
Work-integrated learning for TVET lecturers: Articulating industry and college practices

André van der Bijl

Cape Peninsula University of Technology

Vanessa Taylor

Swiss-South African Cooperation Initiative

ABSTRACT

South Africa's policy frameworks for technical and vocational education and training (TVET) and adult and continuing education and training (ACET) lecturers require that the work-integrated learning (WIL) element of programmes include WIL in appropriate 'industry settings' to ensure that TVET lecturers develop expertise in both teaching their subjects and preparing their students for the demands of the workplace. Whereas the country's education faculties have a strongly developed practice of school-based WIL, none currently offers a formal programme that includes WIL in industry. International literature on teacher placement in industry thus largely concerns the in-service placement of practising educators to develop and update their industry knowledge and experience. In South Africa, some institutions have embarked on projects that have developed knowledge of industry WIL for TVET college lecturers, one of these being the SSACI-EDTP SETA WIL for Lecturers Project, through which more than 400 college lecturers have completed a work placement, conducted between 2014 and 2017. It provides a significant amount of information on the possible nature and implementation of the industry-based WIL component of the lecturer qualifications currently being developed. Using the Shulman and Shulman (2004) framework on teacher learning, this article analyses the project. It seeks to deepen the understanding of the nature of lecturer learning through WIL and also to contribute to the national, African and broader international discourse on the placement in industry of vocational educators and articulation between the worlds of work and education.

KEYWORDS

TVET; work-integrated learning; lecturer qualifications; teacher placement in industry; communities of practice

Introduction

The purpose of vocational education is primarily to prepare young people for work, and this places unique demands on lecturers in vocational programmes. They need to be subject experts, they need to have current knowledge and experience of their subject's application in relevant industries, and they need teaching expertise. Ultimately, they are expected to bridge the gap between education and work in the teaching of their subject. The need to have industry knowledge and expertise is a primary distinguishing feature between school teachers and TVET college lecturers and this feature influences the nature of the training they need in order to teach effectively in a college context.

Between 2011 and 2014, the South African Department of Higher Education and Training (DHET), the state department responsible for teacher education polices, promulgated three policy frameworks: one (RSA, 2011) was promulgated for school teachers, another (RSA, 2013) for TVET colleges and a third (RSA, 2014b) for the newly developed community education and training (CET) colleges. In all three policy frameworks, work-integrated learning (WIL) is an element that serves as an underlying approach to programme construction; it also describes the workplace-based element of all programmes. The WIL element in the policy framework for school teachers involves spending time at a school, colloquially known as teaching practice. The policy frameworks for TVET and CET colleges, however, require both teaching practice and WIL experience at a workplace in which a lecturer's specialisation is practised. Trainee catering lecturers, for example, are expected to spend time in the catering industry, motor mechanics in the motor industry and hair-care lecturers in a hair salon.

The aim of what has become known as industry-based WIL for lecturers, according to international and South African research, is to improve vocational educators' teaching skills by developing their industry knowledge and experience (Van der Bijl & Taylor, 2016). Research on the placement in industry of vocational educators tends either to provide arguments in favour of industry placements or is framed within models based on Lave and Wenger's (1991) communities of practice models. The shortcoming of the research base on reasons for industry-based WIL and on community of practice models is that it is limited to one dimension of learning: learning either at an individual level or within a community of practice.

This article sets out to develop an understanding of the possible nature, scope and implementation of the industry WIL component of the professional qualifications of the new TVET college lecturer. It provides an analysis of lecturer learning through industry WIL using the model developed by Shulman and Shulman (2004). This highly cited model provides a useful framework for analysing the nature of the education practitioner learning at an individual and a community of practice level; it also provides insights into the policy and resource contributions needed to sustain this learning. The data for the analysis in this article are drawn from the formative and summative evaluations of the ETDP SETA-SSACI WIL for Lecturers Project

(Smith, 2016; 2017),¹ portfolios submitted by participating lecturers and lecturer feedback at SSACI training sessions.

Literature review

Policy demands for industry-based practice for TVET lecturers in South Africa

Following the first fully democratic election in 1994, the government was faced not only with the challenge of removing discriminatory practices encapsulated in the country's legislation, but also with creating a single legislative framework out of an assortment of frameworks developed by the apartheid state. In 2000, the Norms and Standards for Educators (RSA, 2000) was promulgated as the framework for teacher education qualifications. The framework not only incorporated the differing requirements of education departments that had been incorporated into the single Department of Education, but also developed a single series of qualification names, replacing the diverse naming conventions in use at the time.

