

Nature and dynamics of industry-based workplace learning for South African TVET lecturers

Andre van der Bijl and Vanessa Taylor

Abstract: *This article reports on the findings of an industry workplace experience project involving lecturers in South Africa's technical and vocational education and training (TVET) colleges, against the backdrop of new legislation and the realization that college lecturers' industry-related skills are in question. Its focus is on the nature of TVET lecturer industry-based workplace learning and the internal dynamics of its implementation in the college and employer systems. The article provides background on workplace-based learning for TVET lecturers and contrasts this form of workplace learning with forms used for students. After providing a critical analysis of methods used to theorize workplace-based learning, a model is employed to describe and analyse lecturers' experiences, with the aim of informing national and international knowledge and practice. The study supports the argument that workplace-based learning for TVET lecturers is not the same as for students. While students are exposed to workplaces to provide them with orientation and initial skills for future careers, workplace-based learning for lecturers is designed to improve knowledge development competencies. TVET lecturers undertake workplace-based learning to improve their knowledge of practice and so improve their theorization and teaching skills. The article points to the need for further research on and theorizing of industry-based workplace learning for lecturers.*

Keywords: *Activity Theory; Engeström; lecturer workplace experience; teacher industry placement; vocational education; work-integrated learning*

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In 2013 the South African Department of Higher Education and Training (DHET) published its *Policy on Professional Qualifications for Lecturers in Technical and Vocation Education and Training* (DHET, 2013), which determined qualification requirements for learning facilitators (lecturers) in the country's

technical, vocational and education (TVET) system. The qualifications, to be implemented from 2016, separate qualification requirements for TVET college lecturers from those of school teachers. One of the requirements included in the policy for TVET lecturers is that an initial professional qualification should

include a period of workplace-based learning in the industry for which trainee lecturers are preparing. The industry-based workplace learning element is required in addition to a requirement that trainee lecturers complete workplace training (teaching practice) at vocational colleges. Whilst the policy on professional qualifications for TVET lecturers stipulates the requirement for industry-related workplace learning, it does not indicate how this is to be done. This aspect needs to be determined by the providers involved.

Between 2012 and 2013, the Swiss–South African Cooperation Initiative (SSACI) implemented its lecturer workplace exposure (LWE) project with 10 South African TVET colleges. The purpose of the project was to research and develop an approach to providing in-service industry-based workplace exposure for lecturers as part of their continuing professional development within the college system. The overall goal was to enhance lecturer industry knowledge and skills and thereby improve the links between what is taught at college and the requirements of industry. While framed by the lessons from the broader implementation of the project, this article reports on the findings of in-depth reviews of the implementation by two participating colleges. These outcomes shed light on the nature and internal dynamics of industry-based workplace learning for TVET lecturers in the context of South Africa's vocational education and business/industry environments. The article uses content analysis to scrutinize focus group interviews with college lecturers and managers and makes a first attempt at relating this analysis to frameworks developed by Schüller and Bergami (2011) and Tuomi-Gröhn and Engeström (2007): the aim is to inform national and international discourse and practice on lecturer industry based workplace learning.

Workplace-based learning in South Africa

Workplace-based learning in South Africa has a number of points of origin. It first followed the introduction of the European apprenticeship system to certain industrial fields at the turn of the previous century. Apprentice training was a collaborative effort between employers and technical colleges in which the former provided on-the-job practical training and the latter theory.

South Africa's technical colleges of the 1920s form the basis of its universities of technology (UoTs). Colleges evolved into colleges of advanced technical education (CATE) in the 1970s, which then grew into Technikons in the 1980s (Pittendrigh, 1988, pp 167–169) and subsequently into UoTs a decade ago. TVET colleges also have their origins in the technical colleges

of the 1920s (Anon, undated). Technical colleges evolved from institutions that only provided engineering theory for apprenticeships into technical colleges that offered a range of educational programmes. In the early 2000s these technical colleges were restructured into Further Education and Training College (South Africa, 2001), which were renamed TVET colleges in 2014 (South Africa, 2014).

The evolution of technical colleges into UoTs extended apprenticeship-type practices to higher education programmes by introducing *cooperative education*. This is an educational strategy that integrates academic learning with periods of work experience in real workplaces and is based on cooperation between educational institutions and employers (Groenewald, 2004). Apprenticeship-type training was broadened to include all business sectors with the introduction of employer/student and education provider collaborative *learnerships* that followed the formation of sector education and training authorities (SETA) as part of the construction of the country's post-apartheid system of education and training. A development concurrent with that of cooperative education and learnerships has been *service learning*. Service learning refers to exercises through which students participate in an organized service activity aimed at meeting community needs and the students' or academic institution's social responsibility goals. Through service learning students develop their understanding of learning content, simultaneously enhancing their sense of civic responsibility. As a concept, service learning originates in the work of Bringle and Hatcher (1995).

