Incorporating principles of expansive learning and activity theory in curriculum design to bridge work and education contexts for vocational teachers

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ABSTRACT

The focus of this study is a development course for academic staff that is informed by activity theory and transformative agency. It is intended to help vocational and professional educators to link academic curricula to current work practices. The course content first helped the participants to develop a systematic understanding of the different purposes and contexts of educational institutions and workplaces. After that, these contradictory elements were harnessed in order to develop innovative boundary-crossing concepts and practices. The process in which participants engage in developing new possibilities for practice is termed 'expansive learning'. Through expansive learning, participants may develop 'transformative agency' for dealing sustainably with challenges in times of change. The study traces how transformative agency developed among the course participants. It argues that activity theory provides an innovative, sustainable approach to the academic development of vocational and professional educators, especially with a view to them adapting their course content to changing industry needs.

KEYWORDS
Academic staff development; vocational and professional education; activity theory; expansive learning; transformative agency

Introduction

Considerable changes have occurred in South African higher and further education since the arrival of democracy. These changes include institutional mergers, large increases in student enrolments, rapid technological change, and changes in thinking about the role and nature of educational institutions. Changes to the shape and size of universities and colleges have resulted in a broadening of the academic workforce globally, with many lecturers entering these institutions through non-traditional routes (Boud, 1999). Unsurprisingly, these changes have led to renewed interest being shown in the professional development of academic staff. While much is known about academic staff development generally, the means of supporting lecturers in vocational and professional education have been under-researched (Finlay, 2008). In this article, we report on a theoretically informed initiative to support lecturers in vocational and professional programmes. The initiative was offered as an elective course towards a Postgraduate Diploma in Higher Education Teaching and Learning. The elective course was entitled 'Work and Learning: Working across Transitions', and it was attended by a group of nine lecturers (the course participants) from the technical and vocational education and training (TVET) and university sectors. The course used a blended learning approach involving both face-to-face and online teaching.

Activity theory has been used extensively to help teachers better understand the relationships between educational institutions and workplaces (Le Maistre & Paré, 2004; Konkola, Tuomi-Gröhn, Lambert & Ludvigsend, 2007; Virkkunen, Makinen & Lintula, 2010). It was therefore considered a particularly suitable theory on which to base the research reported on in this article. The Work and Learning course design followed the principles of expansive learning derived from activity theory. Expansive learning is a process of collective learning in which groups of people attempt to develop innovative solutions to solve problems identified in society (Engeström & Sannino, 2010; Sannino, Engeström & Lahikainen, 2016). In expansive learning, the participants first identify the problems in their working lives that arise as a result of systemic contradictions (see Figure 1). With regard to these contradictions, we followed the approach that the social and material contexts of education and work are significantly different, an approach often used in activity theory studies of education and work (Le Maistre & Paré, 2004; Konkola et al., 2007). The course participants attempted to resolve these contradictions between the two contexts by formulating new, bridging ideas, which they then experimented with in practice. The blended learning process was supported by means of in-class collective activity among the course participants and through them giving and receiving feedback in the online environment. The course itself had two main outcomes:

1. The course participants were required to explain the differences in knowledge, practice and learning between educational institutions and workplaces; and

2. They were required to propose novel and innovative forms of boundary-crossing practices in their own fields.

In expansive learning, interventions intended to promote boundary-crossing and change need to develop participants' 'transformative agency' (Virkkunen & Newnham, 2013:230). This refers to their ability to theorise an existing challenge and to generate new concepts as solutions. Transformative agency emerges in different forms. Stages in its development provided the course facilitators with a lens through which, first, to examine the course participants' learning and, second, to evaluate the usefulness of the activity theory-informed approach, thus giving rise to the following research question:

> How, and to what extent, did the activity theory-informed course enable course participants' transformative agency over time?

The concept of transformative agency has been used to analyse workplace learning, as has been reported on in the special edition of the *Journal of Workplace Learning* (Engeström & Scaratti, 2016). However, the concept has not been applied or tested in studies about academic development that have focused on the transitions between work and learning. This study attempted to fill this gap.

Brief overview of the literature on staff development in vocational or professional education

The number of studies on academic staff development in higher education generally has been increasing, but less attention has been paid to academic staff development in professional and vocational contexts (Finlay, 2008). In fact, a report by the United Nations Educational, Scientific and Cultural Organization (UNESCO) claims that vocational pedagogy is 'under-researched and under-theorised' (Lucas, 2014:2). Although most of its pedagogies have not been codified, work-based learning (which predates academic learning) can be recognised by a number of 'signature pedagogies': the induction of apprentices into work practices and the development of their expertise through mentoring and feedback (Barnett, 2006:145), to name but two. Wenger's classic study was an early attempt to identify a workplace learning pedagogy, key features of which were 'situated learning', 'communities of practice', 'legitimate peripheral participation' and the importance of context (Wenger, 1999:13–15).

