections of two lecturers involved in this initiative were analysed together with the data from the focus groups.

Results showed that the preparation of students for the NPT programme, and the alignment and positioning of its content within the curricula of both groups of students, were key to the design of the programme. In addition, managerial aspects of the NPT programme, such as communication with stakeholders and logistical arrangements, were identified as critical to its success. To ensure an effective near-peer teaching intervention, specific aspects should be attended to from the development phase already. Although the results of this study align with existing frameworks for peer-assisted learning, the research does reveal key considerations when implementing near-peer teaching initiatives.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Exploring the efficacy of the epistemic assessment framework

**Contribution type:** Research

**Contribution format:** Presentation

**Author(s):** Blackie, M; Arnott, G; Kaschula, C

**Keywords:** science; assessment; student experience

**Abstract:**

It is an established fact that assessment drives learning (Shay, 2008). However, creating assessments that genuinely facilitate the quality of learning we hope to encourage is no simple task. In Chemistry in particular, we tend to presume that the capacity to produce answers to questions that imply chemical complexity is a reasonable proxy for evidence of understanding (Rootman-le Grange & Blackie, 2018). Over the past few years, we have implemented the epistemic assessment framework in various Chemistry courses. This framework is derived from a consideration of legitimation code theory (Maton, 2014) and Winch's (2013) description of types of knowledge. The purpose of this framework is to make visible to students the difference between things that just need to be learnt, things that require procedural knowledge, and things that require an understanding of the underlying principle. In this paper, we interrogate the value of this framework for second-year Chemistry students.

Student experience was explored using small focus group discussions. Most students use the framework pragmatically to guide their use of time in formal assessments. However, some students have clearly derived more value from it. It has helped deepen their understanding of Chemistry in particular, and science more generally. It lays bare the inadequacy of the rote-learning/drill-and-practice approach so often used in high school science.

While other frameworks exist, few are specifically aimed at the epistemological challenges of science. This is the first study of the efficacy of this framework. This work will inform the assessment policy in the Faculty of Science.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** From didactics to datafication: A critical reflection on virtual learning environments and the production of space

**Contribution type:** Reflection

**Contribution format:** Presentation

**Author(s):** Bernard, T

**Keywords:** datafication; higher education; postcolonialism; space; virtual learning environments

**Abstract:**

When writing about transformation in higher education in South Africa, it is quite popular to mention the fall of apartheid, and perhaps also 1994, as a starting point for significant change. I myself have made this mistake (Bernard, 2015). However, the recent #FeesMustFall protests highlighted that many approaches to transformation have been superficial at best, and extremely problematic at worst (Lockett & Naicker, 2019; Lockett, 2019). This is because they have done little to acknowledge the legacies that colonial modes of thinking have had, and continue to have, on the everyday lived experiences of students in spaces that still feel alienating to them.

In April 2020, when the doors of South African universities closed to all, and there was a swift and mass migration away from university campuses to virtual learning environments (VLEs), I was presented with the opportunity to critically reflect on the impact that increased use of VLEs could have on the transformation agenda in the higher education sector. My approach takes up Tumubweinee and Luescher's (2019:2) argument that many initiatives aimed at transformation in higher education have failed because they do not pay sufficient attention to the "where" of transformation. Thus, like Tumubweinee and Luescher, I locate my reflection on VLEs in the postmodern, sociopolitical understandings of "space" evident in the work of Lefebvre (1991), but more specifically his notions of conceived and abstract space. In doing so, issues of identity and coloniality are brought to the fore. My approach is critical, in that it "implies possibilities, and possibilities as yet unfulfilled" (Lefebvre, 2002:18-19).

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Helping students navigate the intricacies of group work

**Contribution type:** Research

**Contribution format:** Presentation

**Author(s):** Krügel, M; Adendorff, H; Van der Merwe, C

**Keywords:** collaboration; group work; facilitate; new product development; reflections

**Abstract:**

Trial Design and Product Development (NPD) is a final-year undergraduate Food Science module. This research-based module allows students to gain insight into the entire food product development process. Students are assigned to groups for the year and must integrate all fundamental Food Science and related disciplines' principles to research and develop food products, simulating the real-life workspace. Thus, group work is a key outcome of the module. Yet Themane (2020) warns that group-work projects of this kind often tend to overlook group-work skills development in favour of disciplinary outcomes. This raises the question: How do we best facilitate student learning in this area?

Collaboration in the NPD course is designed around the five key elements of effective collaboration identified by Johnson and colleagues (2007). It includes learning opportunities aimed at empowering students towards effective group work. In this paper, we ask whether that is enough?

Using thematic analysis of reflection data collected during the group-work project, we looked at what students valued in terms of collaboration. To this end, we analysed how students conceptualised "being a team" – in other words, what made them feel like a team or not, and what led to "conflict" in their groups. We then compared this with Johnson and colleagues' framework (2007), other literature and our offering to identify possible areas for refinement in the NPD curriculum.

The data highlighted many topics that were indeed addressed in our learning opportunities, such as communication, work ethic, trust, participation, respect and accountability. However, just addressing these as part of the learning opportunities did not prevent groups from struggling. Therefore, a key finding of this study is the importance of support during the practice of group work, especially where group work is an outcome in itself. Support should take the form of (1) reflections to help students process and integrate their experiences with what they have learnt (Themane, 2020), as well as (2) lecturer interaction to facilitate learning (Brown & McIlroy, 2011; Chapman, 2005) and help students navigate the intricacies of group work. In addition, if the group-work element of the process fails, the disciplinary outcomes often also suffer.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** How a course on wellbeing and flourishing skills changes lives

**Contribution type:** Research

**Contribution format:** Presentation

**Author(s):** Du Plessis, A

**Keywords:** wellbeing; student success; intervention; impact study; changing lives

**Abstract:**

Every year, a specially designed intervention-based and evidence-based curriculum to optimise student wellbeing is delivered online to incoming Extended Degree Programme students. The programme, i-FlourishWell4Life, aims to deliberately advance wellbeing and develop malleable predictors of academic performance (such as grit, optimism and wellness). A pre-test–post-test design was used to measure the impact of the programme.

The composition of the i-FlourishWell4Life curriculum, its potential for universities and the appropriateness of online interventions have strong support in the literature. Adler (2016) performed a randomised control trial (RCT) involving more than 750 000 senior high-school students to scientifically determine whether wellbeing can be taught, whether it was possible to teach it on a large scale, and whether this teaching could improve the academic achievement of students. Adler managed to prove all three, as well as a causal link between wellbeing and performance. Rashid and Loudon (2019), in turn, found that flourishing Canadian university students were twice as likely to graduate within five years compared to their struggling counterparts, and that a wellbeing intervention was effective in increasing student engagement and flourishing. And Sergeant and Mongrain (2014) conducted an RCT to investigate the potential of online positive psychological interventions (OPPI) as a tool to positively affect life satisfaction. OPPIs were found to be feasible, with sustainable effects.

This impact study focused on the following questions: Can wellbeing skills be taught online to university students? Are predictors of performance indeed malleable? Is i-FlourishWell4Life more beneficial to specific groups? How are students changed by the programme?

Participants completed various measures of wellbeing, flourishing and mindsets as part of their onboarding programme. The process was repeated at the end of i-FlourishWell4Life. Testimonials were also collected. Paired Two-Sample for Means T-Tests yielded statistically significant increases on most measures ( $p < 0,05$ ) for most groups studied. In general, first-generation students and those from lower socioeconomic groups benefited slightly more. Many students described i-FlourishWell4Life as a “lifechanging” experience.

Because of its potential impact on throughput rates, it is recommended that the teaching of wellbeing skills be expanded. The scalability of i-FlourishWell4Life makes this a realistic possibility. It is also important to investigate the potential sustainable impact of the programme further.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Impact of emergency remote teaching on postgraduate Engineering learning

**Contribution type:** Reflection

**Contribution format:** Presentation

**Author(s):** Goosen, N; Korsten, N; Wolff, K

**Keywords:** emergency remote teaching; postgraduate teaching and learning

**Abstract:**

The outbreak of COVID-19 presented unique challenges to institutions of higher education. Worldwide, faculties, staff and students alike had to adapt to teaching and learning environments characterised by varied degrees of emergency remote teaching (ERT) (Hodges et al., 2020). Much effort was devoted to ensuring that undergraduate teaching and learning continued during the various lockdown levels. The most common focus in the African context has been on factors such as “digital fluency” and systemic access to resources such as laptops and internet (Czerniewicz et al., 2020). An initial national survey of Engineering educators and postgraduate students at Stellenbosch University highlighted factors that influenced wellbeing and productivity, and the relationship between the two. Engineering academics supervising postgraduates sought to elicit a more detailed and nuanced view of how their students were progressing.

As part of a faculty-wide, ethics-approved research initiative, a qualitative, case-study-based initiative was undertaken by a group of postgraduate student supervisors. The study is theoretically framed by a holistic, overarching model that links Bloom’s cognitive, affective and psychomotor educational objectives (1956) to the epistemological, ontological and praxis curriculum dimensions (Barnett, 2000), requiring educators to provide cognitive, affective and systemic (CAS) support. This CAS model (Gilmore et al., 2017) was used as an analytical framework to interrogate the anonymous responses to online surveys across a range of relevant ERT studies between September 2020 and July 2021.

Although most students’ research was affected by systemic issues (such as access to labs, equipment and connectivity) as well as adapting research methods to suit lockdown limitations, the most important factor affecting students and their research seemed to be in the affective sphere. Analyses show that postgraduate students who experienced a more supportive environment were academically more successful. Combined data analyses from other faculty projects indicate that affective support is possibly the key factor in student success.

This paper makes a methodological contribution to establishing the link between student access and success by examining the synergy between cognitive, affective and systemic dimensions of learning support. Developing empowered postgraduates applies to all fields and is crucial to socioeconomic development on our continent.

[\[Back to index\]](#)



[\[Back to index\]](#)

**Title:** Is it possible to teach social justice as lived capability?

**Contribution type:** Research

**Contribution format:** Presentation

**Authors:** Andrews, R; Ndebele, F

**Keywords:** social justice; citizen-leadership; democracy

**Abstract:**

The Shared Humanity module (SH module), which was conceptualised and piloted in 2019, is premised on a socially just civil society that is able to address the humanitarian challenges of our time and to protect the rights and freedoms of all people as enshrined in the Universal Declaration of Human Rights, the Bill of Rights and the Constitution of the Republic of South Africa, 1996. The SH module is offered as an interdisciplinary module to registered students in the second year of study and beyond, with representation from all ten Stellenbosch University faculties.

Kahneman (2011) states that the individual's inherent bias and prejudiced way of seeing the world can be stemmed through an awareness of the self and of our role in creating the conditions for social (in)justice to prevail. This conceptual understanding of our embodiment and personal identity as dialectically linked to our expression through the actions and projects we take up creates the mechanisms to explore ways of shaping the self-awareness towards an empathic way of living and leading in a complex world.

The SH module integrates this learning theory and methodology into the learning design in the following ways, thereby placing social justice at the core of the student learning journey: Firstly, the theoretical construct of the model includes the work of Freire (1970), Mezirow (2009), Kahneman (2011), Cargas and colleagues (2017) and Sen (2005). Secondly, the methodological frameworks involve the critical thinking model of Paul and Elder (2010), while Kolb's (2011) theory of experiential learning, among others, provides the tools for social justice praxis and practice.

As an online module, the methodology comprises the three phases of experiencing and reflecting (asynchronous on SUNLearn), conceptualising (synchronous Live-Online seminar) and learning integration and application (asynchronous on SUNLearn), thereby mirroring Kolb's learning cycle.

The SH module intentionally sets out to equip graduates with an understanding of their responsibility as citizen-leaders and as custodians of an invaluable democracy to "hold... the state and its leadership accountable, and ensur[e]... the country's developmental state ambitions are protected" (Khambule, 2021).

The module is set up as a participatory action-research project, and we look forward to sharing the first set of research data with you at the SoTL conference.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Learning thresholds across the MPhil in Health Professions Education (HPE) at Stellenbosch University

**Contribution type:** Research

**Contribution format:** Presentation

**Author(s):** Archer, E; Jacobs, C; Schmutz, A; Volschenk, M

**Keywords:** threshold concepts; postgraduate teaching; curriculum review

**Abstract:**

Global trends in health professions education (HPE) have led to the professionalisation of the field, and a concomitant increase in master's programmes in HPE (MHPEs). While there is significant emphasis on the content and outcomes of MHPEs in the literature, there is little reference to threshold concepts, which are key to develop mastery of a new subject area and may guide meaningful engagement and support across such programmes.

The rationale for this study was to understand the challenges students experience from the perspective of the lecturers teaching them, as these challenges are often indicative of threshold concepts (TCs) (Meyer & Land, 2005). The research question was: "What are the TCs underpinning the MHPE, as understood by the lecturers teaching on the programme?"

The study is theoretically framed by the work of Meyer and Land (2003:1), who refer to TCs as a "portal, opening up a new and previously inaccessible way of thinking about something", representing "a transformed way of understanding, interpreting, or viewing something without which the student cannot progress". The research draws on concepts such as "transformative", "irreversible", "integrative", "troublesome" and "bounded" to identify the TCs in the MPHE.

The literature (Cousin, 2010) suggests that discussing TCs among subject specialists could lead to a better understanding of one's own subject, and of the best ways to teach it for students to attain mastery thereof. Therefore, all lecturers teaching on the programme were invited to participate in this qualitative study, and nine gave their informed consent. Data was gathered iteratively across nine focus group sessions, where the lecturers reached consensus on TCs in each of the seven modules, as well as across the programme. Data analysis was participant-driven and involved an iterative process of consensus-building and prioritising the identified TCs, followed by a mapping of the TCs across the programme.