In addition to the existence of models providing for the development of workplace knowledge and skills in business and industry, a number of professions servicing other social sectors developed their own form of workplace learning. One such sector is teacher education, in which providers place teacher-education students at schools for teaching practice. Workplace learning in the form of teaching practice for college lecturers and school teachers is currently coordinated through the State's *Norms And Standards For Teacher Education* (South Africa, 2000).

Because of their historical role in apprenticeship training, TVET colleges are often regarded as the original custodians of workplace-based learning. Since that time, however, their position as such has been obfuscated. The introduction of the National Education Department (NATED) programmes in 1984 (South Africa, 1995, p v) expanded college curricula from primarily apprenticeship-based engineering and hairdressing programmes to a range of business and general programmes that were theoretical and lacked a structured workplace/practical element. The result

was that a large number of programmes provided by colleges did not require workplace-based learning. This change was accompanied by a decline in the place of apprenticeship programmes in colleges in South Africa due to a decrease in demand for this type of training from employers and individuals; a world trend at the time.

Lack of demand for apprenticeships, coupled with the introduction of learnerships in the late 1990s and the national vocational curriculum (NC(V)) in 2007, and other structural changes, were factors that resulted in the State describing TVET as ‘. . .the subsystem that is the most fragile as a result of the incomplete transitions it has experienced in recent years’ (South Africa, 2010, p 9). Challenges facing colleges almost led to the cessation of these institutions in the country. The extent and quality of workplace-based learning in learnerships varied because this was determined by each learnership and tended to be regarded as an employer responsibility. The result is that colleges offer workplace-oriented education and training, but few college programmes currently have a formal, structured workplace-based element. For instance, workplace learning is an optional element of NC(V) programmes, the core offering of TVET colleges. Furthermore, as a whole, few college lecturers have current, if any, workplace experience.

In South Africa, numerous workplace-based learning practices thus exist with a variety of points of origin and departure (Taylor, 2013), of which those mentioned above are but a few. Different systems of workplace-based learning have evolved over time to meet the needs of different sectors and professions, including teaching education. The Minimum Requirements for Teacher Education Qualifications (MRTEQ) (South Africa, 2011) and the policy on professional qualifications for TVET lecturers extends the traditional system of workplace-based learning for educators by specifying one form of requirements for school teachers and another for lecturers at TVET colleges. From 2016, when the policy on professional qualifications for TVET lecturers is implemented, TVET lecturers will be required not only to complete teaching practice as do their school teaching counterparts: they will also have to complete industry-based workplace experience (DHET, 2013). Providers of new professional qualifications for TVET lecturers face the challenge of providing industry experience to new trainee lecturers and existing staff who either need to upgrade their qualifications or lack a sound base of prior workplace experience.

The current interest in industry-based experience for college lecturers in South Africa is thus based on meeting the requirements of new legislation as well as

initiatives to develop the industry-based knowledge and skills of existing lecturers. To support implementation in South Africa, information is required on both international discourse and practice and on current practice in South Africa. This article begins to bridge the information gap by providing an analysis of international literature and reporting the findings of SSACI's LWE project.

International literature

Two separate but related frameworks provide a basis for understanding lecturer industry placement. One is the Community of Practice-based model designed by Schüller and Bergami; the other is contained in Tuomi-Gröhn and Engeström's (2007) arguments concerning boundary crossing between activity systems.

Schüller, Bergami and a number of associates (Bergami *et al*, 2009, p 53; Schüller and Bergami, 2008, p 201; Bergami *et al*, 2010, pp 110–112; Schüller and Bergami, 2011, pp 136–137) developed a theoretical model for understanding teacher industry placement (TIP) which provides insight into the process and learning that teachers/lecturers undergo before, during and after workplace-based learning. Their cyclical/linear TIP model, based on Lave and Wenger's (1991) Community of Practice (CoP) model, constitutes an account of a development trajectory starting with an industry placement which develops industry experience and skills followed by theory development, classroom teaching and, ultimately, putting theory back into industry practice (Schüller and Bergami, 2011, pp 136–137). The possibilities for application of the Schüller and Bergami model (Bergami *et al*, 2009, p53; Schüller and Bergami, 2008, p 201; Bergami *et al*, 2010, pp 110–112; Schüller and Bergami, 2011, pp 136–137) are limited to tracing the learning cycle in the context of an industry placement and as a set of criteria to be used for managing TVET lecturer industry placements. Diagrammatically the model is depicted in Figure 1.