While much has been written about the procedural standards and skills expected of both novices and experts, many of them codified, the pedagogies required to attain these standards are in the process of 'evolution' (Viteritti, 2015:130). Accordingly, at this stage, further clarity is needed on the 'epistemological distinctions' that underpin the differences in work-oriented pedagogies (Kennedy, Billett, Gherardi & Grealish, 2015:3). For example, industries demand a closer alignment between higher education curricula and real work tasks so that the former better meet the needs of organisations and learners (Choy & Delahaye, 2009). Trede (2012) argues that, in order to shape and match professional identities, both industries and learners prefer learning to reflect real work issues. This, in particular, was the focus explored in the Work and Learning course. However, such an alignment is often complex and challenging for both academics and workplaces. It demands that students, academics, workplaces and

administrators move beyond a teaching orientation to a demonstrably effective learning arrangement by means of learning and practice that is informed by theory (Cooper, Orrell & Bowden, 2010).

In a recent study, Cenci and colleagues (Cenci, Lemos, Bôas, Damiani & Engeström, 2020) propose expansive learning as a learning theory that is both highly applicable to teacher education and one that teachers themselves can apply in their own professional practice. In the next section, the potential of expansive learning as a theoretical framework for academic staff development in vocational and professional contexts is explained further.

Theoretical framework: Expansive learning

Most forms of learning at university or college focus on learners' acquiring pre-existing knowledge and skills, often in incremental form, through engagement with texts, teachers and peers. Learners are then presented with an intervention such as a training course and are expected to apply their knowledge in a linear fashion. Where expansive learning differs is that what is to be learnt is unknown at the start of the process (Engeström & Sannino, 2011) and evolves as the participants engage with real problems in working life. Since the course participants were dealing with working life, and the problem of how to integrate it better with educational practices, the course facilitators felt that 'expansive learning' was a particularly suitable approach.

Problems provide the starting point of expansive learning and act as a first stimulus to the participants' engagement (Action 1 in Figure 1). Then the participants engage with particular thought processes (or 'tools') that help them to reshape and view problems in a new light. Ultimately, these thought processes should lead to the generation of a new concept or structure that may help the participants to deal with the problem at hand. For their part, the participants' learning involves a 'substantive reconceptualization of learning challenges' facing them (Schaupp, 2011:215). By 'reconceptualisation', Schaupp means that a shift takes place from instances of problems to a more systematic and relational understanding that is underpinned by historically accumulated contradictions.

The expansive learning actions 1 to 7 in Figure 1 are underpinned by particular instruments and tasks. An important instrument for analysis and modelling (Actions 2 and 3 in Figure 1) is the activity system (see Figure 2).

The elements of the activity system require some elucidation. The subject refers to the group from whose perspective an activity is being examined – in this case, the course participants. The object refers to what it is that the group is working towards, often in the form of a 'rough draft'. The object also provides motivation for the course participants to achieve a desirable outcome for the activity (Engeström, 1999). Subjects use tools to work on an object – for example, concepts and processes drawn from their own experiences, from those of other participants and the facilitators or, more generally, from the cultural milieu. The rules element refers to the explicit rules of the organisation and its implicit norms and cultural

values, and so they also influence what can and cannot be accomplished in or through an activity. The division of labour – who does what with what authority – also influences how work is done during the activity. The community refers to all the additional people that course participants have to interact with while doing their day-to-day work.
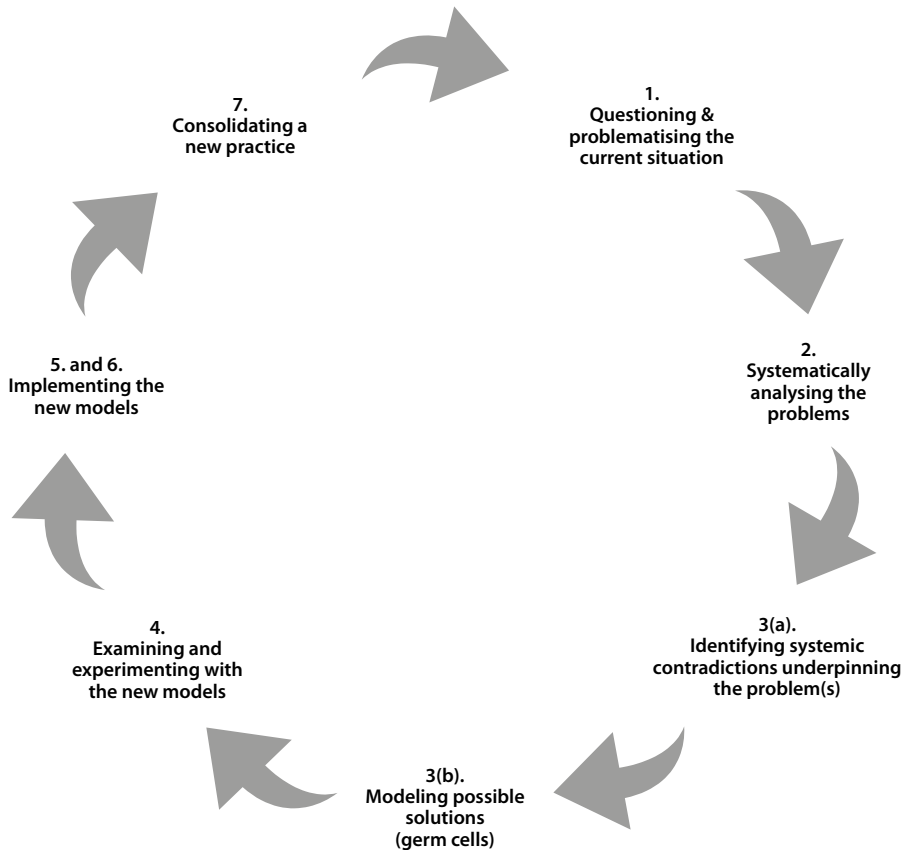
7.
Consolidating a
new practice