The findings suggest that there was synergy across the TCs identified in each of the seven modules, which formed the basis for reaching consensus on four TCs identified as cutting across the programme as a whole. The results of this study will assist lecturers in planning and sequencing their modules optimally.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Let's let them 'cheat'! Group work in a summative setting

**Contribution type:** Innovation

**Contribution format:** Presentation

**Author(s):** Arnott, GE; Blackie, M; Kaschula, C

**Keywords:** summative assessments; group work; peer learning

**Abstract:**

The importance of peer learning, grounded in Vygotsky's sociocultural learning theory, is a popular subject, as evidenced by the many books and articles written on it (such as Topping, 1998; Boud, 2001). Moreover, peer assessment is seen as part of the broader topic of sustainable assessment, which should be encouraged (Boud, 2000). Peer learning is regarded as beneficial not only for learning specific material, but also for learning the "soft" interpersonal skills necessary to succeed in life in general (Johnson, 2014). Nevertheless, peer (or cooperative) learning is usually connected with group work, which itself is typically assessed as part of a larger project that would be too onerous for an individual to do.

High-stakes exams are frequently used to generate "summative" assessment data for an individual and, whether one agrees with it or not, do represent the assumed gold standard associated with determining whether a student is "any good".

With open-book assessments in 2020, and the added risk of students cheating via their WhatsApp groups, we took the innovative stance of "Let's let them cheat!". Our approach was to turn the written test/exam into a group assignment. The main question of how one separates the individual from the group was addressed through peer review and self-reflection, and required an iterative design process on our part.

We believe several aspects of this work will be of interest to other practitioners: It (1) changes the summative assessment to include a greater formative element; (2) encourages greater personal reflection on what is known and what is not; (3) emphasises peer learning; and (4) mitigates some of the negative effects of high-stakes testing.

This presentation describes our new assessment method, and its strengths and weaknesses we have experienced to date. We believe that this approach has the potential to foster the kind of evaluative judgement valued by Boud, and to move towards recognising the importance of the social/relational aspects of knowledge building, which have been neglected in science education.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** My rollercoaster teaching journey during COVID-19

**Contribution type:** Reflection

**Contribution format:** Presentation

**Author(s):** Slabbert, I

**Keywords:** reflection; biopsychosocial model; wellbeing; COVID-19

**Abstract:**

When 2020 started, I was excited for another year of teaching. I was particularly looking forward to an international conference in Italy. And then ... We all have our own personal stories of teaching before and during (and, hopefully one day, after) COVID-19. I utilised Schön's (1991) concepts of reflection-in-action as a guideline to explore the question: What did I learn about myself as well as my role as educator during COVID-19?

Before the experience: When the pandemic started, I had to adjust to online teaching and missed the live interaction with students. Postgraduate students had to be guided on how to collect data online. Undergraduate students too had to be supported, and some found themselves in very challenging situations. In 2021, the hope of returning to face-to-face classes did not materialise, and although it was disappointing, at least Teams was a valuable platform to engage with students.

During the experience: MY own COVID-19 journey: Like most of us, I too did everything I could to avoid contracting COVID-19, but then it happened! I tested positive just before the third term. The biopsychosocial model (Engel, 1977) helped me analyse my COVID-19 journey. Biologically, I was tired and lost my sense of smell and taste. To me, the biggest fear was the uncertainty of how I would cope with being sick and still teaching, as well as the uncertainty as to how the illness would progress (psychological). This was indeed a rollercoaster journey. At a social level, I would not have made it without my faith and the support of my family, friends and colleagues. I managed to continue with my teaching without major disruptions and made a full recovery. This was a blessing, as many special people had passed away or lost loved ones.

After the experience: I realised how unexpected events can influence one's life and teaching. I also realised the importance of my own wellbeing if I wanted to be a good lecturer. My own COVID-19 journey helped me reflect on my own wellbeing and made me determined not to neglect it. In addition, I learnt that I can be transparent about my own fears and vulnerabilities.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Not starting from scratch: Drawing on newcomer students' existing knowledge of popular cultural artefacts when illustrating new linguistic concepts

**Contribution type:** Innovation

**Contribution format:** Presentation

**Author(s):** Southwood, F

**Keywords:** newcomer students; Linguistics; illustrative material

**Abstract:**

Upon entering General Linguistics, first-year students are required to move away from thinking of language as only grammar or only a creative tool with which to express themselves. They are expected to start viewing language as more than rules and prose, and to gain an understanding of ideological, structural, societal, psychological, identity-related, education-related, policy-related, developmental and other aspects of language, each of which is the focus of separate yet interrelated subdisciplines within Linguistics.

To this end, a project has been launched to collect example material from contemporary texts that illustrates linguistic concepts in an accessible manner, with the ultimate aim of making the transition from studying a language at school to studying Linguistics at university smoother for our students. In this presentation, I report on how material from popular texts (such as movies, TV series, songs, memes and cartoons) that illustrates aspects of Linguistics is made available to newcomer students in a systematic manner.

A vast array of illustrative material is collected by topic. Each example (or link to the example) is downloaded, clearly labelled, and then made available on SUNLearn. Newcomers as well as more advanced students are also invited to contribute their own examples.

In this way, we wish to capitalise on our students' knowledge of the "real world" (or *their* real world), and specifically their knowledge of popular culture, thereby making the proverbial playing field more even for academically differently prepared students entering General Linguistics. It does seem possible to give students a foothold in Linguistics in this manner. However, students' reception of the example material still needs to be assessed.

If proven successful, it should be possible to collect similar examples for other fields of study in the humanities as well, such as Sociology or Philosophy.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Observed changes in student activity during remote teaching in 2020

**Contribution type:** Reflection

**Contribution format:** Presentation

**Author(s):** Venter, MP

**Keywords:** emergency remote teaching; evaluation; reflection; technology in education

**Abstract:**

Since 2018, online forums have been the principal communication channel for a second-year, second-semester course with 350+ students in the Engineering Faculty. Our intention with these forums is threefold, namely (1) to encourage students actively to contribute to their learning; (2) to promote the higher-level learning opportunity provided by the discussion format; and (3) to allow students rapidly to generate cohort-specific content, with equal access for all participants.

Participation in the forums contributes 5% to students' final grades. We score their participation based on engagement quantity and type. For example, viewing a post would earn a student one mark, posting new content 10, and responding to content 20.

The course has a significant online footprint, using several teaching and learning modalities available through the SUNLearn platform. Before implementing remote teaching in 2020, the course used a flipped-classroom approach, with summary and supplemental videos. As such, the content or format of the presented course remained unchanged.

Reviewing the logs for student activity on the forums, and comparing the data to similar logs for 2018 and 2019, revealed meaningful changes in activity. In 2020, there was increased activity before the start of class, while activity during the six weeks was as expected. However, activity during the exam week was lower than previously observed. This trend continued into the second six-week block of classes, when student-driven content creation and viewing of posted content dropped.

We do not yet have an explanation for the evident change in student behaviour after the mid-semester exam. However, the forum activities have been very successful, and conventional logic would suggest greater value in forum-based learning during remote teaching.

At this point, we can only speculate on the several possible sources for the student behaviour change, such as a change in course value after the first assessment, a change in communication path away from the forums, or a general work overload. Online logs are easy to access and process as a working tool, and can easily become a staple diagnostic tool for online-heavy courses. Further investigation is needed.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Online formative feedback: Forums can enhance student presence and voice

**Contribution type:** Reflection

**Contribution format:** Presentation

**Author(s):** Hanekom, PW

**Keywords:** feedback; forums; student presence; voice; theory-practice divide

**Abstract:**

A two-hour double period of theory to support classroom practice for 300 Postgraduate Certificate in Education (PGCE) students per week, the COVID-19 pandemic affecting teaching and learning at universities during 2021, and a need to create more opportunities for student presence and voice. How could I, as lecturer, approach this quandary?

Hew and Cheung (2012) and Rodesiler (2015) describe online class discussions as one of the benefits of online learning, providing students with time to think, reflect about and compose their thoughts, before sharing their answers – time that is usually not available in the face-to-face class context. Drawing on their research, I present an autoethnographic, reflective narrative, focusing on the successes and challenges of implementing online question-and-answer forums in the Practical Learning (PL) module of the PGCE at Stellenbosch University.

Overall, students not only participated in the forums, but most also critically reflected on the questions posted by the lecturer, linking the theory from the module with their observations from practice. This is a much-needed step to minimise the theory-practice divide found so often in PL modules. A challenge arose when students requested individual feedback on their forum posts. In my presentation, I report on an emoji system that was implemented, which required me only to post text replies where major corrective feedback was needed.

Although online forums cannot replace the interactive formative feedback of a face-to-face class, I found that online forums, when purposively designed, can enhance student presence and voice, and even help address the theory-practice divide, in large-group online contexts. I propose its continued use in hybrid contexts during and after the pandemic.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Pandemic pedagogy in the research setting: A postgraduate student's perspective

**Contribution type:** Research

**Contribution format:** Presentation

**Author(s):** Baatjes, KJ; Layman-Lemphane, JI; Keet, K; Alblas, A; Meyer, I

**Keywords:** postgraduate students; hybrid; pandemic; expectations; relationships

**Abstract:**

Postgraduate studies are a phase where students gradually transition from guided, dependent undergraduate study to independent functioning and developing an identity in the research community. Ideally, the transition through the postgraduate arena should be an organised process for both the supervisor and candidate. Students expect to work with a supervisor who is an expert and has a keen interest in their field, to grow academically, and to be in an environment of respect and tolerance, as suggested by Bitzer and colleagues (2011). The COVID-19 pandemic caused an abrupt shift to remote supervision, which may influence the postgraduate student's development. This study explored the question: How did postgraduate students experience supervision during the pandemic?

A mixed-method strategy of inquiry within a constructivist-descriptive paradigm, as described by Honebein (1996), was used to explore postgraduate students' perspectives. This framework involves building on prior knowledge, and a description of students' experiences. A convenience sampling strategy of available postgraduate students resulted in five participants enrolling in the study. Participants completed a questionnaire, followed by a semi-structured interview using the Microsoft Teams platform. Interviews were recorded and transcribed verbatim by an independent transcriber. Qualitative data was analysed thematically.

Students expressed a need for adequate learning spaces, positive relationships and personal development during remote supervision. Furthermore, the remote learning environment brought many distractions, few resources and unclear expectations from their supervisors, which hampered students' academic development and mental health. Students reported that improved hybrid-learning spaces, clear expectations and additional support from supervisors and peers were invaluable to their progress during remote supervision.

The student-supervisor relationship relies heavily on ongoing support. This can be provided in different forms: Our postgraduate students proposed hybrid engagements as the ideal strategy for training. In addition, progress towards self-directed learning requires clear expectations and open, reciprocal relationships to encourage postgraduate students' positive development. Adjustments in training during the pandemic have allowed for new teaching and supervisory engagement with postgraduates, but do require regular review.

[\[Back to index\]](#)



[\[Back to index\]](#)

**Title:** Pedagogical choices to integrate theory and practice: Conceptualisation and insights for literacy teacher education

**Contribution type:** Research

**Contribution format:** Presentation

**Author(s):** Barends, Z

**Keywords:** pedagogical choices; theory-and-practice divide; integrate theory and practice; literacy teacher education; pre-service students

**Abstract:**

This paper illustrates how common pedagogical choices such as service learning, situated learning, reflection and student support were used to design and enable integrated student learning experiences in a literacy teacher preparation programme.

Learning to teach is a complex activity that is premised on the acquisition, integration and application of different types of knowledge practices (DHET, 2011:10) to develop and deliver skilled instructional practitioners (Ball, 2011:18). To deliver these skilled practitioners, teacher education programmes (professional programmes) draw on two core components: coursework (theory) and work-integrated learning (WIL) (practice). However, not much evidence exists that describes how such courses should be organised so that students can learn both from and in practice.

In addition, teacher educators are constantly trying to solve the persistent conundrum in teacher education, namely the theory-and-practice divide (Ball, 2000; Gravett, 2012:2). Foundation Phase literacy teacher education is no exception, as these graduates are expected to acquire very specialised knowledge and skills to address the literacy challenges of the classroom.

Against this backdrop, this paper aims to answer how pre-service literacy teachers can be assisted in bridging the theory-practice divide in a teacher preparation programme.

Shulman's (1987) theoretical framework for teachers' content knowledge was used to form the knowledge base for this study. A survey of the literature reveals that appropriate pedagogical choices could enhance the quality of teacher education. Moreover, the literature identifies service learning, situated learning experiences and reflection as fundamental pedagogical choices for professional programmes, as these approaches to teaching afford students an opportunity to learn theory and practice while engaging in structured learning environments.

This qualitative case study explores the educational value of these pedagogical choices in a module of a teacher preparation programme. It illustrates how these pedagogical choices create opportunities for students to learn in and from practice. It also proposes a conceptual framework for teacher preparation programmes to draw on when designing courses/modules.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Portfolios as a pedagogical choice for assessment as learning: Insights from a teacher education programme

**Contribution type:** Research

**Contribution format:** Presentation

**Author(s):** Barends, Z; Jacobs, AHM; Lebethe, A

**Keywords:** teacher education programme; portfolios; reflection; assessment-as-learning; knowledge integration

**Abstract:**

Much has been written about the theoretical bases of portfolios as an assessment tool. However, not much is known about the knowledge, attitudes and learnings resulting from the use of portfolios and reflection among pre-service teachers. This is also referred to as assessment-as-learning. We contribute to this knowledge gap by demonstrating how a module in a teacher education programme used portfolios as a tool for assessment-as-learning and knowledge integration.