The Schüller and Bergami model offers a clear argument for industry placement as one way in which education staff can learn from experience. Others include own experience (Bathmaker and James, 2007, p 517) and reflective practice (Harkin, 2005, pp 172–176). Other research, however, indicates that placement is but one form of lecturer learning. Lecturer industry placement, Clayton (2012) argues, is not a feasible practice in some industries or under some conditions nor is it always the best strategy for updating the industry knowledge and skills of educational staff. According to Clayton:

‘. . . research found that while employers would like teachers to keep current, they did not think

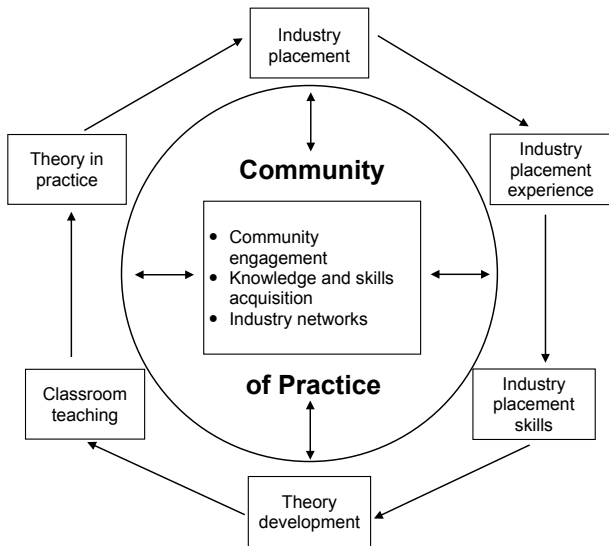


Figure 1. Teacher industry placement cycle.
 Source: Schüller and Bergami (2011, p 134).

it feasible especially where industry trends and technological changes were constantly impacting on workplaces. Strategies that were considered useful in keeping teachers current were strong management support for ongoing training, collaborative learning in the workplace, targeted professional development activities and networking with industry. The research also identified the need to establish and maintain an organisational climate that supports updating of industry skills while offering continuing professional development that encompasses the full range of updating approaches. Also highlighted was the need to adopt a strategic approach to the maintenance of industry currency, particularly where technology and technical knowledge were constantly being superseded. As new knowledge emerges and skill requirements change, TVET teachers in the areas of change need to be provided with specific training to keep them abreast of the changes. Importantly the research also highlights the need to introduce innovative approaches to upskilling that not only offer formal and structured learning but also informal and incidental collaborative learning opportunities that inevitably arise during the conduct of day-to-day work.’ (Clayton, 2012, p 28)

The process of lecturers learning from industry and applying this learning is complex: this complexity was corroborated by the lecturers interviewed during the SSACI’s LWE project review. From these interviews it is clear that lecturers do not simply go to a site in industry, pick up new experiences, integrate them into the curriculum and, as a result of teaching, adapt practice. The relationship between industry

and education is not a simple linear one, nor are the relationships between vocational institutions and their staff, on the one hand, and local business, on the other. The transfer of learning between industry and college is complicated, requiring a detailed analysis of its mechanisms and manifestations.

Studies associated with Engeström’s Activity Theory (Engeström, 1987) provide insights into the complexity of the transfer of learning from one context to another. Engeström’s activity system model, also known as Engeström’s triangle or cultural historical activity theory (see Figure 2), has been described as ‘a lens to analyse data’ (Pather 2012, p 127). Engeström’s model, his form of Activity Theory, is commonly represented by a triangle of interacting elements. According to this model, key elements of interaction are the subject, the object and the community. Elements are influenced by rules, tools or instruments and division of labour within each element. The subject processes community demands into objects in the form of outcomes.

Adaptations of Engeström’s initial model include the idea that more than one activity system can coexist and that the different activity systems interact with each other. Such models include those designed by Uden (2007), Bolton and Kevvy (2011) and Ludvigsen *et al* (in Tuomi-Gröhn and Engeström, 2007, pp 291–310). Figure 3 shows the diagram used by Bolton and Kevvy (2011, p 14) to illustrate how one activity system, in their example the South African Qualification Authority, coordinates activities of other systems.

