

## THE EFFECTS OF TEACHER EDUCATION ON TECHNICAL VOCATIONAL EDUCATION AND TRAINING COLLEGE LECTURERS

**Molefi Motsoeneng**

*Scholarship of Teaching and Learning (SoTL), Central University of Technology,  
Free State (South Africa)*

### Abstract

The aim of this paper is to analyse teacher training with regard to Content Knowledge (CK) and Pedagogical Content Knowledge (PCK) by universities in South Africa. The universities' training of teachers does not cater for Technical Vocational Education and Training (TVET) college lecturers, who are thus required to teach courses in which they are not competent. At the beginning of democracy in South Africa, reform of teacher education was initiated. This reform was followed by a closure of the teacher training colleges which therefore shifted the responsibility for training of future teachers to the universities. Minimum Requirements for Teacher Education Qualifications (MRTEQ) were adopted as the policy document for admission into the teaching profession. The reforms, however, excluded the training of (TVET) lecturers. TVET College lecturer training has not changed and most of the problems regarding lack of Content Knowledge (CK), PCK, and Subject Matter Knowledge (SMK) have not been attended to. This has negatively influenced the quality of lecturers at TVET colleges and resulted in a poor quality of TVET education. Semi-structured interviews collected the data regarding training in relation to courses currently being taught, as well as measuring CK, PCK, and SMK in those courses. The findings revealed that the lecturers were not competent in the courses they taught. Thus, the study strongly recommends more teacher training of the continuous professional development.

**Keywords:** *TVET, CK, PCK, SMK, MRTEQ.*

---

### 1. Introduction

This paper is a theoretical contribution to the understanding of how lack of training has affected teaching in the TVET college sector. Lecturers in the sector do not receive training in the specific courses offered at the colleges. The minimum requirement of teacher education has impacted negatively on lecturers at these institutions. It is, for example, a requirement to have a teaching qualification in order to teach engineering courses at colleges and so lecturers who have a trade, but do not have a teaching qualification, cannot not enter the profession. A particular challenge for lecturers is that they have a poor understanding of the subject. Teachers' capacity to recognize prevalent misconceptions underlying their students' work and to analyse the trade-offs between various instructional approaches is hampered by a lack of content expertise (Daehler, Heller, and Wong, 2015).

This article stresses how the lack of PCK impacts negatively on students' success. It leaves them with poor PCK and CK, basic requirements for them to carry out effective teaching (Motsoeneng and Mahlomaholo, 2015). The DBE and DHET (2011:4) point out that although "...a wide variety of factors interact to impact on the quality of the education system in South Africa, teachers' poor subject matter knowledge and pedagogical content knowledge are important contributors". A lecturer's knowledge and understanding of the content to be taught is a prerequisite of effective teaching (Janík, Najvar, Slavík and Trna, 2009). Technical Vocational Education and Training lecturers are, however, expected to teach subjects in which were not trained, thus defeating the Minimum Requirement of Teacher Qualification (MRTEQ) that the teacher must have "sound subject knowledge" and "know how to teach their subject(s) and how to select, determine the sequence and pace of content in accordance with both subject and student's needs", and must "know who their students are and how they learn" (DHET, 2011: 53). Teachers with a high level of PCK are better able to spot student errors and misunderstandings, employ instructional strategies to handle problems that develop throughout the teaching process, and provide lessons that are appropriate for students' cognitive abilities (Korkmaz & Şahin, 2020).

The Integrated Strategic Planning Framework for Teacher Education and Development in South Africa 2011-2025 identifies several factors, one of which is teacher preparation, that focus specifically on subject matter knowledge and pedagogical content knowledge (DBE and DHET, 2011). This involves being well-grounded in the phase, subject, discipline, or practice's knowledge, skills, values, principles, methods, and processes. Different approaches to teaching and learning (and, if necessary, research and management) should be familiar to the educator, as well as how to apply them in ways that are acceptable for the students and the situation. The lecture must possess a thorough understanding of specialisation (DHET, 2011:49).

## 2. Discussion

The Minimum Requirements for Teacher Education Qualifications (henceforth, MRTEQ) (2011:9), requires teacher education offered at universities to “address critical challenges facing education in South Africa today – especially the poor content and conceptual knowledge found amongst lecturers, and the legacies of apartheid”. Contrary to this policy, the TVET sector of lecturer training is neglected by the universities – there is no effort to train these lecturers.

The qualifications, educational backgrounds, and experiences of TVET college lecturers in South Africa differ (DHET, 2015). TVET lecturers possess qualification not relevant to the sector needs. They are not qualified teachers as it required by the authorities to be permanent employees. This means cannot register with the South African Council for Educators (SACE), which is a condition for employment with the DHET. The senior lecturers have industrial and professional expertise as artisans, trainers, and facilitators. Although the new entrants in the sector are qualified to teach but lack the practical experience. They are unable to bridge the theory to practice. The policy thus rejects a “purely skills-based approach [that relies on] . . . evidence of demonstrable outcomes as measures of success, without paying attention as to how knowledge must underpin these skills for them to impact effectively on learning” (DHET, 2011:7).