In this paper, we explore pre-service Foundation Phase teachers' reflections on the value of portfolios as an assessment tool for learning. We aim to answer the following question: Do portfolios promote learning through students' engagement in reflection?

We unpack the theoretical foundations relating to portfolios and assessment, and draw a link with sustainable assessment. In the methodology section, we pay attention to our context and the impact on integrating portfolios in a teacher education programme. We describe the design of our case study and the data collection process, and explain how we employed thematic analysis to analyse the data.

Our specific contribution to learning, teaching and assessment lies in our example of how, by use of a structured portfolio, courses could be packaged to facilitate knowledge integration. Our findings indicate that if portfolio activities are structured and integrated within learning and teaching, these can be an effective tool to bridge the gap between theory and practice in professional programmes and help students integrate knowledge.

The use of portfolios that include reflection has the potential to enhance the student's thinking about learning, thereby encouraging students to think about more than just their marks. A shift from the traditional view of a portfolio, to a portfolio with a focus on the process of learning could be beneficial for assessment-as-learning. Portfolios with an explicit focus on learning could bring about changes for students, as they become more aware of their own learning. Therefore, the construction of the learning portfolio is an effective form of professional development. We conclude that portfolios are indeed a useful pedagogical choice for assessment-as-learning.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Preparing Military Geography honours students to publish their research results

**Contribution type:** Reflection

**Contribution format:** Presentation

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

**Keywords:** research skills; writing for publication; postgraduate students; South African Military Academy; Department of Military Geography; Faculty of Military Science

**Abstract:**

Publication by postgraduate students is a scholarly achievement for both student and supervisor. The process to get an article accepted for publication provides students with valuable experience as well as validation of the research they conducted. However, postgraduate students who are ill-prepared in terms of research skills and article writing are at a distinct disadvantage when trying to get research published. Ensuring that postgraduate students have well-developed article-writing skill sets, and providing adequate resources and support to ensure publication, have advantages not only for students and supervisors, but also for the institutions where these students are registered.

The aim of this paper is to report on the initiative by the lecturing staff of the Department of Military Geography (Faculty of Military Science) at Stellenbosch University to develop the research projects of their honours students into publishable accredited outputs. In recent years, academic staff at the Department have focused on developing and enhancing the research skills of their honours students by submitting their research projects to accredited publications. Since 2014, the research projects of six honours students have been approved for publication in accredited national and international publications – four of them in the past two years. This paper explores the preparation of Military Geography honours students to successfully publish their research in accredited publications.

It is foreseen that the benefit of this initiative will be threefold: Firstly, it will greatly enhance these students' development and progress, which may spill over to other departments in the Faculty of Military Science. Secondly, students will be well prepared to write their master's and doctoral theses and become well-established researchers. Thirdly, this process will enhance the supervisors' academic profile and have a monetary and reputational benefit for the University in terms of increased research output.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Product or process – a chance to rethink assessment

**Contribution type:** Reflection

**Contribution format:** Presentation

**Author(s):** Lupton-Smith, A

**Keywords:** assessment; assessment for learning; problem-based learning

**Abstract:**

The theoretical module Applied Physiotherapy (APT) in the third year of the Physiotherapy programme at Stellenbosch University (SU) aims to help learners integrate knowledge – the basis for clinical reasoning. APT makes use of problem-based learning and continuous assessment. Students partake in six theoretical assessments during the module, of which four comprise multiple-choice questions (MCQs) and two are essay-based assessments.

Using Rolfe and colleagues' (2001) model, we reflect on our experience of changes made to the assessment of APT to improve future offerings.

Traditionally, MCQs were used in the bulk of the assessments in APT. MCQs were developed and chosen using a blueprint. However, in 2020, assessment from home was initiated due to the pandemic, and the format of the assessment required rethinking to ensure its validity. MCQs were replaced with modified essay-based questions (MEQs), which were specifically designed to assess higher-order thinking.

Initially, there were evident gaps in students' ability to apply and motivate their answers, suggesting a more superficial approach to their learning. For those students who engaged with feedback, improvement was seen in the course of the assessments. Multiple factors influence student learning, and, in this case, assessment may have been one. This approach is more time-intensive for staff, but the benefit to students' learning perhaps outweighs that. We recognised that, whether using MCQs or MEQs, faculty development is paramount to ensure the setting of appropriate questions.

This adapted format of assessment may foster a deeper approach to learning, and more suitably address the aim of the module. Furthermore, the format augments assessment for learning and enables more specific feedback to students, and, consequently, uncovers an additional learning opportunity. Additionally, with students' thinking being made explicit, it provides an opportunity for case facilitators to identify learning gaps and improve on future offerings.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Project-based learning in the science classroom: Teacher experiences

**Contribution type:** Research

**Contribution format:** Presentation

**Author(s):** Du Toit, A; Botha, M

**Keywords:** project-based learning; science; teachers

**Abstract:**

Growing up in the information age, “new-generation” learners have different approaches to how they learn, play and interact, and how they source and process information, compared to their predecessors (Yurtseven & Karadeniz, 2020:16). Although they are able to gather information instantaneously, they tend to lose interest almost as fast as they have gained it (Docherty, 2018:1032). The impact of science and technology in this new era necessitates development of specific skills, including creativity, critical thinking, collaboration and communication (the so-called 4C skills), ensuring that learners are equipped to make meaningful contributions to the future workforce (Putri, Sumiati & Larasati, 2019:1).

In South Africa, science teachers are challenged by learners’ negative attitudes towards the subject, as well as their lack of motivation and participation. In considering affective factors such as learner attitudes and motivation, refinement of educational praxis becomes imperative to prepare learners to participate and engage in an ever-changing modern society (Yurtseven & Karadeniz, 2020:24, 25). Project-based learning (PBL) involves collaborative engagement and the development of specific skills (4C). Little research has been done regarding the implementation of PBL and its effect on learner attitudes and motivation in learning science in the South African context. Therefore, this pilot project conducted in two primary schools in the Western Cape Winelands district aims to shed light on the benefits PBL can hold for the future of science in the classroom.

A qualitative, phenomenological approach was employed to answer the research question of how teachers experience learner attitudes towards PBL in science classrooms. In-service science teachers were purposefully selected as participants, and were interviewed according to an interview schedule. Interview discussions were audio-recorded, transcribed, and analysed by means of thematic analysis and constant comparison methods to find commonalities (Maykut & Morehouse, 1994:134). These were interpreted and described to reach valuable conclusions to the research question.

As this is work in progress, we anticipate to be able to share with other teachers the lessons learnt in motivating learners to apply 4C skills for effective science learning through PBL. Lessons learnt in this pilot project could also inform future investigations and be of value in other science fields/subjects.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Reflection on project-based assessment in Thermofluid Dynamics 214

**Contribution type:** Innovation

**Contribution format:** Presentation

**Author(s):** Hoffmann, J; Erfort, G

**Keywords:** project-based assessment

**Abstract:**

Thermofluid Dynamics 214 is offered under three distinct disciplines, namely thermodynamics, fluid mechanics and heat transfer. The curriculum is so crowded that there is no time left at the end of the semester to integrate the disciplines in a meaningful way. As a result, students experience the module as three independent silos and miss the desired cumulative learning effect (Maton, 2013) required to enhance their employability (International Engineering Alliance, 2013).

Students in the junior years of their Engineering degree find it difficult to deal with open-ended questions and uncertainty in answers (Tadie et al., 2018). They do not understand how the worst (unknown) input affects overall results. Single-answer questions do not illustrate this.

Traditional sit-down assessments reinforce the silo effect. Integrating module content by using the answer from one question in follow-up questions is possible, but at the risk of increasing failure rates. A survey at Stellenbosch University (SU) revealed that students experienced written exams as very stressful. Project-based learning and assessment is one way to stimulate active learning, while at the same time integrating module content (Prince, 2004; Lehman et al., 2008) in a low-stress environment for the students. Project assessments are regularly used in the third and fourth years of the Mechanical and Mechatronic Engineering programme at SU.

This paper presents an approach to enabling cumulative learning and assessment integrity through a project-based learning and assessment strategy. Students' experiences during the project were probed via two questionnaires: one taken upon project announcement, and the other after completion of the project. Student performance in project-based assessment, as expressed by class average for the module, improved marginally over past performance, when sit-down exams were in force.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Service learning during lockdown – an assessment space of intentionality and possibility

**Contribution type:** Reflection

**Contribution format:** Presentation

**Author(s):** Lebethé, A

**Keywords:** pre-service teachers; Mathematics education; assessment

**Abstract:**

Service learning during lockdown filled some fourth-year pre-service student teachers with fear and anxiety, while for others, it was a space to greedily grab teaching experience. I decided to recreate the BEd service learning and assessment space into a web of intentionality to allow for deeper understanding of the content and community needs. Students had to establish a Mathematics tutoring service and offer it to children that were highly affected by COVID-19 in their schooling. I chose to create this shift using assessment tasks linked to module outcomes and graduate attributes to prepare students as prospective employees.

Teaching and learning (assessment) had to continue in the cracks of crisis. For one moment, the assessments narrowed the cracks and allowed students to see a professional life ahead. The pandemic provided a catalyst for change in my assessment practices and opened spaces of innovation. Here was an opportunity to modify existing practices.

The assessment tasks considered the future professional identity of the student, as well as learning-in-assessment that transcends the lecture hall, and allowed the students to think critically of COVID-19 and its impact on the learning of Foundation Phase children. The assessments presented an opportunity to reimagine a hybrid community engagement that was still academically rigorous, reflective and reciprocal.

Although the assessments were in permanent flux of collapse, shaping learning and student judgements opened possibilities. Reflection became the link between service learning and the assessments.

Consciously framing the assessment tasks in a theory of intentionality opened a space of making meaning in Mathematics education (Skovmose, 2014). I have allowed myself to be guided by intuition rather than the search for truth (Claxton, 2000). I have learnt to embrace the tensions and the paradox of assessment in service learning, in Mathematics education, amidst COVID-19!

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Stimulating open-ended peer learning through peer-assessed presentations

**Contribution type:** Research

**Contribution format:** Presentation

**Author(s):** Motang, N; Pott, RW; Wolff, KE

**Keywords:** peer assessment; problem solving; epistemic plane; legitimation code theory (LCT); fluid mechanics

**Abstract:**

Students need to be comfortable applying their (theoretical) knowledge contextually, to an array of open-ended problems, particularly once they transition to the world of work. However, they often battle with this – rather preferring “exam-type” calculations. One route to encourage them to explore open-ended problems is through giving them the choice of topic, and then asking them to expound on the topic using relevant theory. Moreover, peer learning activities can enhance student engagement through improved motivation (Pott et al., 2017) and provide a wide array of scenarios that students can be exposed to.

In this work, students were asked to describe the application of fluid mechanics concepts in self-selected contextual scenarios. Presentations on their findings were made to, and assessed by, peers. Students later completed surveys in which they described their approach to the task. From the student responses, and to unpack how students’ thinking transitioned through this task, the students’ approach was mapped onto the epistemic plane of the legitimation code theory (LCT) (Maton, 2014), and then compared to problem-solving skills of established engineers. Previous research demonstrates that effective problem solving requires the problem solver to shift between “principles, procedures, possibilities, people and places” in a non-linear fashion, as illustrated by the quadrants on the LCT epistemic plane (Pott & Nortje, 2021).

Results from the survey indicated that students enjoyed the assignment – they were able to pursue their own curiosity (albeit in the context of fluid mechanics!). Furthermore, the peer assessment not only exposed students to others’ work, but also facilitated self-reflection on their own performance (Booyesen & Wolff, 2021). The two key ideas presented here (curiosity-driven contextual problem solving, and peer assessment) show significant promise in enhancing students’ abilities to face open-ended problems. Encouraging students to engage with “people and places” may facilitate the transition from undergraduate degree to the world of work (Pott & de Jager, 2021). Quantitative and qualitative lecturer observations over three years indicate that further research is warranted into the improved epistemic access and community of inquiry that may be developed as students regularly share their insights with one another (Morrow, 2009).

[\[Back to index\]](#)



[\[Back to index\]](#)

**Title:** The dark side of online learning

**Contribution type:** Reflection

**Contribution format:** Presentation

**Author(s):** Rudman, R

**Keywords:** governance; risks; online learning; recordings; rights

**Abstract:**

On 26 March 2020, South Africa entered a hard lockdown, and students and academics were forced to transition into the fully (emergency) online remote learning space. Lecturers innovated, adapted and, in the process, tacitly agreed to waive various rights to ensure a successful transition to online learning, as there was insufficient time to consider the unintended consequences ... the dark side of online learning.

Despite the changed context in which lecturers worked, the traditional academic and professional expectations of staff remained unchanged. Staff were left having to navigate both a new world of life and work. They balanced personal and professional decisions as well as disruptive technologies, along with the added responsibility for the governance of these technologies.

The purpose of this research is to outline and reflect on the challenges and risks relating to teaching online discussed in prior literature. Streaming and recording lectures hold benefits as well as risks. Notwithstanding the practical issues relating to online learning in a developing country, the risks relating to streaming and recording lectures centre on the three themes of:

- influences on teaching practices (e.g. inhibiting engagement with controversial topics);
- influences on the student experience (e.g. the emergence of “binge” learning); and
- the reshaping of institutional strategy and responsibilities specifically relating to this new digital environment (e.g. loss of ownership of material, loss of intellectual property).

Two potential arguments can be made to address the risks associated with the streaming and recording of lectures: The risks would not exist if (1) lecturers reshaped their pedagogical stance regarding teaching, learning and assessment in an online environment, and (2) those charged with governance proactively governed the IT risks arising from streaming and recording lectures.