Tuomi-Gröhn and Engeström (2007) use the term ‘boundary crossing’ to describe learning that crosses social systems. Boundary crossing is broadly conceptualized by Tuomi-Gröhn *et al* (in Tuomi-Gröhn and Engeström, 2007) as a conceptual place where transfer of learning between activity systems takes place. Involved in boundary crossing are ‘brokers’, ‘boundary zones’ and ‘boundary objects’. A broker

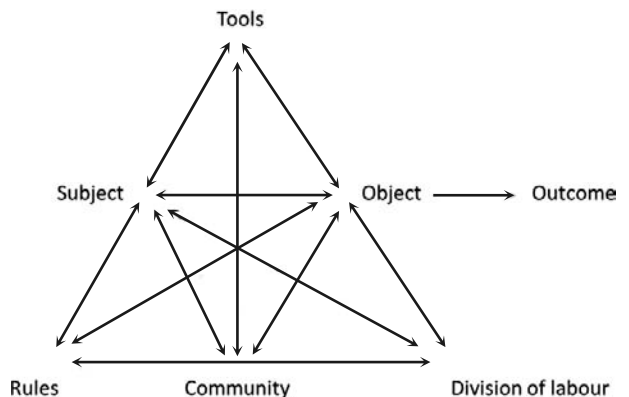


Figure 2. Engeström’s Activity System.
 Source: Engeström (1987, p 78).

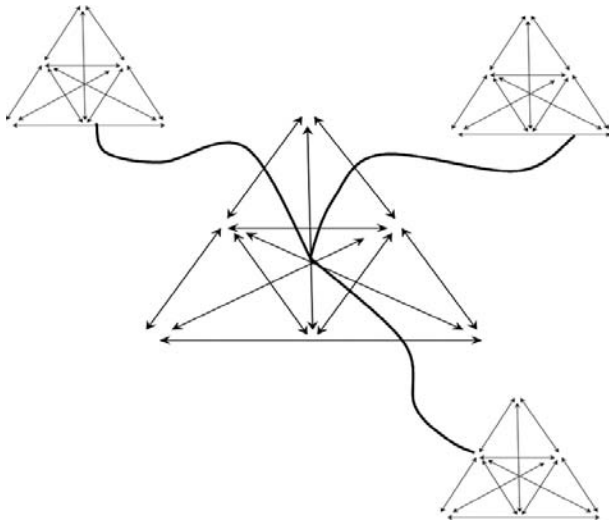


Figure 3. Communication between system.

Source: Bolton and Keevy (2011, p 14).

is a mediator who is able to make connections across communities of practice, facilitate coordination and open possibilities for new meanings. A boundary zone is described by Konkola (2001, in Tuomi-Gröhn and Engeström, 2007 p 5) as ‘...a “no-man’s land”, free from prearranged routines or rigid patterns’ (Tuomi-Gröhn *et al*, in Tuomi-Gröhn and Engeström, 2007 p 5). In a boundary zone, both communities of practice are present. Boundary objects emerge and can be adapted to suit various local needs, but maintain a common identity across sites.

Activity Theory in general and the concept of boundary crossing in particular are useful tools for determining how college lecturers navigate the no-man’s land between vocational educational institutions, where they are employed and where they gain their professional identity, and industry, where they come from, where their students find employment and achieve their professional identity. Understanding lecturer workplace-based learning involves an analysis of the influence of one activity system (the workplace) on another (the college), as well as the reciprocal influence that a subject (lecturer) and the activity system (the workplace) exert on each other during the workplace experience.

In summary, Schüller and Bergami provide an indication of what college lecturers should gain from industry placements. College lecturers gain knowledge that can and should be incorporated into the theory that they teach. An understanding that emerges from Tuomi-Gröhn and Engeström is that more than one Community of Practice is involved. Lecturers do not just gain information and integrate it into their theoretical repertoire: they navigate between

communities of practice or activity systems, each with its own rules, tools and division of labour. What lecturers do with information gained from experience is determined by a number of factors, one of which is theory development for the classroom.

Understanding what lecturers do with knowledge gained from industry experience rests on comprehending on the nature of lecturer industry placements.

Methodology

The research that forms the basis of this article was carried out with two of the 10 colleges that participated in SSACI’s LWE project. Although the project included 10 colleges, four were used as research sites. In-depth reviews of the implementation were carried out, at the end of 2013, at two of these colleges. At each college, a college management focus group was held and focus groups were held with participating lecturers who were grouped according to field of study – for example, business programmes, engineering programmes, and hospitality.

The review addressed the following questions.

- (1) How did the college plan and manage LWE implementation within the college system?
- (2) How was it determined what lecturers would do during LWE and which employers they would visit?
- (3) How were employers recruited and prepared by the college to implement LWE?
- (4) What were the nature and value of the actual LWE completed by each lecturer?
- (5) How did lecturers integrate their workplace learning into teaching and how did the college manage this process?
- (6) What overall lessons were learned? What worked well, what were the challenges and how could implementation be improved?

For the purpose of this article, we were interested in understanding the nature, internal dynamics and management of lecturer LWE. The interview data were analysed and themes were developed. Key themes were:

- The nature of lecturer workplace experience;
- College management of lecturer workplace experience;
- The internal dynamics associated with implementing LWE as an element of the college system;
- The internal dynamics of lecturers being hosted in the employer system; and
- Results and impact of lecturer LWE.