In 2013, the government established a framework for new certifications, with the purpose of assisting lecturers to become qualified educators in addition to their professional credentials. In response, Warrington (2016) contends that, if colleges and lecturers placed a higher emphasis on education rather than work experience, TVET institutions' connections with industry (the workplace) might suffer. The lecture who join the system as artisan do not have an interest in obtaining teaching qualification.

Even though the curriculums are student-centred, lecturers are the ones who will personally implement those curriculums at every class level (Ömer Şahin, Burçin Gökkurt and Yasin Soylu, 2016). In this regard, teachers require knowledge that incorporates interpreting students' course-thoughts by using their own content knowledge and organizing their teaching in line with this. They have a responsibility in teaching the subject that is difficult for students to understand. As a result, the teacher's occupational expertise has a direct impact on the quality of learning and teaching processes.

## 3. Conclusion

The study concludes that policymakers and the DHET, and Sector Education and Training Authority (SETAs) should start re-looking at the Work Integrated Learning (WIL) initiative, how learning from practice can be factored in as a policy directive, and how necessary support and provision can be made available for this crucial component of WIL as a means to improve TVET colleges as learning institutions. In addition, a system should be put in place to retrain TVET College lecturers, specifically those who have extensive industry experience, but lack PCK. Teacher training should be aligned to courses that are offered at TVET colleges. In addition to management courses, students who have industry experience should be offered a qualification in teaching. The nature of TVET lecturer learning involves theory and practice, as well as the new technology which has been introduced lately and has to be mastered. Integrated learning should be made compulsory for all academic staff and should include exposure to the life situation.

## 4. Implications

This is a theoretical paper that reveals negative implications brought about by the quality of teaching in TVET Colleges which are the very ones expected to accelerate provision of skills to the youth of this country.

## 5. Recommendations

My recommendation for future research is to look into the nature of TVET college teachers' training and support before the curriculum is implemented in the classroom. More research is needed to determine what kind of training and support TVET college teachers will benefit from in order to successfully implement that curriculum. The role of college administrations in aiding curriculum implementation could also be studied.

### References

- Cite, S., Lee, E., Menon, D., & Hanuscin, D.L. (2017) Learning from Rookie Mistakes: Critical Incidents in Developing Pedagogical Content Knowledge for Teaching Science to Teachers. *Studying Teacher Education*, 13(3): 275-293, DOI: 10.1080/17425964.2017.1366306
- Daehler, K. R., Heller, J. I., & Wong, N. (2015). Supporting growth of pedagogical content knowledge in science. In A. Berry, P. Friedrichsen, & J. Loughran (Eds.), *Re-examining pedagogical content knowledge in science education* (pp. 45–59). London: Routledge.
- Department of Higher Education and Training (DHET). 2011. Minimum requirements for teacher education qualifications. Pretoria.
- Department of Higher Education and Training (DHET). (2015). *Statistics on Post-School Education and Training in South Africa: 2013*.
- Department of Higher Education and Training (DHET). (2011). *Integrated strategic planning framework for teacher education and development in South Africa 2011- 2025*. Pretoria: Department of Basic Education & Department of Higher Education and Training.
- Janík, T, Najvar, P., Slavík, J. & Trna, J. 2009. On the Dynamic Nature of Physics Teachers' Pedagogical Content Knowledge. *Orbis Scholae*, 3 (2): 47–62.
- Jin, H., Shin, H. J, Johnson, M. E., Kim, J., & Anderson, C. W. (2015). Developing learning Progression-Based Teacher Knowledge Measures. *Journal of Research in Science Teaching*, 52, 1269-1295
- Korkmaz, H.I. & Şahin, Ö. 2020. Preservice Preschool Teachers' Pedagogical Content Knowledge on Geometric Shapes in Terms of Children's Mistakes. *Journal of Research in Childhood Education*. *Journal of research in childhood Education*, 34(3): 385-405. <https://doi.org/10.1080/02568543.2019.1701150>
- Motsoeneng, M. & Mahlomaholo, S. 2015. Entrepreneurship education for further education and training college lecturers. ICIE 2015 3rd International Conference on innovation and Entrepreneurship: ICIE 2015, 120.
- Şahin, Ö., Gökkurt, B., & Soylu, Y. 2016. Examining prospective mathematics teachers' pedagogical content knowledge on fractions in terms of students' mistakes, *International Journal of Mathematical Education in Science and Technology*, 47(4): 531-551, DOI: 10.1080/0020739X.2015.1092178