The content of this research was sourced without acknowledging or referencing the sources. Therefore, it must be acknowledged that parts of this research were plagiarised. I must thank those academics who thought about the personal and professional risks associated with online learning, and placed their thoughts and ideas online with the misplaced belief that they would be acknowledged. Although this literature review has no references, it does, however, have a Turnitin similarity index score of 4%.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** The evolving role of an academic online mentoring programme

**Contribution type:** Reflection

**Contribution format:** Presentation

**Author(s):** Ontong, JM; Arendse-Fourie, S; Schonken, C

**Keywords:** mentoring programme; emergency remote teaching (ERT); student support; module mentoring

**Abstract:**

For residential universities, the COVID-19 pandemic necessitated the suspension of in-person lectures and a swift transition of classes and other in-person activities to emergency remote teaching (ERT) (Bozkurt & Sharma, 2020). This included the academic module mentoring programme, cognisant of the potential challenges experienced by first-year students. The core role of the mentoring programme is to provide academic support to first-year students in an introductory Financial Accounting module to promote student success.

Du Preez and colleagues (2013) investigated the perceptions of mentees and mentors in a peer module mentoring programme in Economic and Management Sciences, and found that, although students perceived additional benefits of the peer module mentoring programme, the main aim for mentees was academic performance. The researchers found these perceived benefits to correspond with Jackling and McDowall (2008) and Beltman and Schaeben (2012), who listed the main motivations as altruistic, cognitive, social, and personal growth.

With the transition to ERT, this study investigated the role of an academic online mentoring programme for students in an introductory Financial Accounting module. A web-based survey was conducted to source the perceptions of both mentors and mentees who participated in the academic online mentoring programme both before and during ERT, to analyse whether the role of the programme had shifted and evolved beyond that of academic support. While academic support remained the main perceived benefit of the online mentoring programme, the findings illustrate an evolving role that is more inclusive of perceived psychological, peer support and engagement benefits for first-year students who participated in the programme.

Understanding student perceptions of the value derived from an academic online mentoring programme is important to understand their needs, and to provide relevant and applicable training tailored to those needs so as to promote student success at all times. The findings of this study highlight the perceived value-add from both a mentor and mentee perspective. Thus, the study provides insights to institutions that may be considering the introduction of interventions such as academic online mentoring programmes both now and in the future.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** The flipped-classroom approach in Intermediary Financial Accounting: A reflection using Rolfe et al. (2001)

**Contribution type:** Reflection

**Contribution format:** Presentation

**Author(s):** Steenkamp, G; De Laan, A

**Keywords:** flipped classroom; engagement; motivation

**Abstract:**

Although literature provides ample evidence that passive teaching fails to actively engage students and facilitate deep learning (Williams, Horner & Allen, 2019), most South African Accounting academics utilise class time for passive learning activities. In Intermediary Financial Accounting, we have a topic (Financial Instruments) that is both technical and theoretical, and many students parrot-learn it rather than attempting to understand the principles.

Following discussions with colleagues, we applied the flipped-classroom approach in delivering Financial Instruments in 2021, as we believed this would improve engagement and deepen understanding. Pre-recorded videos discussing the theory were made available before class. Class time was used for application, analysis, synthesis and evaluation as defined in Bloom's taxonomy to encourage deep learning and critical thinking (Akçayır & Akçayır, 2018; Duron, Limbach & Waugh, 2006).

Overall, students enjoyed the flipped approach (Wanner & Palmer, 2015). Initially, we had planned to deliver only the first three periods in the flipped mode, but the students requested that we continue with this style of teaching for the entire topic. Informal verbal and e-mail feedback revealed that students felt more engaged, and appreciated the flexibility the approach provided (Steen-Utheim & Foldnes, 2018; Wanner & Palmer, 2015). However, students who fell behind struggled to benefit from class time, which focused on application and discussion (Akçayır & Akçayır, 2018). Furthermore, student comments revealed that pre-recorded videos should not exceed 20 minutes.

From a lecturer's perspective, the approach seemed to encourage deep learning and improve student performance (Strelan, Osborn & Palmer, 2020). Out of all the topics examined in the mid-year test, students scored best in Financial Instruments.

During the COVID-19 pandemic, flipped learning could be employed in an online delivery model to improve student engagement and learning (Tang et al., 2020), with possibly even better outcomes in a post-COVID blended delivery model. In 2022, we aim to refine the videos and in-class activities (Awidi & Paynter, 2019) and then present the topic using a blended flipped approach. Afterwards, we plan to conduct formal research, gathering students' perceptions on engagement, motivation and deep learning under the approach.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** The new normal in engineering assessment: A faculty SWOT case study

**Contribution type:** Reflection

**Contribution format:** Presentation

**Author(s):** Hans, TM; Wolff, KE

**Keywords:** assessment; SWOT; emergency remote teaching (ERT), augmented remote teaching, learning and assessment (ARTLA)

**Abstract:**

Assessments are the primary instrument for the certification processes that govern formal engineering education. The onset of emergency remote teaching (ERT) (Hodges et al., 2020) saw the Engineering Faculty adopt a coordinated approach to forms of summative assessment (traditionally sit-down exam-based). Additionally, there were a range of innovations, from project-based to peer learning, and alternative forms of practical engagement and formative assessments. As part of the institutional focus on lessons learnt during the pandemic, a faculty-wide analysis is being conducted to answer the following research question: How can our collaborative reflective experiences inform the improvement of student learning, while better utilising our current resources?

All faculty curriculum, teaching, learning and assessment staff initiatives are theoretically informed, and analysed using cognitive, affective and systemic (CAS) support dimensions (Gilmore et al., 2017). The synergy between these dimensions is important for the ultimate goal of “cumulative learning” (Maton, 2014), as demonstrated in a postgraduate ERT case study (Lewis et al., 2021). In addition to the CAS framework, the project embodies the ethic of “ubuntu currere” (Hlatshwayo et al., 2020) in drawing on the voices of varied stakeholders, including those of students.

This paper presents a qualitative reflection on assessment practices in the Engineering Faculty, prompted by the transitions to ERT and then augmented remote teaching, learning and assessment (ARTLA). It is systematically structured using a SWOT analysis of a variety of data sources, including surveys, semi-structured interview data, and staff and student feedback. The findings reveal that the strength of online learning is the potential for better, scaffolded formative assessment. A major weakness is the report of poor self-regulated learning practices. This latter finding has led to a faculty intervention to develop student self-efficacy and align student and staff expectations (Booyesen & Wolff, 2021). The systems in use during ERT/ARTLA indicate the ideal opportunity for urgent digital fluency development (Czernowitz et al., 2020). Of concern is the threat around assessment validity, given the certification and standards requirements.

At this stage, the study points to a need to think seriously, critically and creatively about what assessment means, and the potential it has to become a critical part of the strategy towards transformative learning.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** The value of e-learning in the acquisition of a clinical skill

**Contribution type:** Research

**Contribution format:** Poster

**Author(s):** Van der Walt, L; De Villiers, M; Loots, R

**Keywords:** e-learning; clinical skills

**Abstract:**

The influence of e-learning and blended-learning approaches (such as flipped classrooms) on the assimilation of theoretical knowledge has been studied extensively. However, health professions education requires not only theoretical knowledge, but also the ability to integrate such knowledge with clinical skills to graduate as a clinically competent healthcare practitioner. While it is challenging to teach clinical psychomotor skills online, the cognitive and affective components as well as demonstrations can be addressed in a flipped-classroom scenario. This study aimed to determine how valuable students found an e-learning bundle on the administration of injections in preparation for a face-to-face session on the same topic.

Altogether 41 of the 133 third-year medical students rotating through Internal Medicine participated in the study. They had to have completed the e-learning bundle on injections, attended the face-to-face session, and completed an online questionnaire within 72 hours thereafter.

The students indicated that they found the e-learning bundle to be extremely valuable in their preparation for the contact session, with a mean score of 9 out of a possible 10. Students also reported positively on the content, the relevance for their level of training, and overall enjoyment of the bundle. The students did identify some barriers as well, such as not having enough time for preparation within an overloaded curriculum and experiencing technical difficulties such as slow loading and incompatible video formats.

Using an e-learning bundle of a clinical skill in preparation for a contact session seems to be beneficial before actually practising the skills. Creating protected time for the students to complete the clinical skills-related online learning, the face-to-face sessions may be more focused on the actual psychomotor component, resulting in more time for deliberate practice with feedback, as described by Ericsson (1993), who postulated that repetitive practice of psychomotor skills with formative feedback is the best way to gain competence in clinical skills. The latter has been proven to improve performance in clinical skills and real-life scenarios.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Undergraduate teaching on assistive products at three South African universities

**Contribution type:** Research

**Contribution format:** Presentation

**Author(s):** Visagie, S; Gubela, M; Scheffler, E; Ohajunwa, C; Seymour, N

**Keywords:** assistive technology; undergraduate curricula; teaching; learning; disability

**Abstract:**

The Western Cape provincial strategic plan (2014-2019) and the sustainable development goals (UN, 2015) emphasise the importance of equity and eradicating poverty. Without assistive products (devices, equipment, instruments or software that maintain or improve functioning and prevent complications (Smith et al., 2018)), persons with impaired body function cannot access opportunities on an equitable basis (Tebbut et al., 2016). Healthcare professionals (medical doctors, professional nurses, physiotherapists, occupational therapists and speech therapists) often prescribe assistive products.

This study asked the question: To what extent are teaching and learning on assistive products included in undergraduate curricula of the health science faculties at three universities in the Western Cape province of South Africa?

Healthcare professionals must be knowledgeable on policy, systems and products to provide a person-centred service and prescribe appropriate assistive products. They need procedural and metacognitive knowledge to apply, analyse and evaluate (Krathwohl, 2002) when delivering assistive technology (AT) services.

Data was gathered through a cross-sectional survey. Fifteen programmes were approached, of whom eight participated. Information on teaching on assistive products was sourced from purposively identified key informants through e-mail questionnaires. Descriptive analysis was done.

The results revealed that the eight programmes covered 104 assistive products. Manual wheelchairs were the only product for which teaching was underscored by policy guidelines. Teaching on assistive products for self-care, participation in domestic life, indoor and outdoor activities, employment and leisure was limited. Teaching and examination were theoretical in nature, and occurred in professional silos. Clinical exposure was often incidental. The range of included products and the level of training were insufficient to prepare graduates to effectively address users' needs. Newly appointed graduates will require early in-service training to ensure appropriate assistive product service delivery.

It is recommended that undergraduate programmes align their curricula to include teaching and learning on the 50 essential assistive products identified by the World Health Organisation (2018). Teaching and learning on those products should include all service steps, practical experience and examination.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** USB Teaching and Learning Landscape Project

**Contribution type:** Innovation

**Contribution format:** Presentation

**Author(s):** Opperman, P; Chapwanya, M

**Keywords:** Business School; gamification; hybrid learning

**Abstract:**

The University of Stellenbosch Business School (USB) initiated a Teaching and Learning Landscape Project, with one of the objectives being the creation of a one-stop destination and access point for all USB teaching and learning content. The impetus for this project was found in the USB's unique context, which includes serving the needs of learn-and-earn students exclusively, using a distinct assessment timetable, and with curriculum management being influenced by the requirements of accreditation bodies.

Further objectives include the creation of an asynchronous hybrid-learning course to capacitate faculty (core, part-time and visiting) with the necessary knowledge and skills required for facilitating in a hybrid or remote environment, as well as the gamification of said course. A hybrid-learning course specifically tailored to the USB environment is important, as the USB has considerably more external part-time and visiting faculty (including from industry) than core faculty members. All taught USB programmes have a hybrid-learning component. The hybrid-learning course will assist with the induction of new, part-time and visiting faculty.

The required content of the Teaching and Learning Landscape Project from which the course and subsequent gamified experience will be designed is arranged around six pillars, with each pillar containing different content folders. For instance, the fourth pillar is "Systems and facilities", with examples of the content folders being "Hyflex classrooms", "Student engagement on the Learning Hub", and "Online proctoring on RPNOW". Lenses will be employed to simplify the view of the pillars and content folders for different USB stakeholders: For instance, an external moderator requires a different view compared to an external visiting faculty member.

Similar projects have been introduced at esteemed institutions, including Cornell, Indiana University, and Northwestern. The focus of the presentation will be to introduce the USB Teaching and Learning Landscape Project to the broader Stellenbosch teaching and learning community, and provide initial project evaluation results, which may be useful to fellow practitioners contemplating hybrid-learning capacity-development initiatives.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Using graduates' experiences of the world of work to guide rearticulation

**Contribution type:** Research

**Contribution format:** Presentation

**Author(s):** Pott, R; De Jager, M

**Keywords:** engineering graduates; curriculum renewal; graduate destinations; world of work; graduate experience

**Abstract:**

The transition from undergraduate studies to the world of work is significant, and one which universities have a mandate to facilitate. It is difficult, however, to understand how best to rearticulate undergraduate degrees to best meet the demands of the (changing) work environment. Although alumni are in a unique position to evaluate the effectiveness of their degree, data from graduates is relatively limited (Heydenrych & Case, 2018). Furthermore, using graduates' feedback to inform rearticulation has proven to be useful for degrees such as Veterinary Science, Accounting and Medicine (e.g. Jaarsma et al., 2008; Yu et al., 2013; Clemmer & Bertrand, 1980).

This study invited recent Chemical Engineering graduates ( $\leq 10$  years since graduation) ( $n = 440$  invited,  $n = 110$  responded) to complete an e-survey with both qualitative and quantitative questions to elicit opinions on the effectiveness and usefulness of the curriculum. This paper focuses on graduates' destinations: within which sectors they are employed, their technical areas, and the nature of their work. Survey results were analysed with regard to employment area, technical application area, and current activities. Analysis of their responses with regard to technical areas and nature of work was considered in comparison to the training they had received at undergraduate level. This provided an understanding of whether the curriculum had provided the skills and tools that are commonly used and needed in the world of work.