The findings are presented through discussion of the nature and dynamics of lecturer workplace experience. The timing of lecturer industry placements, a significant problem that was identified in the review, is also discussed. The final section of the findings considers the impact of the experience on lecturers.

Colleges and lecturers involved

Both colleges that participated in the review are multi-campus institutions that offer a wide range of learning programmes and together placed 65 lecturers in industry for periods of between three and five days. Programmes taught by the lecturers included engineering, information technology, business studies, hospitality, boat building and what is called 'fundamentals' (English, Life Orientation and Mathematics). The two colleges are, coincidentally, at two ends of the country, with different local industries and college communities. One college is in the Western Cape province, primarily serving coastal industries in a large city; the other is in the Mpumalanga province, primarily serving mining-based industries and small local businesses in small towns servicing a rural area. The qualifications and the level of experience of the lecturers involved range from university degrees to technical qualifications and from substantial industry experience to no industry experience whatsoever. Interactions between lecturers and their industry counterparts during LWE ranged from positive to negative. In some cases lecturers found the experience rewarding and were able to use what they learned in their teaching. In others, lecturers were negative about both what industry could offer and industry practice or expressed feelings of inferiority.

The nature of lecturer workplace-based learning

Lecturer industry placement is complex and differs fundamentally from student placement in a number of ways. This understanding emerged in interviews with both college managers and lecturers. Numerous factors influence the nature and internal dynamics of lecturer placement, including its purpose, lecturer employment and the relation between lecturers and the industries for which they are training.

In order to clarify the nature of lecturer industry placement, this section identifies and discusses key factors that distinguish it from student industry placement. These are:

- Purpose of the placement;
- Matching the lecturer to the employer;
- Placement choice;

- Management of the experience;
- Monitoring and assessment; and
- Status of the lecturer in the workplace.

The first distinguishing factor of lecturer workplace-based learning is its purpose. Student workplace-based learning, in its various forms, is primarily an introductory and formative experience, whereas lecturer industry placement has a variety of potential learning functions. For some, lecturer industry placement has a refresher function, while for others, it has a reorientation function. Students learn in one activity system with the aim of finding work in another. The purpose of their workplace experience exercise is to gain familiarity or develop skills in the activity system at which their learning is aimed.

Lecturers, in contrast, are masters within a learning activity system which, while aimed at the activity system of work, differs in terms of all activity elements. Lecturers gain industry workplace experience to develop, renew or maintain competency in the activity system in which they operate, by entering the activity system at which their students' competency development is aimed so that they, the lecturers, improve the practice within the activity system that employs them. Students perform boundary crossing to ease entry into the work activity system but lecturers cross boundaries to improve their practice in the education activity system. Figure 4 illustrates the fundamental difference between lecturer and student workplace experiences.

For college lecturer interviewees who were employed without prior work experience and those who teach basic subjects such as communication and numeracy, lecturer industry placement had a similar introductory learning function to that of workplace-based learning for students. Lecturers had to learn about the workplace, its dynamics and how to operate within it.

Matching lecturers to employers is a factor that differentiates between placing students and lecturers in industry. While generic factors commonly determine student workplace experience, finding a match for a lecturer involves making an individual match between an employer and personal lecturer needs. For the managers of colleges involved in the LWE project, finding appropriate places for lecturers to visit proved challenging. One college manager noted that the key was 'getting a match' between lecturer and employer expectations. Another noted that 'at the end of the day lecturers have many needs and employers can't meet them all'. Some lecturers, while not consciously aware of challenges related to boundary crossing or the need to theorize what they learn, criticized the nature of their placement, focusing either on the placement, or negative

