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# EDITORIAL

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It gives me great pleasure to present this brief introduction to our 2023 issue of JOVACET, now in its sixth year of publication and seeking to increase its footprint with each passing year. To illustrate these endeavours, this year saw JOVACET being accepted on two more platforms: the first is the Directory of Open Access Journals (DOAJ), and, more recently, our journal has joined the Scientific Electronic Library Online (SciELO), an open-access searchable database that is managed in South Africa by the Academy of Science of South Africa (ASSAf), is funded by the South African Department of Science and Technology (DST), and has the endorsement of the South African Department of Higher Education and Training (DHET; see <http://www.scielo.org.za> for more information about the broader SciELO initiative). As part of the conditions of the SciELO listing, journals are required to publish individual articles on the platform for online access in advance of the completed journal being published. This was a new challenge for JOVACET, as we had not experimented with this requirement previously, and it meant putting some pressure on our time frames for reviewing and editing (so ably managed by Dr Catherine Robertson) so that at least one article could be published as a stand-alone that would also be included in the full journal for this year. The first article out of the starting blocks was therefore put through its paces and became JOVACET's first article on the SciELO SA database (see Brown & Papier in this issue).

With these two additional hosting platforms, JOVACET is expanding its reach and will be accessible to many more researchers, practitioners, policymakers and other interested parties across the world – which is excellent progress for a mere six-year-old! Of course, there remains a great deal of work to be done. We are constantly striving to increase our submissions, which, in turn, increases the need for peer reviewers who freely donate their time to perform a vital quality assurance role. Many of our editorial board members are leaders in the field who, despite their own pressing schedules, undertake reviews when we call on them, for which we are enormously grateful. They understand that, without rigorous peer review, our journal could not meet its stringent accreditation requirements and quality standards, either

locally or internationally. We remain indebted, too, to past and prospective authors for submitting their manuscripts and being willing to take them through the necessary, often frustrating, processes. In this issue, as in our previous publications, the results of their labours can be appreciated.

We open our 2023 issue with **Mulaudzi, Teis and Seleke's** 'Problem-based learning for shifting TVET Electrical Engineering lecturers' practices: A scoping review'. Whereas problem-based learning as a learner-centred approach is not new to education, more generally, TVET (technical and vocational education and training) classrooms have favoured a more didactic teaching style. The authors contribute to practitioner understandings by undertaking a literature review that scopes research and scholarship on problem-based learning in an attempt to tease out essential components that might help Engineering lecturers to foster the problem-solving capacities among their students – a teaching and learning strategy considered essential to the field of Engineering.

What follows is a second theory-focused article entitled 'Vocational pedagogy in Automotive Mechanics: Ontological dimensions and cognitive load theory implications' by **Hugo and Mokoene**. In this contribution, the authors stretch our ontological perspectives relating to vocational pedagogy by causing us to ponder on 'mereology' and 'process ontology', two traditions that might not ordinarily be associated with the science underpinning Automotive Mechanics. Through their qualitative case study of vocational training in Eswatini, their research attempts to draw connections between these various ontological traditions and show how part-whole relationships, often unknowingly, inform lecturers' vocational pedagogy. In addition, they draw on cognitive load theory to explain the mechanisms that students of Automotive Mechanics use to make sense of the volume and complexity of the information they are required to process, absorb and recall. Through creating linkages among what may seem to be somewhat obscure theories, they show how an appreciation of such relationships could lead to more intentional teaching strategies that ultimately benefit trainees.

Continuing with the topic of learning in the engineering trades, in their article, 'Beyond the trade test: Using the COMET Model to build occupational competence', **Brown and Papier** explore the notion of occupational competence, its measurement and what is needed to achieve it. Competence has been a much-debated concept internationally, with many eminent scholars contributing to its definition and theorisation (see the references in the article to, for instance, Weinert, 2001; Winther & Achtenhagen, 2009; Mulder, 2017). Studies abroad and to a more limited extent in South Africa have shown that the use of the COMET Model is appropriate not only to the fine-grained measurement of competence, but also for development if its principles are applied in the teaching, learning and assessment regime. The present authors report on research in which an alternative 'COMET'-inspired methodology was used to assess artisan candidates in two engineering trades, and as a comparative learning approach to preparing candidates for integrated work processes. Their findings were promising in that candidates undertaking the COMET-based learning and assessments showed improved levels of competence and also the emergence of a 'vocational identity'

compared with candidates with those levels of competence on only the traditional pathway to trade-test preparation. Whereas the focus in their research was on determining and enhancing candidates' occupational competence levels, it was noted that the application of COMET as a conceptual model could help artisan trainers and assessors to expand their teaching and assessment repertoire to take into account the many dimensions of competence that candidates could, and should, aspire to achieve.

Moving to the theme of vocational lecturer development, **Holler, Brändle and Zinn** report on research that investigated the self-assessment of the digital competencies of TVET college lecturers and what they would need in order to employ technology effectively in their teaching. The research was part of a partnership project between the South African DHET and the Federal Ministry for Education and Research in Germany for the training of TVET lecturers in Mechanical and Electrical Engineering. The need for the research is justified in the light of the emphasis in South African policies on the critical nature of digital competencies for prospective employment in addition to the competency domains specified for qualified TVET college lecturers. The focus was therefore on the needs of in-service college lecturers that could inform the design of a training programme to improve lecturers' digital competencies and their integration of technologies in their classrooms. In their article 'How do South African TVET lecturers rate their digital competencies, and what is their need for training for a digital transformation in the South African TVET sector?', the authors use the technological pedagogical content knowledge (TPACK) model to survey a sample of lecturers and obtain feedback on the overlapping domains of their pedagogical content knowledge (PCK), technological content knowledge (TCK) and technological pedagogical knowledge (TPK). As might have been anticipated, perhaps, the findings have shown that TVET lecturers are indeed in need of support regarding the ways in which to incorporate technology into their lessons, and also regarding the content with which to do so.