From within the college sector, a motivation developed for a separate framework for college lecturers, which resulted in the circulation of the Draft National Policy Framework for Lecturer Qualifications and Development in Further Education and Training Colleges in South Africa (RSA, 2008a). By 2008, technical colleges had undergone a process in which 152 technical colleges, dispersed across more than 250 campuses, were merged into 50 further education and training (FET) colleges (RSA, 2008a:5).

The promulgation of the draft framework for college lecturers was, however, withheld pending finalisation of the national qualifications framework and, later, the splitting of the Department of Education into two departments: the Department of Basic Education (DBE) and the Department of Higher Education and Training (DHET). By the time the framework for college lecturers was promulgated in 2013 (RSA, 2013), FET colleges had been renamed technical and vocational education and training (TVET) colleges and another form of higher education, namely community education and training (CET) colleges, had been established. Acceptance of the need for different policy frameworks for college lecturers and school teachers resulted in the replacement of the norms and standards for educators of 2000 with three qualifications frameworks, namely:

- The policy on the minimum requirements for teacher education qualifications, promulgated in 2011.
- The policy on professional qualifications for lecturers in technical and vocational education and training colleges, promulgated in 2013.
- The policy on minimum requirements for programmes leading to qualifications for educators and lecturers in adult and community education and training colleges, promulgated in 2014.

1 The project is a collaboration between the Education and Training Development Practices Sector Education and Training Authority (ETDP SETA) and the Swiss-South African Cooperation Initiative (SSACI).

WIL in all three policy frameworks (RSA, 2011:10; 2013:10; 2014b:11–12) is regarded as one of the forms of learning and is equated to practical learning. In addition to regarding WIL as one of the forms of learning that underpins teacher education qualifications, the policy frameworks (RSA, 2011:15; 2013:19; 2014b:13–14) regard WIL as the ‘workplace-based component’ of the qualifications. The policy framework for school teachers regards WIL as the ‘school experience component’ of a teacher education programme. The policy framework for TVET lecturers (RSA, 2013:19), in contrast, notes:

The learning-in-practice workplace-based component of WIL for TVET lecturer qualifications takes place in two types of settings: in teaching settings (eg classrooms/lecture rooms/laboratories/college workshops) and in industry-based settings (eg factory, work sites, offices, etc.).

The policy framework for CET lecturers (RSA, 2014b:13–14) echoes that of the TVET policy, indicating that WIL ‘can take place in two types of settings’. ‘It is the responsibility of the institution offering the qualification’, the TVET policy (RSA, 2013:19) continues:

[T]o arrange WIL opportunities for students, in line with the requirements of the qualification as described in this policy. The workplace-based component of WIL must be structured, supervised and integrated into the learning programme, spread across the learning programme and formally assessed.

Other than requiring that, providers of teacher education, all university schools and faculties of education arrange for supervised, structured learning opportunities. The policy is silent on the nature of WIL in the qualifications. While education faculties have a strongly developed practice of school-based WIL, no faculty has, to date, offered a formal programme including WIL that takes place in what the TVET policy framework calls ‘industry-based settings’.

Identifying the nature and scope of WIL within industry settings is crucial for education faculties because they are the official providers of teacher education qualifications for public institutions of education and training.

Literature on how TVET educators learn from industry-based practice

WIL is one of a number of terms to describe an education experience largely based on experiential learning theory devised by Kolb (1984, cited in Taylor, 2013). Kolb’s experiential learning cycle, attributed to Dewey’s work, involves a cycle of learning which includes experience, followed by reflection on it, the making of generalisations and applying learning back into practice. WIL has been applied in a wide variety of vocationally orientated education settings, including engineering, business and teacher education. Internationally, vocational education and training (VET) teachers and trainers are expected to have current industry knowledge and experience, but industry WIL is usually not a component of initial VET teacher training (RSA, 2008b; Papier, 2008). Instead, prior industry experience is a qualification entry

requirement and qualified VET educators are expected to remain abreast of current industry trends in various ways, including industry placement, as part of their continuing professional development (Clayton, 2012; Ireland, Golden & Speilhofer, 2002). The international literature thus largely concerns the in-service placement of school and VET teachers in industry, which has been adopted in various ways in different countries.