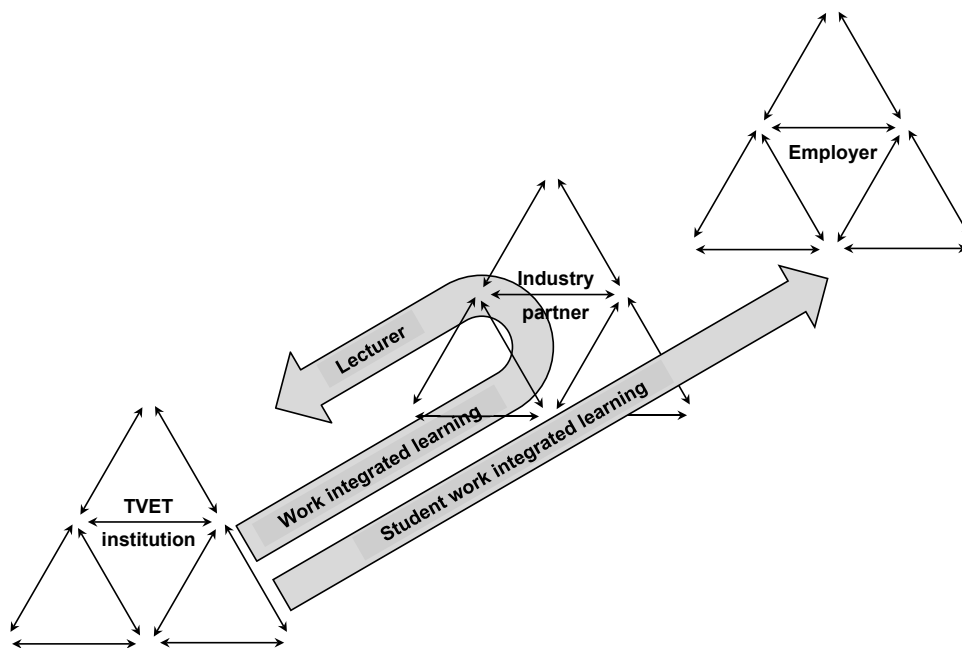


Figure 4. Student workplace experience versus lecturer workplace experience.

attitudes of employers or their staff appointed to oversee them. There were lecturers who were in awe of the work surroundings they were exposed to – notably those whose work or low-level practical experience resulted in them not being close to the industry they served.

A third factor that distinguishes lecturer placement from student placement is that students have little choice in, and must accept, the workplaces at which they are placed. In contrast, lecturer placements require the active involvement of the lecturer in the choice of placement. While lecturer complaints about their industry placements had a variety of surface reasons, many of these could be reduced to the placement simply not being what the lecturer wanted. In some cases this was due to lecturers not being involved in choosing their placements and in other cases it was due to a poor match between the placement and the lecturer’s needs.

A further factor that differentiates lecturer and student workplace-based learning is in its management. The management of student workplace-based learning is fundamentally an academic responsibility and, as a result, a learning management matter with outcomes linked to learning and certification. It is thus commonly assigned to a person or department within an institution’s academic line. Lecturer industry placement, in contrast, is primarily a labour relations matter with outcomes linked to human resources management of staff. Linked to lecturer industry placement are academic matters, including staff members’

qualifications, teaching function and the demands of the academic calendar. Concurrently there are human resource management issues such as incentive and replacement budgets, leave policies, health and safety issues and legal issues that could arise when a person from one place of employment is productively used by another. As a labour relations exercise, lecturer industry placement raises a number of management issues including power and lines of communication, legal responsibilities, and cost to the lecturer, the college and the employer.

While lecturer industry placement is primarily a labour relations issue in that it is tied to a lecturer’s employment, competence and their performance, it is an academic matter in that it is integral to a college being able to deliver quality education that relates directly to the world of work. Effective academic management of lecturer industry placement can improve the relevance of this through helping lecturers make better links between their workplace experience and the subjects they teach. It can ensure that lecturer industry placement has a positive effect on teaching, through lecturers bringing back and using their experiences in their teaching.

A key role in the success of lecturer industry placement is the role played by college management in facilitating lecturer placement, and incorporating this into human resources management processes and the academic function. Both lecturers and managers viewed lecturer industry placement implementation in a college as a management function; and both looked

to management for decisions on lecturer placement and timing. Placements at which lecturers experience high levels of satisfaction occurred where college management, human resource management, academic management and lecturers were involved in the decision and supported the implementation.

The fifth factor that distinguishes student and lecturer placements relates to monitoring and assessment processes and, linked to monitoring, the way in which knowledge and skills are acquired and developed for further use. The monitoring of student workplace-based learning is essentially based on a vertical relation. A lecturer industry placement relation could, or arguably should, be horizontal; it is a collaborative relation between professionals in industry and a related educational institution.

The assessment of student workplace-based learning is in essence an academic exercise and is directly linked to the attainment of a qualification. By contrast, lecturer industry placement, unless it forms part of a professional qualification, does not necessarily have a predefined competency indicator and is linked to improvement of a competency related to the work of a lecturer.

Finally, the status of lecturers in workplaces compared to that of students is a key factor that differentiates student and lecturer placement. Students as learners are in a subordinate position in relation to company employees. However, the status of lecturers is less clear. They are qualified professionals who in some cases may even be better qualified (from a qualifications point of view) than those they are temporarily job shadowing or working alongside in the workplace. At the same time, they are less skilled and experienced because they do not practise the application of their skills on a day-to-day basis in highly pressured workplace environments. This can create tensions between lecturers and staff members in the hosting workplace, and this was a matter of concern for some lecturers.