Findings show that Chemical Engineering graduates currently predominantly find employment in the field, but that the skills the degree provides allows for movement into multiple sectors. However, there are several instances where skills prized and used in industry are underrepresented in the undergraduate curriculum. In particular, there is a strong focus in industry on risk management, finances and economic decision making, which, while they are present, are underrepresented in the current curriculum. Furthermore, a significant majority of graduates report spending significant time on "soft" skills, such as communication, teamwork or stakeholder management. Management in general and management of subordinates specifically are also highlighted, which may indicate an unmet need for undergraduate courses focusing on leadership, management styles or group psychology. On the whole, graduates reported that skills from their undergraduate degree were used often.

[\[Back to index\]](#)



[\[Back to index\]](#)

**Title:** Using H5P in assessment for learning: Mastering a threshold concept

**Contribution type:** Innovation

**Contribution format:** Presentation

**Author(s):** Le Roux, E; Talip, F

**Keywords:** innovative assessment; assessment for learning; threshold concepts; H5P; SUNLearn

**Abstract:**

Students' learning and understanding can be transformed when difficult conceptual disciplinary knowledge is mastered (Meyer & Land, 2003). A difficult disciplinary concept, akin to a portal that opens a new way of thinking, is referred to as a "threshold concept" (Meyer & Land, 2003). Due to the often irreversible nature of a threshold concept, it involves an ontological and conceptual shift, resulting in the ability of a student to make connections between interrelated phenomena (Cousin, 2006). With a focus on threshold concepts in designing a curriculum, the teaching, learning and assessment activities could be strategically embedded in the course structure to facilitate conceptual change and transformed understanding for students (Biggs, 2012).

Assessment should not only assess the intended learning outcomes (*assessment of learning*), but also be close to the teaching and learning process to add value to students' learning (*assessment for learning*). One example of a value-adding assessment approach is that of continuous assessment – an approach with the purpose of providing feedback to students about the progress of their learning, and motivating students to improve their learning (Luckett, 2000). Continuous assessment integrates teaching and assessment, whereby the feedback from the assessment can provide information to students about the progress of their learning (and the mastering of threshold concepts), motivate them to improve their learning, and inform lecturers' further teaching and assessment (Luckett, 2000).

The H5P activity on SUNLearn is an active blended-learning tool that could be used to continuously assess students' learning and provide feedback to students so as to improve their learning (Ibrahim et al., 2019). This tool enables lecturers to create, share and reuse interactive HTML5 content such as videos, quizzes and presentations in their teaching, learning and assessment (Faulconer & Wood, 2019).

The purpose of this contribution is to demonstrate how, with the use of H5P, the integration of innovative assessment practices can determine whether threshold concepts have been mastered. In addition, it could add value to students' learning and inform further teaching and assessment.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Using the “powerful knowledge” concept towards socially just teaching and learning

**Contribution type:** Reflection

**Contribution format:** Presentation

**Author(s):** Ntwasa, S; Blackie, M; Dullaart, G; Farmer, J; Feldman, J; Joorst, J; Lesch, F; McKay, M; Mlitwa, A; Ohajunwa, C; Loots, R

**Keywords:** powerful knowledge; ubuntu pedagogy; curriculum responsiveness; curriculum transformation

**Abstract:**

Curriculum transformation is an urgent aspect of the discourse on South African higher education after the #FeesMustFall movement. Its calls to provide teaching and learning that is responsive to South African contexts remain relevant. A group of Stellenbosch University (SU) lecturers agreed that they were interested in exploring how our curricula have power in knowledge making, and how we could provide students with equal access to disciplinary discourses and powers. Thus, a focused interest group (FIG) emerged from an Auxin discussion.

The FIG studied and discussed key texts on a quarterly basis. Lecturers from various disciplines expressed a desire to understand how “powerful knowledge” (PK) (Muller & Young, 2019) is present in their own disciplines, and how they could give students access to it in the broader context of decolonisation, epistemological access and alienation (Vorster & Quinn, 2017:37). We found that PK as a concept assumes rigid disciplinary boundaries, and a binary opposition between skills and knowledge. Instead, we propose (as does Alderson 2020:98) to integrate kinds of knowledges, instead of having separate knowledge in silos. We also found that the power of knowledge depends on students’ and lecturers’ agency. Knowledge on its own does not attribute power.

We turned to ubuntu pedagogy to solve problems arising from PK concepts of curriculum transformation. Some of us felt confused by the concept of PK in the context of current South African higher education discourses. In some disciplines, PKs were not easily defined, while in others, it was clearer how students needed to understand the “disciplinary rules”. Students are then better placed to engage critically, and curricula can then transform in a way that allows students to participate in knowledge creation. A transforming curriculum would provide opportunities for students to transcend knowledge boundaries.

In this contribution, we aim to share some of our considerations for future curriculum decisions at SU.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Variety is the spice of e-learning: Applying diverse online teaching approaches to optimise knowledge acquisition in short courses

**Contribution type:** Innovation

**Contribution format:** Presentation

**Author(s):** Lamb, G

**Keywords:** short course; innovation; multiple teaching methods; course management; government officials

**Abstract:**

A key challenge in online education is that conventional teaching approaches, such as lecturing, have limited applicability for learning outcomes. This is because participants often experience fatigue and diminished ability to absorb knowledge during lengthy teaching sessions. This is particularly acute for short or executive courses, which are typically intensive in nature.

This paper will discuss the combined use of a variety of teaching techniques in the context of an online short course, and the implications of this method for learning outcomes. The course in question was specifically designed for government officials. It took place over five consecutive days (eight hours a day) and was offered via the Zoom for Government videoconferencing platform. It entailed a combination of self-study (readings, videos and written exercises), presentations by guest speakers, as well as facilitated online discussions. Focusing on the political, economic and social dynamics in Southern Africa, the course was offered on six occasions, and participants provided detailed written evaluations at the end of each course. Class sizes varied between five and 16 participants.

The paper will demonstrate that the combination of teaching methods had considerable learning benefits for the participants in the short course, which included consistent engagement with the course material throughout the five days. Key determining factors included accessible and interesting reading material and other resources, thought-provoking and engaging guest speakers, the facilitation of lively discussions, and the overall management of the course by the course instructor. Class size did, nonetheless, affect participants' experience of the course: Those in courses with a larger class size (more than eight participants) provided more positive feedback.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Video e-portfolios for learning and assessment of Physiotherapy foundational practical skills

**Contribution type:** Research

**Contribution format:** Presentation

**Author(s):** Unger, M; Keiller, L; Manas, L

**Keywords:** foundational practical techniques; video portfolio; OSPE; assessment

**Abstract:**

Physiotherapy students must perform more than 200 clinical techniques, but are struggling to meet minimum standards. Emerging technologies, along with increased social drive and accessibility of technologies, enabled an exploration of an e-portfolio of self-recordings and peer assessment to overcome limitations of conventional approaches (Hill, 2002). The aim was to determine whether an e-portfolio and peer assessment can improve learning and attainment of practical skills competency in Physiotherapy?

Aspegren (1999) argues that instructional teaching is less effective than experiential teaching, and needs to be ongoing and integrated over time. Requiring students to submit self-recordings of performance tasks forces experiential learning. A video supported by peer assessment provides students with the opportunity to view their own performance repeatedly, and promotes the development of self-regulation (Boyer et al., 2009; Malloy & Boud, 2013).

After submitting 23 techniques to their e-portfolios, all second-year students (n = 67) were invited to complete a Likert-scale-rated and open-ended questionnaire. Repeated-measures ANOVA compared performance across four OSPE assessments, and Pearson's correlation coefficient compared mean final marks for the e-portfolio with the mean final OSPE scores. Interclass correlation coefficients explored reliability by comparing peer with lecturer scores.

The responses from 67,3% of participants, with age and gender demographics representative of the class, suggested that the intervention made them practise more (87,2%), helped them do better in the OSPE (77,5%), and made them reflect on their own performance (71,8%). Performance across four OSPE assessments improved throughout the year (p = 0,021). Contrary to our hypothesis, the mean final mark for the e-portfolio was almost identical to the mean final OSPE scores (p = 0,96). Reliability of peer assessment compared to faculty was poor (ICC scores = .616), but this improved (ICC = .938) when a benchmark video was provided prior to peer assessment.

Adopting a more socio-constructivist approach to learning new practical skills by using self-recording and peer assessment is a strategy valued by students: It got them to practise more and resulted in more students meeting the minimum standard. Further investigation into the predictive validity of an e-portfolio is recommended to enable its exploration as an alternative assessment strategy to the stressful, expensive and time-consuming OSPE, which is currently considered the gold standard for skills assessment.

[\[Back to index\]](#)

[\[Back to index\]](#)

## SoTL conference 2021 abstract book: PREDAC poster abstracts

**Index** (arranged alphabetically according to title)

Disclaimer: abstracts are unedited

*\*Click on the title to read the abstract.*

Title	Authors	Faculty
<a href="#">Addressing bottlenecks and threshold concepts in student learning by Decoding the Discipline</a>	Bester, P.C; Luzipo, P.Y; Mathee, S; Tshokotsha, M.H; Nkuna, E	Military Science
<a href="#">Addressing knowledge shortcomings through the incorporation of an interactive group assignment</a>	Steyn, L; Strydom, P.	AgriSciences
<a href="#">Chunking as active learning strategy to address academic disengagement of Agricultural students</a>	Lombard, E.H; Mbizana, N; Murphy, M; Theunissen, J; Van Eeden, S	AgriSciences
<a href="#">CPR training through flipped classroom</a>	de Lange, S; Van Schalkwyk, T	Medicine and Health Sciences
<a href="#">Creating learning opportunities to assist students overcome bottlenecks in learning</a>	Malope, M.F; Lokotola, C.L; Moleleki, M.F; Obasa, A.E	Medicine and Health Sciences
<a href="#">Developing ecoliteracy through <i>Mistica</i></a>	Dunn, S	EMS
<a href="#">Digital Narratives Movie Project – from passive to active learning modalities</a>	Moore, J.P.	AgriSciences
<a href="#">Enhanced engagement with literature in a postgraduate science class</a>	Pfukwa, R	Science
<a href="#">Flipping the Horticultural classroom</a>	Kleinert, A; Dzikiti, S	AgriSciences
<a href="#">Improving classroom participation in a hybrid teaching and learning environment: A case study of the LSCM 244 classroom</a>	Lalendle, C; Saruchera, M	EMS
<a href="#">Improving statistical education performance of students through facilitated e-tivity</a>	Sadiq, H; Louw, S	EMS
<a href="#">Individual and collaborative reflections on teaching and learning</a>	Bredell, J.R; Burger, E; Kamper, H; Pretorius, H	Engineering

<a href="#">Integrating theory and experiment via a simulation of an astronomical observatory</a>	John, A	Science
<a href="#">Interactive content assessment in counter-intelligence theory: assessing cognitive learning in reading, comprehension and writing</a>	Putter, A.P; Henrico, S.J; Reutener, M; Mkhize, H; Ramuhala, M.G	Military Science
<a href="#">Interactive explanations for Applied Maths B124</a>	Josias, S	Science
<a href="#">Learning through improved engagement</a>	Mouton, D.P <sup>1</sup> ; White, P <sup>1</sup> ; Tarisayi, K.S <sup>2</sup>	Theology <sup>1</sup> ; Education <sup>2</sup>
<a href="#">Mind mapping a way through curriculum frameworks</a>	Meyer, R; Brits, K	Medicine and Health Sciences
<a href="#">Old ways won't open new doors – A teaching perspective</a>	Hayward, S	AgriSciences
<a href="#">OSCE based learning opportunities to enhance training of medical professionals</a>	Bruce-Brand, C; Matukane, S.R.; Nair, G; Van den Heuvel, L.L	Medicine and Health Sciences
<a href="#">Peer assessment to enhance simulation and clinical skills teaching</a>	Baron, J; Robertson, A; Felix, R	Medicine and Health Sciences
<a href="#">Scoring strategies for multiple choice questions with variable number of correct answers</a>	Dunaiski, M; Landi, P	Science
<a href="#">The effectiveness of obtaining continuous student feedback to inform teaching</a>	Palk, A.C; Chetty, S; Holm, N; Moodley, D.D; Snow, M	Arts and Social Sciences
<a href="#">The Regular Use of Short Formative Quizzes to Improve Student Motivation and Understanding</a>	Joao, S; Visser, M	AgriSciences
<a href="#">Understanding student engagement during lectures: sharing lessons learnt during ARTLA</a>	Barnes, J; Mahomed, S; Van Gensen, L; Van Wyk, S	Law

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Addressing bottlenecks and threshold concepts in student learning by Decoding the Discipline

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Bester, P.C; Luzipo, P.Y; Mathee, S; Tshokotsha, M.H; Nkuna, E

**Keywords:** Bottleneck, Decoding the Disciplines Wheel, Pretest-posttest design.

**Faculty:** Faculty of Military Science

**Abstract:**

Personnel psychology (Ipsy244) is a module in Industrial Psychology that follows a scientific approach to the selection of personnel. Therefore, students in industrial psychology and human resource management must demonstrate and apply the concepts of predictor and criterion and the use of cut-off scores to facilitate selection decisions in the workplace. During 2020 the lecturer in Personnel Psychology observed that his students struggle in mastering and applying these concepts and it was marked as an area of concern that needs to be addressed. The objective of this study was to create a learning opportunity to address this bottleneck. The Decoding the Disciplines Wheel was used as tool to *inter alia* develop an intervention as part of the process. The study followed a pretest-posttest design where a test based on the relevant content was developed to test their knowledge after the conventional class presentation. The intervention was applied which used 'learning by doing' and the flipped classroom technique where the students had to develop a Tik Tok video demonstrating their knowledge and understanding of the theoretical content and upload to the learning platform for others to watch and rate. After the intervention the student's knowledge on the content was tested again on a similar test to assess student mastery. A statistical approach was used to examine the effectiveness of the intervention. The posttest results shows that the Tik Tok Video as an intervention does influence the learning that took place. This poster closes the loop in the decoding process by sharing the results. From this study we have learned that collaborative learning is of paramount importance for students. The student's feedback was that they had fun while learning.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Addressing knowledge shortcomings through the incorporation of an interactive group assignment

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Steyn, L; Strydom, P.