1.
Questioning &
problematising the
current situation

5. and 6.
Implementing the
new models

2.
Systematically
analysing the
problems

4.
Examining and
experimenting with
the new models

3(a).
Identifying systemic
contradictions underpinning
the problem(s)

3(b).
Modeling possible
solutions
(germ cells)

Figure 1: The expansive learning cycle (Virkkunen & Newnham, 2013)

The role of the activity system is to help the course participants to move from lived experiences and difficulties (in this case, linking the curriculum to actual work) towards a more systematic and theoretical understanding of the original issues. A key moment in this process is the reconceptualisation of difficulties as contradictions within or between elements of the system and – more importantly for this work – as significant, deep-seated and historically accumulated tensions between the different activity systems of education and work. This transfer from the experiential to the theoretical is an indicator of expansive learning. After this, the course participants attempt to identify a new concept that bridges the identified tensions and holds the potential for a new form of practical activity for the future, known as the 'germ cell' (Engeström & Sannino, 2010). The course participants then attempt to model the new concept and the way in which it may play out in practice.
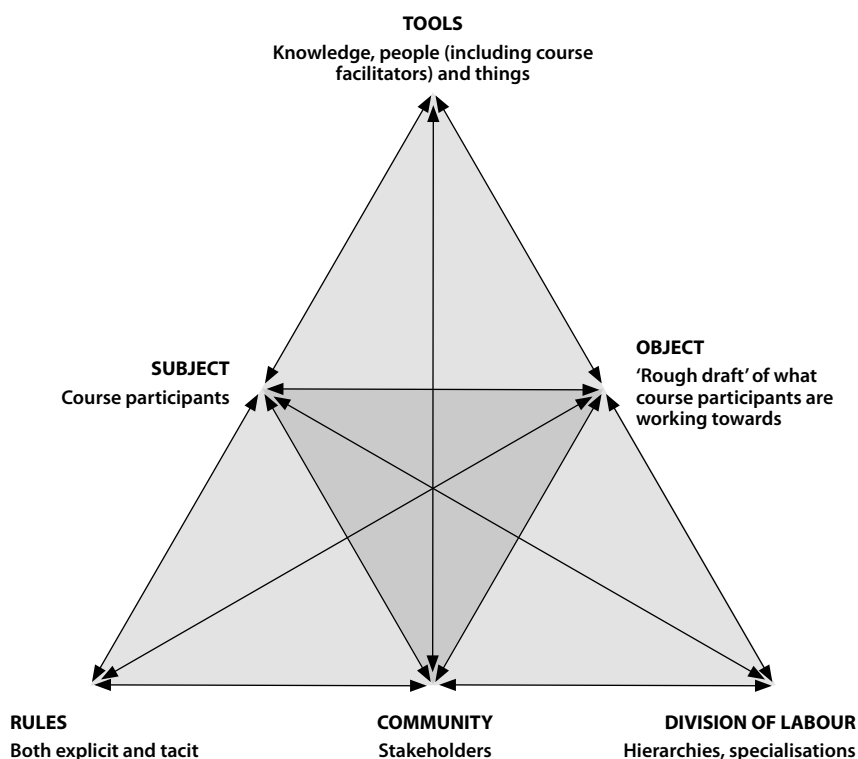
Figure 2: An activity system (adapted from Engeström & Sannino, 2010)

Expansive learning has been described as developing participants' 'transformative agency' (Haapasaari, Engeström & Kerosuo, 2016). Transformative agency occurs when individual agency becomes a more collective activity directed towards change. Englund and Price (2018), writing about academic staff development, suggest that such agency is also about developing the ability to understand one's own actions in relation to those of others and also in relation to attempts to respond to difficulties arising from this relationship.