Most lecturers were given tasks limited to helping someone else in the workplace. To paraphrase one lecturer: they were involved in production in a supervised way and helped rather than did things independently. For most, and notably those with limited workplace experience, this subordination was not offensive. A few lecturers who originated from industry and regarded themselves as specialists found subordination and the low-level tasks they were given problematic. Where production was carried out by a group and relations between lecturers and their counterparts in the workplace existed, lecturers generally became involved in the process. However, where production was high tech or based on individual efforts, or where relations did not exist, they tended to be subordinated and to have limited involvement.

The nature of the work done by lecturers when placed in industry is a complex issue. Lecturers will only ever be allowed to work independently if they are placed in a workplace long enough to be thoroughly inducted into it and can prove they have the skills to do it. Antagonism or resistance to allowing lecturers to work independently appears to be especially prominent in dangerous and high risk work environments and work that has direct public image or deals with sensitive financial information. Trust between institutions and individuals involved in the placement experience needs to be developed in order for lecturers to be allowed to work independently, especially when the consequences of mistakes are high, for instance, damage to expensive equipment, accidents or spoiled customer relations.

Timing of lecturer placement

The preceding discussion provides clarification of the nature of lecturer industry placements by contrasting these to student placements. In addition to the factors which distinguish lecturer placement that were identified in this discussion, an important factor that influences the nature of lecturer industry placement, which is directly related to their work as lecturers, is when they can be released to visit industry. 'Timing of the placement' was a common point of discussion in interviews with managers and lecturers.

One member of college management noted that finding an opportunity and appropriate time is 'difficult'. This person went on to indicate that there are various timing options, each with its own implications. One option is a block time during an academic term, which is within a lecturer's expected working time. The implication is that lecturers would need to be replaced in the classroom, which involves problems of cost and potentially negative implications for teaching and learning. Furthermore, there is the challenge of finding a suitable short-term replacement, especially in rural areas. When questioned about staff replacement, lecturers expressed concerns about the competence of potential replacements and the implications this could have for them when they returned from lecturer industry placement.

The option juxtaposed to the option of a block time during the academic term involved sending lecturers on a workplace experience during college vacations. However, different types of courses have different academic schedules; as such, vacation times of programmes differ, which affects lecturer placement schedules. In addition to scheduling challenges, this option has labour relations implications and costs, because vacations form part of lecturers' conditions of employment.

A suggestion made by some lecturers interviewed was to use the time when students were engaged in workplace-based learning for lecturer workplace experience. However, some lecturers interviewed were opposed to being in the workplace at the same time as students. Two factors influenced this view. First, lecturers do not want to work at the same level alongside their students because they want to be viewed by the students as being at a higher level of knowledge and competence. Second, lecturers do not feel that it is appropriate for them to be watching over students during their workplace-based learning because this might interfere with student learning and engagement in workplace activities.

Another factor that comes into play is the administration of student workplace-based learning if lecturers are in the workplace at the same time as students. Lecturers are commonly involved in monitoring students during their workplace-based learning. If lecturers cannot be used to monitor students because they themselves are in the workplace at the same time as students, additional staff would need to be employed to carry out this function. In some programmes, however, at one college, namely hospitality, lecturers monitored the students who were in the same workplaces as the lecturers. This approach avoids the need to send out other staff to monitor the students and could result in a time and cost saving for a college.

One manager indicated that they had identified some 'green periods' which include examination time when lecturers are invigilating and marking rather than teaching, and adding a week of term time to the main June–July holiday period either at the start or end of the holiday. The second option involved 'stealing time' from both teaching and lecturer vacations. The 'stealing time' option, however, could only become a long-term solution if the college timetable was reviewed and periods of term time, rather than just holiday time, were formally allocated both to student workplace-based learning and lecturer workplace experience, as is currently the case in TVET colleges.

Some lecturers had a different perception of time allocation and spoke about finding appropriate time from their own, individual, annual schedules. This view not only reveals the fluid nature of time available, it indicates the individual nature of a lecturer workplace experience.

Impact on lecturers and learning from their experience

Lecturers commonly expressed the opinion that their workplace experiences affected and altered their classroom practice. A number noted that their teaching

style changed, from a focus purely on the state's curricula to one that included the demands of the workplace. Some lecturers noted an increase in their own motivation.

For some lecturers, especially those who did not have an industry background, the experience appeared to create feelings of inferiority, both about themselves and about what colleges are doing, compared to employer demands. This was especially the case when engineering lecturers from under-resourced campuses visited high-tech industrial plants. These lecturers felt insecure about their lack of industry knowledge and practical experience. They perceived business practices and technology as considerably more advanced than those found at college and spoke of a lack of alignment between the two types of institution. Being exposed to industry resulted in frustration for a number of lecturers: they were obliged to teach a set curriculum which was (and is) out of date and were not sure how to align what they saw in industry with what they had to teach to enable their students pass their exams.