Around the turn of the century, the first teacher professional development placements (PDP), primarily for 'science and technology teachers and teachers of vocational courses', were made in the United Kingdom. Programmes such as PDPs date back to the promulgation of the *Learning to succeed* White Paper in 1999 (Ireland et al., 2002:2–3) and are associated with the development of real-life competencies perceived to be required for teaching vocational content. In Australia, the teacher industry placement (TIP) scheme has been in existence for quite some time and, as a result, has been the subject of analysis (see Bergami, Schüller & Cheok, 2009:53; Schüller & Bergami, 2008:201; Bergami, Schüller & Vojtko, 2010:110–112; Schüller & Bergami, 2011:136–137).

The model produced from the analyses by Bergami and his associates provides an indication of the nature and role of industry-based WIL in the development of TVET lecturer competencies, and, as a result, the articulation between industry-based learning and classroom practice. Bergami's model emanates from work within the Australian VET system's TIPS scheme and is framed within the communities of practice model conceived by Lave and Wenger (1991, cited in Schüller & Bergami, 2011:135). Citing Lave and Wenger (1991), Schüller and Bergami (2006:18) describe a community of practice 'as a group of individuals who share a common interest in their activities within a community'. Different levels of participation are possible in a community of practice, but for it to be successful, 'its membership must have a degree of commitment and behave in a mutually respectful and trusting manner' (Mittendorf et al., 2006 cited in Schüller & Bergami, 2006:18).

Bergami's model (Schüller & Bergami, 2011:134) argues that a VET teacher's industry placement involves the development of industry-based skills, which is an integral part of any industry-based WIL experience. In addition to learning industry-based skills, Bergami argues, VET teachers develop theory, take the theory back to the classroom and lay the foundations for the further implementation of theory into practice.

Industry placements, Bergami and Schüller (2011:135–136) argue, result in the formation of relationships among the 'key stakeholders', which include 'the teacher, the educational institution, the host industry and students'. One of the social derivatives of this form of industry placement is the development of communities of practice and networks, which has positive results for all involved.

Shulman and Shulman (2004) argue that the development of communities of practice is but one of three levels of learning that new teachers experience. According to Shulman and Shulman (2004:268), learning occurs at a number of levels, namely at individual, community and policy implementation levels.

For individual analysis and learning to occur, according to Shulman and Schulman (2004: 260–261), a teacher must be ‘ready to teach ... [and have] developed a vision of the particular kind of student, learning and understanding’ of the process of learning in disciplinary and interdisciplinary terms and of a classroom in which a range of activities occurs. This is learning at a level of individual activity, reflection and analysis. Learning at this level, according to Shulman and Schulman (2004:260–264), requires a person who is ready to teach, willing and motivated, able to understand what must be taught and how to teach it, able to engage in appropriate performance and able to learn from experience through reflection.

Communities of practice, Shulman and Schulman (2004:265–267) reiterate, share visions, commitments, knowledge and sets of rituals and practice. For novice teachers this is learning at a community level. Shulman and Schulman (2004:265) note, with reference to school-based learning, that a community emanates from the existence of ‘one or more groups’. They add:

Accomplished learning and teaching depend on the provision of adequate resources such as mentoring staff development, curriculum and associated materials, instruments and models of assessment, additional personnel, computers, physical space for groupings and rotations, etc. (Shulman & Schulman, 2004:267).

This, they argue, is the provision of metaphoric *capital*, which is learning at a level of policy implementation. The forms of capital identified by Shulman and Schulman (2004:267–268) are curricular, cultural or moral, technical and venture capital.

The articulation between industry-based learning and its implementation in practice is clearly, therefore, not merely an articulation between communities of practice, as described by the Bergami-based cases. Indeed, articulation occurs not only between communities, but also at the level of individual learning ability, motivation and understanding, and at the level of policy implementation and resource allocation.

Novice and trainee TVET lecturers undoubtedly need to be ready, motivated and able to teach. The policy discussed so far (RSA, 2013; 2014b) and the argument surrounding Bergami’s model clearly express the view that the ability, readiness and motivation of novice and trainee lecturers can be enhanced through industry-based WIL placements. However, industry placements could complicate such readiness, ability and motivation: first, whereas school teachers and college lecturers on education-based WIL exercises may encounter relatively homogenous communities of practice, TVET students are likely to be confronted with a divergent variety of types of community of practice. An education student with a hospitality specialisation assigned to the kitchen of a fast-food outlet, for instance, is likely to encounter a type of community of practice entirely different from one assigned to the kitchen of a five-star hotel. Each community is therefore likely to influence education students differently. Secondly, exposure to the resources and activity systems in use in industry compared with exposure to those within TVET colleges could influence lecturers’ willingness, motivation and teaching readiness (Van der Bijl & Taylor, 2016:106).