Coincidentally in this issue of JOVACET, there is a second article dealing with TPACK in vocational education, albeit in a neighbouring African country; it is entitled 'Instructors' perspectives of TPACK in a vocational training classroom in Namibia', by **Nepembe and Simuja**. Extracting the findings from a longitudinal study on vocational instructors' development of TPACK, the authors in this article report on the ways in which instructors viewed the integration of technology into their teaching, and what informed their approach. As in the article referred to above, the constructs of TPACK were used to organise and analyse the data obtained through questionnaires and qualitative interviews. The responses from the vocational instructors indicated that they certainly appreciated the importance of incorporating technology into their teaching and that this could enhance the learning experiences of their students; but their responses also revealed that they had had limited exposure to examples of such teaching in reality. Furthermore, while the instructors understood how to use some of the technologies themselves, they were unsure about how they could employ their own knowledge of the technology in teaching their students. This indicated the importance of the complex relationship between technology, pedagogy and content knowledge that the authors point to in their findings.

Changing tack somewhat, the article by **Bester**, ‘Exploring inclusive leadership and strategic visioning as pathways to well-being in TVET colleges’, focuses on TVET college leaders: more specifically, the ways in which leadership policies and practices promote or inhibit staff and student well-being at their colleges. In a case study that targeted college leaders who were also student participants in a postgraduate leadership development programme, data were generated by a survey of college well-being policies and practices and the factors that enabled or impeded them. While overarching policies were in evidence at most colleges, these were inconsistently applied and appeared to be largely absent in strategic planning with regard to the promotion of well-being, which played out in the manifestation of staff burnout and fatigue, stress-related issues, and so on. As had been noted in other studies referred to by the author, college leaders were often preoccupied with student matters – for example, those that resulted in public scrutiny such as protests in recent times – resulting in staff problems being put on the back burner. Staff perceptions in this instance were therefore that student well-being was prioritised over that of staff, however unintended that may have been on the part of college leaders. The author recognises, however, that committing to an inclusive policy which ‘create(s) a culture of well-being that is embedded in a college’s everyday activities – and which is embraced by all’ is a complex matter that requires purposive and strategic planning.

**Aploon-Zokufa and Needham** shift our attention to the problem of articulation between TVET and university qualifications, in particular that of mature adult women who are early childhood development (ECD) practitioners. The problem manifests itself in what has been a marginalised sector of education and training in South Africa, that is, the education domain of ECD and the formal certification of ECD practitioners/educators/facilitators (also known as teachers in other contexts). With its history of inequality and racial discrimination, in this sphere formal qualification opportunities have been limited for many ECD practitioners in disadvantaged communities. These are mostly women without school exit certificates or without university teaching qualifications. ECD practitioners do, however, have access to TVET college ECD certificates located at Levels 4 (matric equivalent level) and Level 5 (equivalent to year one at university); however, these college certificates do not enable easy access into the bachelor’s degree in ECD at university, except through negotiated articulation arrangements. The topic of the article is therefore adequately explained in its title: ‘Recognition of prior learning practices at post-school institutions and the effect of such practices on the learning pathways into higher education of mature women who are early childhood development practitioners: A capabilities approach’. Recognition of prior learning (RPL) is often the only route into a university ECD degree but, in addition to the systemic barriers, mature women face a host of additional impediments to their aspirations that are elaborated on in the article. The lens offered by capabilities theory therefore proved to be a fitting vehicle for exploring and analysing the experiences of mature ECD women as they navigated/did not navigate pathways into higher education qualifications.

We close our 2023 issue with a thoughtful and somewhat hard-hitting article by **Moll** entitled ‘A critique of andragogy in the South African TVET context’. Here, the author argues that, in the South African context, the term ‘andragogy’, which has been used to describe the

teaching and learning of adults, is not appropriate to a modern vocational context. This is a term relating to TVET that, as an Education scholar, he has often been questioned about. He holds that andragogy is not a benign term in that it has, in his view, sinister connotations, being ‘culturally biased ... because it is based on white, male, middle-class norms of the 1960s’; and that ‘its assumptions about adult learning tend to marginalise others on the basis of race, gender, and cultural difference’. Moll proceeds to explain this viewpoint by tracing the history of fundamental pedagogics in South Africa’s apartheid ideology-based theorisation of education and its locating of andragogy within that theorisation. Readers, especially those outside of the South African context, will no doubt be interested in the strong standpoint taken by Moll and his assertion that a seemingly benevolent expression such as ‘andragogy’ may have been permeated and tainted by perverse philosophies and ideations. As with all our published articles, we encourage similarly well-argued pieces that may wish to challenge and provide further intellectual stimulation on this or any other matters that have been embraced by our authors.

Finally, we hope that this JOVACET, Volume 6, Issue 1 of 2023 finds you well and leaves you with many questions that you may wish to research further and write about for the benefit of your peers in the TVET sector. We look forward to your contributions!