**Faculty:** AgriSciences

**Abstract:**

The previous blueprint of the module, Introduction to Animal Nutrition (AN244), did not allow for interactive learning and there was specifically a shortcoming in terms of the understanding of raw materials and application of fundamental knowledge. Students in their third and fourth year will often be unable to answer the most basic questions around raw materials and there is a real lack of confidence which limits critical thinking. Gharibi & Arulappan (2020) stated that repetitive simulation enhances clinical competence. The same approach has been applied here through the development of a new learning opportunity. The focus was not only on self-study (student centered learning) but also on repetition of information in different mediums. Additionally, fostering a sense of comradery between students, who have been isolated from each other in 2020, also motivated the development of this new learning opportunity. Both issues were approached by means of a group assignment, with each group being assigned a different raw material category. Groups were instructed to meet on their dedicated MS Teams Channels and collaborate on a concise literature review of their topic. Upon completion of the writing component each group peer reviewed a fellow groups assignment. Each group was required to present their work to the rest of the class in a formal presentation setting. Finally, an in-person practical was held where each of the raw materials discussed was exhibited and discussed. The practical was set up to be a fun reward for their hard work, while also being informative and creating a different setting for learning to take place. Beyond these activities, this topic was also covered extensively in class (lectures) and reading material. A student feedback form was set up to receive feedback in terms of preference for group work and effectiveness of the learning opportunity. The overall success of this learning opportunity will be evident from the exam outcome, as well as when these students start with their third-year nutrition and are hopefully able to effectively apply what they have learnt previously. Following the Rolfe et al. (2001) reflection method we are encouraged to ask the questions, "So what?" and "Now what?". Shortcomings and hurdles have been identified that can be adapted and improved on in the following years. It was clear to see which students embraced the opportunity to follow their own lead and take the learning opportunities into their own hands.

[\[Back to index\]](#)



[\[Back to index\]](#)

**Title:** Chunking as active learning strategy to address academic disengagement of Agricultural students

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Lombard, E.H; Mbizana, N; Murphy, M; Theunissen, J; van Eeden, S

**Faculty:** AgriSciences

**Abstract:**

As is the case with most students in the world, the new learning and teaching offerings necessitated by the Covid pandemic, affected students at Elsenburg Agricultural Training Institute. Anecdotal evidence from the lecturers revealed an alarming level of academic disengagement over the past two years. In this study, disengagement is conceptualised as the 'non-engagement' of students revealed in their study behaviours and academic interactions (Brint & Cantwell, 2014), namely limited time spent on study; class- non-attendance; and non-completion of assignments or 'late or rushed' assignments (Chipchase et al, 2017), leaving the impression of 'cognitive absence'. Chunking as active learning strategy has been identified as a possible didactical tool to address students' disengagement and the related factors causing this disengagement (Gobet & Lane, 2012). Largely attributed to the work of Miller (1994), chunking refers to the process of organizing and grouping small units of information (a chunk) into larger clusters. Chunking serves as both a triggering and code building device where interrelated chunks (keys to the concept under question) enable the building of larger schemata of information. The focus of this study is to establish the success of 'chunking' as an active learning strategy to address the challenge of student disengagement. Using Rolfe et al.'s (2001) reflective model, the authors reflected on how to implement the principles embedded in chunking theory (e.g. deliberate practice, the teaching of metaheuristics and the development of schemata) in their didactical practices. Anonymous feedback from the students were collected at the end of the semester using a Likert style questionnaire, on the didactical offering of the modules during the second semester of 2021. Based on the data received, class attendance; utilization of the learning opportunities designed for deliberate practice; and the modelling of the analytical and problem-solving skills expected by the lecturers and fostering self-directed learning habits were achieved. Students reported a high level of confidence in their ability to apply the course material in future contexts (transferability of skills). The organization of the learning material into deliberate chunks, however, provided a mixed response from the students. Some of the students found it somewhat useful or not useful. Upon reflection, we realised that the identification of the key aspects of a concept (or chunks of information and their interrelatedness) need more deliberate reflection from each lecturer. What we considered being the key concepts, did not always emerged as the key that unlocked the concept for the students. Further reflection on the organization, the teaching sequence and providing the necessary application tasks for the students on each of the concepts are needed.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** CPR training through flipped classroom

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** de Lange, S; van Schalkwyk, T

**Faculty:** Medicine and Health Sciences

**Abstract:**

COVID-19 restrictions require smaller groups during clinical teaching of nursing students, yet still meeting the required time for knowledge acquisition, skill practice and retention. To meet these criteria flipped classroom was applied in Cardiopulmonary Resuscitation (CPR) teaching which can increase student capability, satisfaction, motivation, engagement and confidence. It consists of three components, pre-classroom activities, in-classroom activities and post-classroom activities. (Youhasan et al. 2021). Nurses are often the first person to witness cardiac arrest and should be able to provide CPR which requires teaching and practice (Garcia, Herrera-Pedroviejo & Abelairas-Gomez, 2019).

Through reflection, using the Rolfe method (Rolfe, Freshwater & Jasper, 2001), teaching of CPR to fifty-two second year Bachelor of Nursing students at Stellenbosch University was transformed using flipped classroom. Smaller groups could also lead to knowledge acquisition, skill development and retention.

Through classroom action research lecturers reflected on teaching practices to improve CPR teaching in the current context (Mettetal, 2001). Pre-classroom activities (videos, images and algorithms) was provided on the learning management system. In-classroom activities consisted of a quick demonstration followed by skills practice and formative assessment of performance. Post-classroom activities involved student and peer reflection.

Current context and method of CPR skills acquisition required innovative and effective ways in teaching. Facilitators reported reduced time spend on skill demonstration due to student preparedness (*facilitator 1: "...pre-knowledge was in place"*). Students reported: sufficient prior knowledge, reduced confusion and better preparation (*"it is nice to have an idea..."*).

Well-developed pre-class activities facilitated enthusiasm (*facilitator 1: "... student participation and enthusiasm..."*), participation and active learning during in-class activities. Facilitators observed the use of flipped classroom resulted in improved student learning (*student: "increased confidence and notion of competence"*). Flipped classroom and classroom action research ensured active student participation and engagement in their learning. This method is currently employed in the clinical teaching of students and will continue to be used.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Creating learning opportunities to assist students overcome bottlenecks in learning

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Malope, M.F; Lokotola, C.L; Moleleki, M.F; Obasa, A.E

**Faculty:** Medicine and Health Sciences

**Abstract:**

Students often struggle with retaining large amounts of content taught within a short period of time. Often the focus of taught modules is to teach theoretical concepts related to clinical scenarios and the outcomes include that the students should demonstrate understanding of the theory and be able to apply these concepts in solving problems related to clinical practice, based on Bloom's Taxonomy (Orey, 2010).

A three-tiered approach (student-student, student-content, and student-facilitator activities) was applied to address these bottlenecks for medical students attending the Genetics section for their Reproductive block. They are faced with learning core concepts in two days with eight topics. This design of learning opportunity aims for the students to (1) demonstrate the ability to apply the theoretical knowledge behind pedigree drawing and inheritance patterns, and (2) infer possible Mendelian patterns of inheritance from a given pedigree. The students were provided with lecture videos and had a live workshop. Further, the students were divided into groups of 10 and were provided with homework in the form of an online forum submission on SUNLearn. Students were also required to comment on a group member's post. Assessments comprised reading the student's responses on SUNLearn and they completed a quiz.

Schön's reflective framework based on the concepts of "reflection-in-action" and "reflection-on-action" was used to assess the learning activities (Schön, 1983). Of 292 students, majority participated in all the activities and 79% scored >90% in the quiz. The students rated their overall experience with the activities as four out of 5 stars but 50% expressed that the activities were too many. In conclusion these exercises have demonstrated the effectiveness of this three-tiered teaching approach in aiding the students to retain knowledge and apply it. Peer feedback was valuable in demonstrating the students' own understanding and ability to critically analyze content. Indeed, as per Cable & Cheung, 2017, including various participatory teaching methods yields higher knowledge retention in students. We will implement similar approaches in other modules to create multiple learning opportunities for students.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Developing ecoliteracy through *Mistica*

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Dunn, S

**Faculty:** Economic and Management Sciences

**Abstract:**

The diploma in Sustainable Development both develops critical thinking about sustainability issues and inculcates an entrepreneurial mindset. The ecoliteracy module's key learning outcome fosters space for student development of comprehension of complex systems and the ability to interpret the interconnection between the natural and human-made worlds with head, hands, heart and spirit.

Sustainable development is a conflicted term. The triple bottom line's three dimensions (economy, social and environment) are often skewed in favour of the economy. This study explored how the social and environmental dimensions could be balanced in the way students understand this term in relation to, and with, the connection to the natural world.

The journey of the *Mistica* process was introduced to a second-year cohort of students. It sought to explore how their ecoliteracy experience could be deepened. They spent eight mornings for about 20-30 minutes participating in *Mistica* that took place in the Lyndoch woodland at the Sustainability Institute.

The Gibbs (1988) reflective cycle was used to analyse the student's ecoliteracy development. At the end of the sessions, students feedback provided insight into the increased levels of ecoliteracy and new ways of relating Nature.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Digital Narratives Movie Project – from passive to active learning modalities

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Moore, J.P

**Faculty:** AgriSciences

**Abstract:**

The challenge of teaching in a traditional format, in this case 2nd year grapevine sciences, is that the students often slip into memorisation and rote learning as might have been experienced/employed in high school and first year. In this case the students may not engage with the theoretical ideas critically and make connections i.e., reference to the table grape or wine industries in real world scenarios. The section of the course taught was in grapevine reproduction and breeding and the aim was to explore ways of making the learning an 'active' process on the part of the students.

To move the students from passive recipients of knowledge into rather active participants in knowledge creation and connecting to 'real world' applications of grapevine science a movie project was implemented. The idea was to use a group-work based movie project as encompassing the highest level of Blooms taxonomy i.e., to create knowledge as a means of encouraging deeper engagement with the material being taught. The idea was to develop new cultivars for breeding and to 'pitch' the idea to a potential investor in this way it was hoped that the students would realise how important it is to connect theoretical knowledge with applications in relevant industries which would employ viticulture graduates in the future.

Submissions received from students varied from the very minimum required and clearly the students did not 'get' the task to absolutely brilliant movie-style presentations that showed the groups really worked at producing an excellent product. The exercise was rewarding as it highlighted the enthusiasm and ingenuity some students are able to bring to their studies. This project will be a mainstay of my teaching assignments for the course going forward. I am employing the Schon reflective teaching approach in my courses.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Enhanced engagement with literature in a postgraduate science class

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Pfukwa, R

**Faculty:** Science

**Abstract:**

The presentation is based on a postgraduate course, Physical Polymer Science, PS744. The main goal of the PS744 course is to equip the students with the conceptual underpinnings necessary to understand the physical behaviour of polymer materials, i.e., polymer crystallization, rubber elasticity and polymer viscoelasticity. Students must understand the molecular level link between polymer microstructure, architecture and functionality, and polymer physical properties, and how these structural parameters influence the practical applications of polymers as engineering plastics. Much of the knowledge gained here is also directly applicable in their research programs and in industrial settings.

The class is given clear learning goals and timelines, class notes and literature reading beforehand, via SUNLearn, and obliged them to prepare before class. During class, I take the active learning approach. As part of our learning activities, the students are presented with research problems, from published research papers and are asked to critically engage the literature, formulate opinions, and challenge ideas critically, and give their take via PowerPoint presentations in a conference styled seminar. To encourage critical engagement with the reading material, we follow a style modelled on the publication submission and review process, in which the presenter (taken as the author) gives a ten-minute presentation, and “peer reviewers” (i.e., two fellow students) give scientific opinions on the paper; each “peer reviewer” must ask the presenter/“author” three questions and submit a one page “reviewer report” (I provide the template and guidelines for this). I evaluate the presentations based on the technical quality, the quality of responses to questions, and aesthetics.