The work by Shulman and Shulman (2004) is widely cited in research related to teacher identity and teacher learning. Whereas most articles relate to First World school-level education, some, such as Westbrook et al. (2013), deal with pedagogy, curriculum, teaching practices and teacher education in developing countries, and Evans (2013) provides an analysis of research evidence on assessment feedback in higher education. While work based on models related to communities of practice clearly illustrates the nature of industry-based WIL for lecturers, Shulman and Shulman (2004) provide a framework within which industry-based learning and knowledge articulation of teachers can be identified.

While the provision of industry-based WIL is a new feature of the initial professional qualifications for South African TVET and ACET lecturers, there is already some practice of lecturers employed by TVET colleges visiting industry for workplace exposure. An analysis of this practice provides useful information on how industry placements for lecturers can support the articulation between industry and college practice. It also sheds light on the possible nature and content of this element in the new professional qualifications being developed. Institutions involved in this work include SSACI, the ETDP SETA and the Cape Peninsula University of Technology (CPUT) research chair for WIL and RLP.

Methodology

This article provides an analysis of the WIL for Lecturers Project, which was funded by the ETDP SETA and implemented by SSACI between 2014 and 2016 at 28 colleges nationwide. Through the project, more than 400 lecturers, teaching a wide range of college programmes, completed SSACI's in-service WIL programme. The participants had to complete five days of industry exposure and to incorporate their workplace learning into their teaching. They also submitted portfolios on their industry learning and their integration of it into their classroom practice.

The data used in the discussion that follows are primarily drawn from the summative evaluation of the project (Smith, 2017) and the lecturer portfolios. The discussion also includes an analysis of the findings of the formative evaluation (Smith, 2016) and feedback provided by lecturers at SSACI training sessions.

The summative evaluation of the project included two online questionnaires, one for college coordinators (returned by 23) and one for participating lecturers (returned by 211). The questionnaires included a number of positively worded indicator statements organised into themes or dimensions which included: motivation to do WIL, placement in the workplace, benefits of the lecturers' WIL, integration into the classroom, and WIL and college systems. The survey respondents had to rate the statements in a dimension on a five-point scale based on the extent to which they agreed or disagreed with them. Statement scores were then converted to a percentage, as in Table 1. A high percentage for a statement indicated a positive perception of it.

TABLE 1: Statement ratings on a five-point scale converted to a percentage

Response	Strongly disagree (very poor)	Disagree (poor)	Neither agree nor disagree (neither good nor bad)	Agree (good)	Strongly agree (excellent)
Percentage	0%	25%	50%	75%	100%

The demographics of academic staff who returned the lecturer questionnaire are included in Table 2 (Smith, 2017:40–41).

TABLE 2: Demographics of academic staff who returned the questionnaire

Gender	Male: 53% Female: 47%
Occupation	Lecturers and senior lecturers: 87% Heads of department: 9% Other staff categories: 4%
Prior industry experience	61%
Lecturing experience	More than ten years' experience: 33% Less than two years' experience: 2%
Programmes taught	Engineering: 37% Business: 37% Hospitality, Tourism and Transport: 6% IT, Primary Health and Primary Agriculture: 10% Fundamentals (Mathematics, Language and Life Orientation): 10%

The summative evaluation also included individual lecturer interviews. From these, nine vignettes that showcased the WIL experience of lecturers teaching a variety of programmes were prepared and included in the evaluation report. The portfolios analysed for this article were submitted by these nine lecturers. This provided an opportunity to triangulate the data provided by the lecturers interviewed with the data in their portfolios and with the feedback provided by the larger group of lecturers who had completed the evaluation questionnaire.

Content-based thematic analysis was used to contextualise the interpretation, as was the coding and labelling of data. The data were coded by means of a constant comparative method associated with Maykut and Morehouse (1994:126); analysed by means of thematic data analysis associated with Howitt and Cramer (2007:335); then compared, critically investigated and represented by thematic grouping (Cohen, Manion & Morrison, 2007:141).

Schulman and Schulman's (2004) work was used as a focus point for identifying themes. From lecturer experiences, evidence related to learning at an individual level was sought, as was evidence of interaction with communities of practice and policy implications that emanated from the experiences.

Findings on lecturer learning through WIL and the articulation between industry and college practice

The findings below have been analysed and discussed through the lens, respectively, of Shulman and Shulman's (2004) individual, community of practice, and policy and capital contribution factors.

Individual

Individual factors noted by Shulman and Shulman (2004) include the motivation of lecturers, what they wanted or expected to learn, what they actually learned, how they incorporated this into their teaching practice and their reflection on this.