While some lecturers' interview comments were negative, their inputs were largely positive and useful as points to consider for further development. Two notable factors commonly expressed were, first, the need to develop long-term relationships between colleges and employers, on the one hand, and between lecturers and their counterparts on the other. The second factor was related to the need to develop mutual trust, once again at institutional and individual levels. Both lecturers and managers noted that trust would be the result of the development of successful long-term working relationships.

Partnership development between colleges and industry thus forms the basis of successful and long-term lecturer engagement with industry. This is supported by Bukit (2012), who asserted that inter-institutional cooperation is a key success factor for lecturer industry placement.

Conclusions

Industry workplace experience is becoming a part of the initial and continuing professional development of South African TVET lecturers. The policy on professional qualifications for TVET lecturers, which focuses on initial qualifications, has been promulgated. Curriculum development has been completed and implementation will begin from 2016. Colleges are starting to implement lecturer industry placements as a part of the continuing professional development of their lecturing staff. The LWE project, now called the Work Integrated Learning (WIL) for Lecturers' Project, has entered its second phase and been expanded to include

28 TVET colleges. These colleges are supported by SSACI in collaboration with the Education Training and Development (ETDP) SETA, the SETA responsible for educator development, to introduce a system of regular industry placement for their lecturers. The exploratory work done in phase 1 of the LWE project has provided insight into the nature and complexity of lecturer industry placements. The lessons from this work are being incorporated into the second phase of the project.

The interviews analysed and reported here demonstrated that implementing and learning from lecturer workplace experience placements is a complex process that cannot be divorced from either the dynamics of both the sector within which the lecturer is located and the employers that host them, or from the level of professional competence and status of the lecturer. Boundary crossing between colleges and workplaces is clearly not a simple matter; it is complex, both from the perspective of the individuals (subjects) involved (college staff who arrange the placements and participating lecturers) and the institutions who need to determine the rules, tools to be used and the division of labour. This process is facilitated by brokers who establish links and communication between systems and open up possibilities for collaboration and learning. This is a role that college lecturers and staff who negotiate placements need to play and they should be capacitated to do so. A workplace learning experience clearly and demonstratively does not occur in an environment with a *boundary zone* that is 'free from prearranged routines or rigid patterns' (Tuomi-Gröhn *et al*, in Tuomi-Gröhn and Engeström, 2007, p 5). Through effective management and staff orientation, a structure could (and should) be created that places lecturers in a situation as close to one that is as free as possible of prearranged routines and rigid behavioural patterns. Lecturer antagonisms or insecurities could also be accommodated if the aim, tasks, roles and report lines are determined and clarified in advance.

In addition to clarification on what experiences are expected of lecturers, the importance of lecturer awareness of what they must do with the knowledge gained from their experience should not be underestimated. A large part of the antagonism expressed by lecturers interviewed was related to a lack of clarity on what to do in the workplace and what to do with the knowledge gained. A boundary zone is an ideal state; Schüller and Bergami's notion of developing theory and placing the newly developed theory into the curriculum is viable only in a situation where there is good alignment between knowledge demand and knowledge supply. In the environment in which colleges operate, where national curricula are offered

to a diverse knowledge market, perfect knowledge alignment is tempered on the one hand by existing labour demand, and curriculum structure and revision processes on the other. While the fluidity of knowledge demand and supply complicates alignment, it creates a variety of collaborative opportunities between colleges and employers, including the provision of short courses, internships and learnerships. Furthermore, lecturer industry placements allow the lecturers to stay abreast of changing knowledge and trends and thus provide the basis for colleges to improve alignment through the addition of enhancements to the prescribed curriculum.

There is still much to learn about the nature and dynamics of lecturer industry-based workplace learning and how to manage this effectively within the college and employer systems and the boundary zone between the two. Through contrasting lecturer and student workplace-based learning we have identified numerous defining features of this for lecturers, key of which relates to its purpose: TVET lecturers do WIL to improve their knowledge of practice in order to improve their theorization and teaching skills. Further research and theorizing of lecturer WIL will advance the understanding developed in this article. Important research questions to consider include the following.

- What do lecturers learn in workplaces and how?
- What conditions facilitate lecturer learning during placement?
- What power dynamics exist during lecturer industry placements and how are these managed?
- How do employers manage lecturers and their learning in the workplace?
- What do lecturers incorporate from their workplace experience into their teaching and the curriculum and how?
- From an activity theory point of view, what tools or artefacts, rules and division of labour will facilitate lecturer learning in a workplace and their transfer of this learning back into their teaching?
- How are colleges managing the boundary zone between them and employers?
- How do colleges manage the implementation of lecturer industry placement within the college system and the associated challenges?

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