The activity offers students an opportunity to hone their technical presentation skills, make critical judgements on scientific literature, present scientific (oral and written) scientific arguments and to respond to scientific enquiries in a formal setting. This helps to prepare students for some of the expectations of formal graduate and professional settings.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Flipping the Horticultural classroom

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Kleinert, A; Dzikiti, S

**Faculty:** AgriSciences

**Abstract:**

Horticultural Science 362 is an eight credit third year module on Subtropical fruit production with a special focus on the avocado and macadamia industries in South Africa. During this 4<sup>th</sup> term course, we cover topics ranging from bearing habits and rootstocks to fruit growth, external vs. internal fruit quality. This is my second year teaching the course. Reflecting on this course using the model by Rolfe et al (2001), a challenge of this course is that we are geographically separated from the main production areas of avocados and macadamias. This means that there is limited opportunity for direct interaction with avocado and macadamia producers. This challenge has further been compounded by the global Covid-19 pandemic which has moved all teaching into the online space. While the course content is not difficult in the traditional sense, it is a large body of new information to assimilate, and it raises the concern that students do not always grasp the practical application or implementation of the theory learnt in class. For this reason we decided to create and assess a learning opportunity using the flipped classroom approach. To implement this, we used a small discussion group format using questions from a previous year's test and videos illustrating concepts on subtropical orchard management. The students then engaged each other identifying solutions to problems presented in the test questions and in the videos. Venton and Pompano (2021) reported that flipping the classroom and adding an active learning component to the class enhanced remote student engagement. Feedback gathered from students using the Group Work Evaluations technique and using the Muddiest Point Technique showed that 85% of students reported a better understanding of the work after the flipped classroom activity. Again drawing on Rolfe et al (2001) to answer the question "now what" it is clear after this activity that teaching and learning in my course is quite effective under the flipped classroom approach. I will fall back on this approach to address the muddiest points in my course by developing more active learning opportunities that promote peer-to-peer learning within the flipped classroom set up.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Improving classroom participation in a hybrid teaching and learning environment: A case study of the LSCM 244 classroom

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Lalendle, C; Saruchera, M

**Faculty:** Economic and Management Sciences

**Abstract:**

The Covid-19 pandemic has disrupted the traditional classroom environment at Stellenbosch University and across the world. During the year 2021, the University moved back and forth between different modes of teaching and learning to align with the constantly changing lockdown regulations in South Africa. The possibility of having students join lectures online and physically in the classroom has allowed for the continuation of the academic programme despite the disruption of the pandemic.

Hybrid classroom environments present flexibility and accessibility to learning. However, they also present a real practical challenge for many teachers who must facilitate classroom activities and equally engage both online and in-person students during class activities. The social proximity, connectedness, and interactions between the two is not the same, and something is lost in the learning relationship and process.

Numerous strategies have been developed to help overcome some of the learning and teaching challenges, and this abstract speaks to the experiences gleaned from implementing one of the tools. Tools such as electronic voting systems, clickers, breakout rooms, “one minute paper quiz”, and flipped classrooms have been extensively researched. The research findings arising from these tools have confirmed their usefulness in getting students to participate in learning activities.

A case study experiment was conducted by the Logistics & Supply Chain Management (LSCM) 244 class at Stellenbosch University in 2021. The study’s objective was to adapt the Clicker Assessment and Feedback (CAF) tool into the classroom and test its effectiveness to increasing learner participation within a hybrid learning environment. The experiment tested the participation levels of both online and in-classroom students during a formative learning activity. The results collected from the CAF tool’s instant feedback capabilities revealed that 154 of the 183 students participated in the experimental activity. They primarily participated by sending in their responses to the questions that were asked during the allocated class time.

The experiment results showed that the CAF tool was effective for the LSCM 244 class across both online and in-class students who participated in the activity. The experiences of both the lecturer and students were reported as positive. The lecturer observed that the nature of the CAF tool helped to merge the online and in-class groups of students to participate as one cohesive group. There was no evident distinction in how students were able to participate or how the teacher facilitated the activity to the students.

[\[Back to index\]](#)



[\[Back to index\]](#)

**Title:** Improving statistical education performance of students through facilitated e-activity

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Sadiq, H; Louw, S

**Faculty:** Economic and Management Sciences

**Abstract:**

Student results for mathematical subjects, such as statistics, are often relatively poor across the various stages of formal education. In South Africa, for example, student performance in mathematics at high school exit levels has continuously poor for several years. Up to 2019, this performance was largely based on face-to-face learning. The COVID outbreak that began towards the end of the year 2019 forced many educational interactions to move online. While there is significant body of research work dedicated to advancing the teaching of statistics, the focus is not on remote or online leaning. Therefore, there is renewed need for studies on improved remote statistical teaching and learning techniques. In this presentation, we investigate the efficiency of an online facilitated education opportunity that seeks to improve the performances in statistics of first-year students at Stellenbosch University.

At Stellenbosch University, statistics represents a compulsory course for almost all first-year students that are affiliated with the Faculty of Economic and Management Sciences. One of the main goals is to equip students with basic statistical tools necessary to prepare them for their commerce-oriented careers. This service nature of the course has three primary implications. First, the class is often very large with over a thousand students. Second, the class membership is not by choice. Third, there is very limited room to adaptively alter course contents and/or structure. The impersonal issue caused by the large class size is traditionally circumvented by dividing students into small tutorial groups, where they are assisted by senior students. This approach had to be put on hold during the COVID pandemic and coupled with the other two inherent problems, this increased the failure rate of the course in 2020. In this study, we designed some online tutorial-like student-facilitator sessions for undergraduate statistics students, where attendance is voluntary. We hypothesise that our sessions impact positively on the performance of students in statistics.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Individual and collaborative reflections on teaching and learning

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Bredell, J.R; Burger, E; Kamper, H; Pretorius, H

**Faculty:** Engineering

**Abstract:**

Individual and collaborative reflections on teaching and learning are presented by a group of lecturers from Stellenbosch University's Faculty of Engineering. These reflections occur within the transient teaching environment brought about by the COVID pandemic, which influences the traditional thinking and approach. This work uses the Deming PLAN-DO-STUDY-ACT reflective model (Cleary, 1995) to review the members' experiences and what was learnt. The work serves as a showcase of observations and reflections across several different fields of engineering.

Individual case studies are presented on the expectations during the start and course of respective modules. The different approaches and tools which were utilized are described, what observations were made and how this affected the thinking of each member.

Drawing on these individual case studies – which span several courses from three diverse engineering disciplines – several common themes are observed. Connecting theory to practice is a common challenge. To address this, students need to engage with the subject matter and receive exposure to practical engineering applications. Each investigator also notes the importance of learning as a social activity, which is especially challenging when teaching online. The importance of learning as a transformative experience and preparing students to become engaged members of society are highlighted by all contributors.

In addressing the above challenges, sociological tools from Legitimation Code Theory proved helpful. The epistemic plane (Maton, 2014) was used in two of the case studies, the semantic plane (Maton, 2013) was used in one case study and the autonomy plane (Maton, 2018) was used in the last case study. These tools are particularly useful in thinking about how theory and practice should be connected, both within a lecture as well as in the overall curriculum of a course. It also gives a way of talking and thinking about the aim of enabling students to ultimately become "knowers".

Individual reflections are finally presented on how the PLAN-DO-STUDY-ACT model will shape the teaching and learning approaches of each person as they design their modules and learning opportunities in the future.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Integrating theory and experiment via a simulation of an astronomical observatory

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** John, A

**Faculty:** Science

**Abstract:**

Historically physicists are either theorists or experimentalists. Each of these sub-groups uses distinct frames of reference and language and this dichotomy can appear as early as the undergraduate phase. As a result the significance of major challenges and advances in the field can be difficult to interpret across the theory-experiment divide. The discovery of gravitational waves in 2015 ushered in a new era of astronomy. The underlying science behind the detection by the Laser Interferometric Gravitational Observatory (LIGO) is traditionally considered beyond the scope of a first course in general relativity, usually encountered at the postgraduate level. In an attempt to stimulate awareness of the experimental aspects of this subject among students from the theoretical physics stream, I decided to introduce a novel learning activity based on a simulation. The students were mostly honours students from the theoretical physics stream. They were tasked with improving the performance of a virtual gravitational wave detector in the publicly available Space-Time Quest game. The students were required to identify and explain any possible sources of noise in their detector. A competitive element was added by the availability of a global ranking table among all participants. Students could continue to improve their game scores if they wished to. This study may support earlier investigations on the use of simulations in education (Steinberg 2000) and the use of games in supporting learning (de Freitas 2007).

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Interactive content assessment in counter-intelligence theory: assessing cognitive learning in reading, comprehension and writing

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Putter, A.P; Henrico, S.J; Reutener, M; Mkhize, H; Ramuhala, M.G

**Faculty:** Military Science

**Abstract:**

Research and writing are considered core fundamentals in the academic environment – it is, after all, the primary course for developing robust reasoning skills. As such, both activities require a learned skillset which can only be developed through practice and a foundational framework during the initial stages of academic exposure. This Scholarship of Teaching and Learning poster presentation addresses an interactive approach towards research, writing and comprehension as part of the Introduction to Counterintelligence and Covert Action module presented at the Faculty Military Science. Critical areas of concern and reflection deals with independent (desktop) research, the improvement of writing skills, writing and the logical development of academic arguments, critical thinking about the student’s ability to articulate theoretical relationships, a critical review of written products (by the student and within a peer setting), and referencing. Based on the ongoing discussion amongst the lecturing staff of the selected group of intelligence studies students about the development requirements for these students – a scaffolding type learning opportunity was created to assist with perceived development problem areas relating to structuring of assignments, referencing, critical review of own work and that of peers and the ability to identify linkages and relationships between relevant constructs. Students responded positively in terms of the methodology and, results indicate that learning occurred. From a teaching perspective, this provided an opportunity actively probe the process, notwithstanding the lengthy process thereof. Considering student feedback and the results obtained, the appropriate incorporation of this methodology into the curriculum is imperative, albeit in acknowledging its laborious nature.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Interactive explanations for Applied Maths B124

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Josias, S

**Faculty:** Science

**Abstract:**

The 2021 Applied mathematics B124 course made use of face-to-face contact sessions once per week, in the form of Q&A sessions. The Q&A sessions took place under the backdrop of the week's theory, homework and tutorial. In retrospect, sessions were facilitated by transferring knowledge more so than engaging students in learning. However, for the moments where students were optimally engaged, they would uncover the answers themselves by building on each consecutive students' inputs. In addition, students attempted to actively gain an understanding by considering problems from multiple perspectives, as revealed by questions students would ask.

In order to increase student engagement and active learning, particularly during course bottlenecks, we present a proof-of-concept online interactive explanation. Interactive explanations allow for problems to be viewed from multiple perspectives, and can prompt self-reflection (Hohman et al., 2020), which can have a positive impact on learning (Chi et al., 1989). In so far as possible, these explanations would take a top-down approach. (Perkins, 2010) motivates that a top-down approach leads to students being in charge of their own learning and allows students to organise various low-level technical concepts. More specifically, we lead students in creating intuition about a fundamental concept spanning the course: Euclidean vectors. The interactive explanation will prompt students to consider the effects of certain operations on a vector and will allow students to experiment with different configurations of the vector while seeing the result instantaneously. By formulating hypotheses about the content and updating them through interacting with the explanations, a student may be more engaged with the course content (Chi, 2000). It is hoped that a deeper understanding and intuition about a fundamental concept spanning the entire course will reduce the cognitive load when learning the more complex topics later on.

Since authoring interactive media can be challenging and time consuming, we use the template provided by the online journal Distill to create the first proof-of-concept. To include interactivity, we make use of the Plotly.js framework. The proof-of-concept learning opportunity is reviewed by colleagues and peers to evaluate its suitability, ease-of-use, and potential impact.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Learning through improved engagement

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Mouton, D.P<sup>1</sup>; White, P<sup>1</sup>; Tarisayi, K.S<sup>2</sup>

**Keywords:** Contextual integration, conceptualization, collaborative reflection, Rolfe reflective model

**Faculty:** Theology<sup>1</sup>; Education<sup>2</sup>

**Abstract:**

While teaching the module “Faith Formation in the Missional Church” for the first time in 2020, the lecturer observed that students became increasingly disinterested in the activities of the module, which was evident in the low attendance of online lectures. Due to Emergency Remote Teaching, Learning and Assessment (ERTLA) teaching was happening fully online. In addition, the lecturer was new to the faculty which may have contributed to the challenges. However, other concerns in Teaching, Learning and Assessment (TLA) were also evident. These were (1) students’ (in)ability to understand and integrate some key concepts and applying those to relevant contextual considerations, and (2) the mechanistic way in which students approached some of the assessment tasks.

The re-designed learning opportunities presented here were aimed at improving students’ conceptualization of key terminology, nurturing a contextual awareness and integration into the content of the module and to improve student participation. The following changes, amongst others, were implemented to increase engagement and for students to realise that they are partners in TLA. The first required students to discuss selected articles in smaller groups, identify the key concepts and arguments in those, and present it in five minutes at the start of the lecture. This was to strengthen understanding through collaborative and reflective discussion. Students were also required, every week, to reflect contextually about the theme for the week and share those reflections during informal tutorial sessions. This primarily aimed at nurturing a contextual sensitivity while also reinforcing the understanding of key concepts. During the semester short, informal reflective discussions are done where students can raise concerns, challenges, as well as positive aspects relating to their experience of the course. The lecturer uses Rolfe’s reflective process to (1) evaluate his own responses in reaction to student responses, as well as for considering future improvements regarding the delivery of the course. In future other opportunities will be incorporated to enrich the feedback process, and the continual renewal of the teaching strategy for this module.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Mind mapping a way through curriculum frameworks

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Meyer, R; Brits, K

**Faculty:** Medicine and Health Sciences

**Abstract:**

The MPhil in Health Professions Education (HPE), a two-year programme at the Faculty of Medicine and Health Sciences (FMHS) adopts a hybrid approach where students have both face-to-face and online sessions. In this paper we reflect on approaches undertaken in the curriculum development and analysis module. We used the reflective model by Rolfe et al (2001), which is based on three questions: what? so what? now what? From previous experience, it was evident that students struggle with identifying relevant curriculum analysis frameworks for their context and then synthesizing these elements to create a framework.

We designed our educational environment based on Laurillard's conversational framework (1993) to depict the communication process between teacher and student. An interactive mind map activity was introduced where students had the opportunity to extract different aspects of frameworks, and then synthesize these frameworks. They then posted their mind maps on a discussion forum where their peers and educators could provide feedback. This feedback could then be used to create their unique framework with a justification for this.