Factors reported by lecturers that motivated their involvement in WIL placements include:

- It was a college requirement.
- It was an opportunity to develop themselves professionally.
- It was an opportunity to possibly improve their qualifications.

'Professional development' was the strongest motivator and achieved a mean positivity rating of 85% by lecturers (Smith, 2017:45). Most lecturers (62%) who participated in the programme had been selected by their colleges to do WIL. The rest chose to participate, with 26% volunteering and the remaining 12% being selected by their colleges, but given a choice to participate or not. The evaluation found that lecturers who chose to do WIL were slightly more motivated than those selected to do it (Smith, 2017:55–56).

Lecturers reported the following learning objectives for their WIL placement:

- to broaden industry knowledge and learn about current practices, technology and trends;
- to observe the practical application of theory taught;
- to gain practical experience;
- to be in a better position to respond to questions from students and;
- to bridge the gap between the college curriculum and industry requirements.

Lecturers who were interviewed during the evaluation elaborated on their reasons for doing WIL. One said:

Most of us come straight from university. We didn't go into industry. I moved straight into lecturing so basically I am teaching what I was taught. I am not teaching something that I have done ... WIL is actually taking the knowledge that I have learned and putting it into practice (Smith, 2017:62).

Another lecturer noted:

Sometimes when you teach you get rusty and you are still working from old information that you have. You miss out on the current events in industry (Smith, 2017:58).

The reason given by a third lecturer was:

WIL is a big bridge between the company side and college side. They [college students] must know both sides; [WIL for lecturers] can help us from our side to change things curriculum-wise, and to inform students what really happens in the workplace (Smith, 2017:73).

Actual learning while on WIL placements largely correlated with lecturer expectations, although it did not uniformly match expectations. Overall, lecturers were positive about their learning during WIL, which is evident in their rating of the following evaluation statements (Smith, 2017:47) in Table 3:

TABLE 3: Lecturers' learning during WIL

Statement	Mean score (%)
Your/lecturers' knowledge of subject areas has been updated	79
You/lecturers have identified gaps between the curriculum and industry practice	83
You/lecturers feel better equipped to deal with issues students face	79
You/lecturers have a better understanding of employer requirements	83
You/lecturers have received fresh insights into different types of job available	78

It is clear that participation in WIL enhanced the lecturers' knowledge of their subject and its application in industry, and that those who engaged in workplace activities enhanced their skills and experience. The lecturers also learned about employer requirements for different jobs and about changes in their industry. In addition, they learned about the structure, culture and rules of the workplaces they visited and the soft skills and attitudes that are important. They also identified differences between the curriculum and industry practice.

Finally, through participating in WIL, the lecturers developed an understanding of the value of WIL for college students and how it could be structured. The lecturers developed an understanding of the support students need in order to obtain suitable placements and benefit from them. One lecturer reported that she was able to encourage and guide students who had to do WIL by sharing her experience with them. She said:

I told them that I felt exactly the same way. If I hadn't done my WIL, I would not have been able to relate to the students or guide them in their next steps. It broadened my vision totally of what they are facing (Smith, 2017:69).

The evaluation also found that WIL had a significant impact on lecturers' teaching practice (Smith, 2017:47–48). This finding was supported by the portfolios reviewed. Overall, the dimension 'integration into the classroom' was rated the highest of all the dimensions by lecturers in the survey, attaining a mean score of 79%. Individual indicator statements within this dimension achieved the scores (Smith, 2017:48) in Table 4.

TABLE 4: Indicator statements with regard to 'integration into the classroom'

Statement	Mean score (%)
You/lecturers are able to explain concepts better	80
You/lecturers use materials obtained on WIL (brochures, manuals, videos, etc.)	76
You/lecturers are able to give more relevant examples to students	83
You/lecturers have introduced changes in your/their teaching as a result of the lecturer WIL experience	77

In their portfolios and interviews, the lecturers indicated that they had informed students about the differences between the college curriculum and industry practice and, in some cases, had updated the procedures they were teaching to align these with current industry practice. For instance, one lecturer noted:

We need to stay in line with what the industry requires ... for example, with the machinery used in the workplace. In the textbook or learning material, we have the machinery that is not in use now. I could tell them that, and also that certain parts could be added. At some companies they need to set current in welding machines by hand. At other[s] they have a foot pedal where [they] can do it (Smith, 2017:77).