Context-specific feedback was obtained by assessing students' response to the activity. Students were provided with an electronic survey feedback form where they were asked to respond to a series of questions about their experiences of the activity. Educators involved in the module were also asked to complete a similar survey. The results from the survey revealed different and sometimes conflicting descriptions of students' experiences of the activity. Educators found this activity to be of value to the students, but also provided a few recommendations.

The mind map tool seems to be an enabler to learning new concepts. However, it was evident from the feedback that perceived usefulness (PU) and perceived ease of use (PEOU), as referred to in the Technology Acceptance Model (TAM) (Davis, 1989) played a major role in students' learning experience. It was clear that assisting students to explore, discuss and reflect on their learning process, aided them in understanding complex concepts. These findings highlight the need for creative and interactive teaching strategies in improving students' application of difficult concepts.

This learning opportunity may be significant for future MPhil cohorts and will be considered when designing learning activities in future. However clearer communication to students as to the purpose for this activity must be ensured.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Old ways won't open new doors – A teaching perspective

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Hayward, S

**Faculty:** AgriSciences

**Abstract:**

With a global drive toward sustainable animal products, biochemistry in Food Science is becoming more relevant. In past years Food Biochemistry students only had three opportunities to obtain marks. This resulted in unnecessary stress on the student's part and contributed to a lack of class participation. To ensure the third-year students in Food Biochemistry stay on track with the set learning outcomes of the module, a weekly discussion forum was introduced during the allocated 3-hour tutorial period followed by an online quiz. For the forum discussion students were asked to bring topics to class which they found interesting, even if it does not relate to the subject matter. The discussion was followed by a tutorial session and a quiz which was based on the work covered in the tutorial. The tutorial material was made available 7 days in advance to ensure that students had sufficient time available to prepare relevant questions. Any questions relating to the quiz was answered in the first period following the test. Out of the 9 learning opportunities, only the best 8 counted toward the final mark for the module. In addition to the weekly quizzes, a take home exam relating to the work covered during the discussion was set as their first test on the theory section of the work.

Although this method of learning was met with mixed feelings from students, the class average improved from 55% to 68% when compared to previous years even though the same material was covered. This result suggests that even though students still feel underprepared as per feedback received, they have a better understanding of the course material than their predecessors. The results furthermore suggest that actively engaging students by making the work applicable during forum discussion had a beneficial effect on student learning. Active participation from the class during discussion forums also resulted in an increase in my own enthusiasm. Based on these findings, discussion topics would be pre-selected and announced a week prior. A mark for class participation would also be introduced.

[\[Back to index\]](#)



[\[Back to index\]](#)

**Title:** OSCE based learning opportunities to enhance training of medical professionals

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Bruce-Brand, C; Matukane, S.R.; Nair, G; van den Heuvel, L.L.

**Faculty:** Faculty of Medicine and Health Sciences

**Abstract:**

Medical professionals frequently complete objective structured clinical/practical examinations (OSCE/OSPE) which test practical application of skills as part of their formal/summative assessments. After constructing storyboards for their modules lecturers noted that there is a lack of learning opportunities to better prepare students for OSCEs. Schön's reflective framework and Reid's concept of reflection-for-action was applied to assess the effectiveness of structured OSCE based learning opportunities that were designed to address the gaps in training.

Lecturers created OSCE based learning opportunities to better prepare students for OSCEs and to assist with learning and formative assessment in their modules. Learning opportunities consisted of mock OSCE stations where students had opportunities to act both as exam candidates and as the OSCE examiners. This allowed for an opportunity to experience OSCE based exams, to reflect on criteria used by examiners to evaluate performance and provided an opportunity for peer-to-peer feedback. Schön's concept of reflection-in-action and verbal feedback from students was used to assess the value of these learning opportunities.

Reflecting on the activities, lecturers felt that utilising mock OSCEs, exposed areas of weakness (e.g., anxiety when performing under scrutiny) which students would then be able to work on. OSCE based learning activities also allowed for the inclusion of skills that do not form a regular component of students' daily tasks, but in which competence is expected in the final examination. Feedback from students indicated that the mock OSCEs were useful in providing them a sense of what their examinations would be like and helped identify gaps in their knowledge that they planned to address.

Utilising assessment techniques, similar in structure to those used in formal assessments as part of teaching can help to better prepare students for the formal and can highlight challenges to students about what they might experience during an exam. Students can identify gaps in their learning which can then be addressed. The intervention can improve performance in examinations, knowledge and skills required within medical professions; and if incorporated earlier and throughout the curriculum can enhance learning outcomes for students in medical professions.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Peer assessment to enhance simulation and clinical skills teaching

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Baron, J; Robertson, A; Felix, R

**Faculty:** Faculty of Medicine and Health Sciences

**Abstract:**

Maternal and newborn care practice is a 3<sup>rd</sup> year module, with 41 students facilitated by two educators. During the first session, an educator performed a demonstration, thereafter the students practiced the skill. The educators observed some students practicing and answered questions/ clarified uncertainties. Reflection on the first session, revealed a low student to educator ratio was inadequate for the educators to facilitate all the students<sup>1</sup>. A decision was made to implement peer assessment (PA) during the sessions<sup>2&3</sup>. The next session consisted of a demonstration, followed by the students working in pairs, where one student practiced the skill, and the other conducted a PA according to a provided tool and vice versa. The educators would randomly moderate the PA to ensure consistency.

77% of the student responses indicated that the PA was helpful and built their confidence<sup>2</sup>. Some students indicated that the PA felt forced, and they felt that they are being marked rather than assisted. They also felt that they required time to practice before the PA was conducted. Positive student feedback included that they experienced diverse explanations and rationale from their peers<sup>3</sup>. It helped them focus on the correct steps and it promoted students assisting one another. The educators felt that the PA worked well, however, the procedural nature of the tools was time consuming and prevented meaningful student guidance.

During the first implementation of the PA, there was not enough tools therefore all the students could not benefit from the experience. In addition to allowing the students to practice the skills, the PA allowed the students to practice how to give constructive feedback<sup>2</sup>.

PA was helpful for the students to do guided practice of the skills however it did not improve the educator's ability to observe and guide all the students. In future sessions, the students will be staggered into two groups which will allow the educators to facilitate a smaller number of students in a session. Students will also be given time to practice before the PA.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Scoring strategies for multiple choice questions with variable number of correct answers

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Dunaiski, M; Landi, P

**Keywords:** Assessment, Higher Education, Multiple Choice

**Faculty:** Science

**Abstract:**

With the move towards online assessments and automatic grading solutions in higher education comes the need to design summative assessments that impedes cheating. One solution is to generate variants to each question with different right and wrong (distractors) answers that are randomly assigned to students. In this paper we look at different strategies to score variants of multiple choice questions, where variants may have different numbers of correct and wrong answers. We analyse the scoring fairness of the different strategies, their propensity to discourage guessing, as well as their accurate estimation of students' partial mastery.

The two common scoring strategies are **Number Right (NR)** scoring and **Negative Marking (NM)**. **NR** assigns a score of 1 to each True Positive (*TP*, a student selecting a correct statement) and True Negative (*TN*, a student not selecting a wrong statement) case. Furthermore, **NR** assigns a score of 0 to each False Positive (*FP*, a student selecting a wrong statement) and False Negative (*FN*, a student not selecting a correct statement). The **Number Right** scoring strategy, where the score  $S = R$  (the number of correct answers), produces an upward bias in scores of poorer students as a result of guessing. The expected score for a student that guesses is 50%. Furthermore, given a different number of right (*R*) and wrong (*W*) answers, leads to different chances of guessing the correct answers amongst the student population. **Negative Marking** assigns 1 to each *TP* and *TN* selection and -1 to each *FP* and *FN* selection. The **NM** scoring strategy will assign an expected score of 0 to students that only guess. However, depending on the values of *R* and *W*, students may still be awarded positive scores if they select all statements or leave all statements unselected.

Assuming that the total number of choices in a test remains constant, we show that a scoring strategy of  $TP = TN = 1$ ,  $FN = -W/R$ , and  $FP = -R/W$ , yields fair results for partial knowledge and produces an expected score of 0 for students that guess. Furthermore, it assigns consistent results, independent of *R* and *W*, even if students choose the select-all or select-nothing strategies.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** The effectiveness of obtaining continuous student feedback to inform teaching

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Palk, A.C; Chetty, S; Holm, N; Moodley, D.D; Snow, M

**Faculty:** Arts and Social Sciences

**Abstract:**

Obtaining student feedback during the course of a module is important as a means of informing the learning process (Cook-Sather, 2008). Student feedback may also enable the lecturer to reflect on, and adapt, their teaching practices accordingly (Hoban and Hastings, 2006, Gibbs, 1988). In particular, such feedback is useful to ascertain parts of the content that students are struggling to understand and challenges they are experiencing with the online learning process (Brew, 2008). Given the demands of Augmented Remote Teaching, Learning and assessment (ARTLA) at Stellenbosch University during 2021, this student feedback is particularly important to enhance teaching and learning. To obtain such feedback, we piloted the use of weekly Google forms in a six-week module which was presented in a hybrid format that included both face-to-face (F2F) and online synchronous contact sessions. Four forms were created in weeks two to five of the module. The forms comprised approximately five questions of which some required open-ended answers and others 'check the box' responses. The questions covered both the content and other aspects of the course, such as students' preference for either F2F or online contact session, or both, as well as their reasons for such preferences. Student responses were then used to inform what was focused on in the contact sessions as well as the way in which online contact sessions were conducted. In the final two weeks of the course the students were asked to give feedback about the process of feedback itself. The students who completed the form were positive in their responses. The lecturer found the feedback from students to be useful not only as a means of gauging student comprehension of the content throughout the term, but also in enabling her to adapt the pace of the contact sessions, to ensure adequate time was provided for student engagement, and to find out about the challenges experienced by students with the platform. In keeping with the reflective cycle developed by Gibbs (1988), the insights gained from student feedback enhanced the teaching experience and will inform the lecturer's approach to future teaching.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** The Regular Use of Short Formative Quizzes to Improve Student Motivation and Understanding

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Joao, S; Visser, M

**Faculty:** AgriSciences

**Abstract:**

At tertiary level, students are challenged by an increased workload and course difficulty. They have to continuously engage with module content in order to gain experience, understanding and confidence in a subject. Self-motivation for this is often lacking, which leads to some students requiring guidance toward efficient engagement with the subject material in order to reach the module outcomes (Jones *et al.*, 2021). To encourage second-year students to actively engage with the material of a Biometry module, a learning opportunity was created in the form of short, formative, five-question quizzes provided at weekly intervals. The quizzes assessed the students' understanding of the preceding week's subject material based on their application thereof. They also served to increase student understanding of the subject, as well as to prepare their expectations for formal assessments. Facilitator feedback on each question was made available to students as soon as each quiz was closed. Student feedback on this learning activity was collected by means of an electronic survey, halfway through the course of the module. The survey addressed the students' experience of the quizzes as well as their perception of the importance and effectiveness thereof. The feedback, along with the quiz results, were used to reflect (Rolfe *et al.*, 2001) on the action point identified and the role of quizzes as learning opportunities, to overcome student challenges.

Students showed a general positive attitude towards quizzes (Haigh, 2015). Student anxiety towards quizzes also decreased over time as more quizzes were attempted. Multiple choice questions were highlighted as the easiest, while questions where numerical answers needed to be provided were experienced as the most difficult. In line with other studies the quizzes improved student preparation (Haigh, 2015). Quizzes can also serve to improve students' final performance (Nagel & Van Eck, 2012). Areas to improve on were identified, which included the re-assessment of the time limits. While regular quizzes can result in feelings of over-assessment, they can result in improved student learning as well as a reduction in lecturer workload over time.

[\[Back to index\]](#)

[\[Back to index\]](#)

**Title:** Understanding student engagement during lectures: sharing lessons learnt during ARTLA

**Contribution type:** Reflection

**Contribution format:** Poster

**Author(s):** Barnes, J; Mahomed, S; Van Gensen, L; Van Wyk, S

**Faculty:** Law

**Abstract:**

In the study and practice of law, it is vital for students to be able to apply theory to practical scenarios and defend their point of view. One way to develop these skills are to design learning opportunities (e.g., class discussions) that allows students to participate actively during classes (Warren, 1997). Students can hear various opinions (and share their own) and give, receive and respond to feedback. Student learning is also enhanced when students are actively involved in the learning process (Phillips, 2005).

As four newly appointed academics in the Faculty of Law, we wanted to understand why students do not participate during these carefully designed learning opportunities and if anything could be done to promote student engagement and participation during lectures. We applied Rolfe et al.'s (2001) reflective model (that consists of three simple questions: What? So what? Now what?) to our reflections to guide us in our understanding and possible way forward. Perhaps this reflection can assist other lecturers.

As a result of the COVID-pandemic, and the decision by SU to offer ARTLA, most of SU's lectures took place online. Face-to-face contact with students were limited. As lecturers of various law subjects, we experienced that most students were hesitant to participate in class discussions, especially in the online space. Those that were not hesitant, ended up always answering questions posed by the lecturer.

Through an anonymous online survey, students were asked why they do not participate during classes. Students responded with a variety of reasons, we list a few: they had anxiety, were shy and afraid that their answer would be wrong, that "they would look stupid" or that they were not confident that their contribution would be valuable. Some said that they did not know the answer and they preferred to first digest the work before being able to answer the question. Some students also said that they did not answer as other answers were already given or what they wanted to say was already said by other students.

Between the four academics involved in this study, we designed and implemented various learning opportunities to determine if we can increase student engagement during classes. Similar to Venton & Pompano (2021) we found that student engagement is promoted when students are given work to prepare (questions and / or reading) prior to a class and the application of the work is discussed in class / or online, in small groups. We provide a few tips for newly appointed academics to consider after reflecting on this topic.

[\[Back to index\]](#)