The lecturers had also made students aware of different types of job and employer requirements for each. One lecturer said:

WIL has opened my mind to what job opportunities the college should be preparing students for. It is now part of my syllabus. Every topic I teach I tell students that once they have finished, they should be looking in this and this direction ... Before it was just content, I only knew a few jobs. Now those guys told me about business analysis, security, testing, things they don't have, which is why they are outsourcing (Smith, 2017:64).

The lecturers also reported that they now included a focus on workplace-applicable soft skills, discipline, and health and safety requirements. In terms of this, one lecturer noted:

There are a lot of things that we somehow neglect, like the safety things that need to be in place before the job can take place. Also the planning that needs to happen, the paperwork, safety register concerns ... Those were the things that I tried to incorporate from WIL ... We concentrate on the welding, for example, but not on the holistic, or soft skills ... Those soft skills are so important because if students don't understand them, the employer gets frustrated and doesn't understand that students don't understand. It is those soft skills that help students find work (Smith, 2017:72, 74).

In addition, the lecturers reported that they increased the amount of time spent on practical activities. One lecturer noted that her WIL experience had given her many ideas on how to make her lessons more practical. For instance:

If we are doing water treatment processes, there are different stages in each, from pre-treatment to tertiary treatment. I incorporated what I had learned in the class by giving the kids creative activities to do, for example to come up with an experiment where you filter your own water, demonstrating water filtration (Smith, 2017:81).

For Shulman and Shulman (2004), individual teacher learning and change rests on reflection. The evaluation findings and review of lecturer portfolios indicate that portfolio completion can facilitate lecturer reflection on learning and practice. One lecturer's comment on the SSACI WIL portfolio was:

It allows you the opportunity to reflect back and be introspective about what you have learned (Smith, 2017:84).

Community of practice

Community of practice-related issues identified by Shulman and Schulman (2004) are the development of a shared vision, commitments, knowledge and sets of rituals of practice. The broad community of practice within which TVET lecturers operate includes lecturers, their

colleges, industry experts and students. The DHET requirement that colleges work with employers to improve curriculum delivery and facilitate student and lecturer placement was a catalyst for developing college–industry communities of practice. WIL was an opportunity for lecturers to learn from expert practitioners and build a network of industry contacts who could support student placement and possibly guest lectures at the college.

The notion of communities of practice is new in the college sector and there is often little sharing between lecturers and almost none with a broader community encompassing industry professionals. Hence, lecturers largely lack a vision of learning and sharing in a community of practice. But participation in WIL made lecturers begin to see themselves as part of a broader professional community which they could both learn from and contribute to.

Employers were primarily motivated to host lecturers for WIL by social responsibility concerns. Another motivator was the possibility that lecturers and students could help with work during placements and that students could be a source of future employees. Our data suggest that few employers think of themselves as part of a community of practice that includes colleges and lecturers, or that their practice could be informed by them. Therefore, while there was a willingness to cooperate, a shared vision of college–industry communities of practice was not yet evident.

Communities of practice develop over time out of shared commitments and interaction. However, many host employers had little knowledge of, and no relationship with, colleges. Some employers who had worked with colleges had hosted students for work experience. But providing WIL for lecturers was new to them and there was initially some confusion about its purpose and how it would differ from student WIL. In some workplaces, employees were even suspicious of the lecturers and worried that they were there to either spy on them or to take their jobs. For instance, one lecturer noted:

They couldn't believe I was coming for practicals. They thought maybe I was coming to take their jobs. They were quite reluctant to show me things (Smith, 2017:92).

Through working with the lecturers, employer representatives began to understand the purpose of WIL for lecturers and the potential benefits both for the lecturer and the employer. This understanding is necessary for a shared vision of college–industry communities of practice to develop.

The development of a common knowledge base in the college–industry communities of practice was not evident. For this to develop, members of a community need to be in regular contact and to share knowledge and practice continuously. While lecturer WIL placements started a process of networking and learning between lecturers and employer representatives, our data indicate that changes are needed at a college and a system level for this to be sustained (Smith, 2016; 2017).

During WIL, the lecturers learned from their supervisors and other employees; but the learning in the workplace was not only one-way. Some lecturers also shared their subject knowledge. For instance, one lecturer said:

I started showing them better ways to do things, like how to make a bed properly. They learned from me. For example, when making muffins, they didn't use ready-made mixes, so I showed them how to do things quickly (Smith, 2017:92).

There was also some sharing of knowledge and experience gained through WIL among the lecturers in a college. In these cases, the lecturers shared knowledge about the WIL process, including how employees were recruited and how their WIL experience was planned. They also shared information on what they had learned and their ideas for incorporating this into classroom practice. In some cases, the lecturers completed WIL in groups at the same workplaces, which provided a basis for common understanding and shared experiences to develop.

At a few colleges, the sharing of learning took place through subject and other college meetings. For instance, at one college, the Head of Primary Agriculture, who also completed WIL, said the following about his department:

Usually when lecturers come back, especially after placement, we arrange a session for information delivery. We need to know what have you learned, how it can help us to go forward as a department, and how can we better shape our students in terms of what you have acquired. It is good to interact, to network (Smith, 2017:90).

At most colleges, though, there was no formal mechanism and few opportunities for the lecturers to share their experiences or plans for integration into teaching (Smith, 2017:61, 75). However, the SSACI training sessions and meetings provided an important forum for lecturers from the same and different colleges to share their learning (Smith, 2017:74, 94).

While there was some sharing of knowledge, there was no evidence of the development of common practice in the broader college–industry community. For shared common practice to develop, regular interaction, exchange and reflection are needed and systemic support is required to sustain it. The WIL for Lecturers programme provided impetus by sending lecturers into the workplace, but a single interaction is not enough to develop a college–industry community with shared rituals of practice.

During their WIL, some lecturers began exploring future collaboration possibilities, including online interaction and guest-lecturing arrangements, but there is no evidence that any of these arrangements came to fruition. Some lecturers completed a second placement, which reinforced their developing relationship with the employer and some lecturer placements led to arrangements for student placement. In one case, a placement consolidated an existing student placement arrangement and opened a discussion about establishing a formal agreement between college and employer (see Smith, 2017:63, 79,

80, 90). On returning to their colleges and the everyday pressures of lecturing, however, the lecturers tended to slip back into their old routines, which did not include regular interaction with employers.

A positive outcome of the industry placements was that lecturers and students started to see themselves as a part of a common community of practice. Lecturers shared their WIL experiences in the classroom and provided opportunities for students to do the same. Participating in WIL also equipped lecturers better to support the process of student WIL (Smith, 2017:69, 93).

Overall, participation in WIL led to some changes in lecturers' and their colleges' rituals of practice. First, it changed the way lecturers saw their subject and its teaching. They now understood the value of working with employers and aligning their teaching with industry practice. Secondly, the ritual of student WIL was reinforced by confirming its value for lecturers and building their understanding of the placement process. Thirdly, the lecturers' WIL experience and their interaction with each other on this led to some changes in the way they taught their subject, which now included strategies for linking it to workplace practice and mediating the differences between this and the college curriculum. Lastly, the practice of lecturers participating in WIL had not only become a possibility, but had also started moving in the direction of becoming a ritual which colleges could begin to formalise in their policy, planning and budgets.

A key issue in the development of a shared vision, commitments, knowledge and rituals of practice in the TVET college–industry community of practice, which is not addressed in the Shulman and Shulman (2004) framework, is the significant organisational and cultural differences that exist between colleges and industry workplaces. These need to be understood and negotiated in order to develop common understandings and practice. Van der Bijl and Taylor (2016:101) draw attention to the complexity of college lecturer learning and the transfer of learning between the college and industry activity systems.

Policy and capital contribution

The final level in the Shulman and Shulman (2004) framework concerns the policy or systemic contribution that is necessary to enable learning and change in practice. Shulman and Shulman (2004) identified four elements at the policy level: moral capital, curriculum capital, technical capital and venture capital.

Moral capital concerns the policy motivation, or incentive, for lecturers to complete WIL. While the DHET requires college lecturers to stay up to date with industry through continuing professional development, this requirement is not enforced by their conditions of employment. Furthermore, as a professional body still needs to be established for college lecturers, there is no professional recognition of their completion of industry WIL. In addition, completing WIL is time-consuming and most colleges require their lecturers to complete it during their holidays.

This, along with some colleges not reimbursing the expenses incurred by lecturers through participating in WIL, is a demotivating factor (Smith, 2017:42, 45). There are therefore few incentives in the system for practising lecturers to complete WIL.

However, the incorporation of industry WIL in initial lecturer qualifications provides an important motivation at the policy level. Not only does it elevate the importance of lecturers having current industry experience, but lecturers employed at colleges without educational qualifications also recognise that industry WIL will be a mandatory element of the new qualifications.

Curriculum capital is the second element at the level of policy contribution. The relationship between curriculum and industry practice is complex. The TVET curriculum is prescribed by the DHET and students are assessed against this. Therefore, while there is some scope for lecturers to adjust what they teach to improve its alignment with industry practice, they must cover what is in the curriculum for students to pass. Making changes to the curriculum also has time implications and, at SSACI training sessions, lecturers reported that there was little time to add additional material. Because of outdated curricula, the content included sometimes also contradicts industry practice (Van der Bijl & Taylor, 2016:106). However, curriculum change is a slow process in the college sector and it is not clear how lecturers should feed what they learn through industry WIL into this process.

Technical capital support is at the level of systems and resources. The college timetable does not include time for students and lecturers to complete WIL, and some lecturers recommended that it be amended to do so (Smith 2017:61). Systems and resources that enable lecturers to share their learning with each other and build this into their practice are also necessary. At SSACI training sessions, some lecturers reported that their application of learning was hindered by non-existent or outdated college resources and facilities. The evaluation also found that lecturers would like more support from their seniors, but that heavy workloads affect the capacity of their seniors to support them (Smith, 2017:37, 48).

Lecturer participation in WIL and the integration of learning from it into teaching has financial implications. This is the venture capital element. Completing placements requires transport and, in some cases, accommodation when suitable employers are not available locally. Then, if lecturers have to be in workplaces for lengthy periods, replacement lecturers might need to be hired. How this should be funded by colleges is not entirely clear. Some colleges provide for this in their budgets, but there is no standard approach to where the money is drawn from and how much is allocated (Smith, 2016). Improving alignment with industry also has cost implications regarding college infrastructure and equipment.

Conclusion

South African professional qualifications for TVET and ACET lecturers, which universities will begin offering in 2019, require the completion of WIL in two settings: the college classroom

and industry or other relevant workplace contexts. Education faculties have experience in implementing teaching practice but not in workplace WIL.

This article sought to inform the design and implementation of the industry–workplace WIL component of the new qualifications by means of an analysis of the learning of TVET college lecturers through workplace exposure. The Shulman and Shulman (2004) framework on teacher learning was used to analyse data from the SSACI-EDTP SETA WIL for Lecturers Project, through which more than 400 college lecturers completed a work placement. Using the Shulman and Shulman (2004) framework, lecturer learning was first considered at an individual level, then at a community of practice level and, finally, at a policy contribution level.

Shulman and Shulman's (2004) framework was found to be a good model for analysing lecturer learning from exposure in an industry setting. The following implications arise from our analysis for the design and implementation of the industry–workplace WIL component of college lecturer qualifications.

First, learning, development and change are needed at the individual, community of practice and policy contribution levels for lecturer learning through WIL to have a sustained impact on their teaching practice and its articulation with industry. Universities need to design qualifications that support learning at all three levels. Systems also need to be developed and resources allocated that enable the effective implementation of the workplace WIL component.

Secondly, the development of TVET college–industry relationships and communities of practice is central to effective vocational education. Trainee lecturers need to understand that their professional community includes the education and industry community in their subject field and they need to be given the capacity to build relationships and work with industry. Qualifications should address this requirement.

Thirdly, before lecturer placement commences, the motivation and vision for lecturers to complete industry WIL need to be understood and shared by universities, lecturers and the employers who will host them. In the Shulman and Shulman (2004) framework, motivation and vision provide the foundation for successful learning, collaboration and changed practice. The design of university programmes should include a preparation phase during which the motivation, vision and plans for industry WIL are clarified with trainee lecturers and host employers.

Fourthly, during their placement, the lecturers develop industry knowledge and experience and the employers learn from the lecturers and the process of hosting them. This is the understanding or knowledge dimension in the Shulman and Shulman (2004) framework, and reflection on learning is central to this. Knowledge development and sharing are reinforced through reflection at the individual, community of practice and policy levels. The process of knowledge development, sharing and reflection at different levels needs to be supported through qualification design and other mechanisms set up for this. For instance, weekly reviews between

workplace supervisors and trainee lecturers could be a programme requirement and journals could be used to facilitate individual reflection.

Finally, after completing WIL, lecturers are expected to incorporate their industry learning into their teaching practice. In the Shulman and Shulman (2004) framework, this is the practice dimension. For practice to change, it needs to be planned, resourced and supported. Furthermore, opportunities need to be created for individuals and members of communities of practice to reflect on and learn from practice to enable shared rituals of practice to develop. Learning from practice is also needed at the policy level to facilitate change in policy, curricula and support. Qualifications should be designed to deal with these issues and support the integration of lecturer learning from WIL into practice, and the building of shared practice both in college–industry communities and at the policy level.

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