Following the work of Haapasaari et al. (2016) and Virkkunen and Newnham (2013), transformative agency can manifest as the types listed below. Although the different types can occur at any moment in the expansive learning cycle, they can also occur in the order given below:

- **Resisting** refers to both the resistance of the broader community to forms of change and to participants' own resistance to engaging in formative interventions (such as training), which are often seen as having been imposed upon them by researcher–interventionists;
- **Criticising** a current activity and an organisation with the aim of identifying problems at work;
- **Explicating** new opportunities or potential in the activity, which may sometimes include reference to other solutions that have worked in the past;

- **Envisioning** new ways of operating that may help to resolve the problems identified;
- **Committing** to taking concrete new steps to change the activity, which may take the form of definitive statements such as 'I will … ' or 'I aim to … '; and
- **Taking action** to change current practices and so resolve the problems originally identified.

The elective course: Work and learning – working across transitions

- The Work and Learning course was a blended learning intervention that took place during an academic semester. The nine course participants were all lecturers working in the fields of vocational or professional education. Three TVET college lecturers were teaching at National Qualifications Framework (NQF) Level 5 in Small Business Development, Motor Retail and Electrical Engineering;
- One lecturer was a military officer at the officer training academy;
- The other five were university lecturers:
    - Three were from the health sector, lecturing in Emergency Medical Care and Pharmacology; and
    - One taught in a university law clinic and one in the field of transport economics.

What brought the course participants together was their mutual concern about the relevance of their courses to society and their respective industries, a concern that emerged during discussions on problems with alignment in the early sessions.

The course comprised face-to-face sessions, online meetings and individual consultations. The facilitators introduced the participants to concepts in activity theory, particularly the idea of expansive learning, third-generation activity theory, and boundary-crossing.

The course itself was aimed at helping the participants to become aware of the activity systems that they were working within and across. The intention was for facilitators and participants to collectively develop strategies and tools to support expansive learning in various vocational and professional fields. It was hoped that the participants' engagement would result in creative rethinking about how students might be better prepared for their various occupations or professions. Such 'creative thinking' has been reported more generally in expansive learning initiatives (Sannino, Engeström & Lahikainen, 2016).

Using the expansive learning theoretical framework (Figure 1), the participants were first asked to come up with what they believed to be a major disjunction or difficulty between what they were teaching and what their students were expected to do in practice. The participants were then interactively introduced to activity theory analysis. This was followed by a detailed exploration of work–education differences, based on the work of Eraut (2004) and Le Maistre and Paré (2004).

After that, the participants were required to perform an activity theory analysis of their own classroom activities, on the one hand, and an analysis of a typical workplace, on the other.

For example, activities could be analysed as elements in an activity system, such as subject, object, tools, rules, and so on – see Figure 2. The different systems were then compared and the most glaring contradictions were identified. For example, were any of the contradictions primarily between the purpose of education and that of work? Or between the rules of the classroom and those in workplaces? Or between the resources available in the classroom and those available in the workplace? Through this process, the course participants were encouraged to question the ways in which their students were being prepared for work in the current South African context; and, through such questioning, they were being guided to search for solutions to the problems that they identified and to model solutions that could be implemented. The next task was for the participants to situate the identified disjunctions within these major systemic contradictions. Once they had completed this task, they could proceed to seek a bridging concept or process that could possibly resolve the disjunction. This task was performed with varying degrees of accomplishment, as illustrated in the participants' vignettes.

Although transformations in higher education do not take place easily, the intervention that this course constituted was guided by Engeström's (2009) idea that any change, no matter how small, could become the 'germ cell' for greater transformation where conditions permit this.

Evaluation research design and methods

In evaluating the Work and Learning course, we drew on theoretical and methodological tools to determine the extent to which the new course was able to guide the participants' thinking about how to prepare their students better for the world of work. The research design comprised a 'theory-driven evaluation' (Chen & Rossi 1980; Coryn, Noakes, Westine & Schröter, 2011). In their classic study, Chen and Rossi (1980:67) argue that 'common sense understandings of social problems and their treatments, without considering the appropriate social science theory' are unlikely to build knowledge or improve programmes. In a meta-analysis of theory-driven evaluation research, Coryn et al. (2011) found that theoretical approaches were central to knowledge-building in evaluation research. The contribution of programme evaluation to knowledge-building is enhanced when the programme is innovative, particularly when the evaluation of an innovative programme includes contributions by course evaluators, course facilitators and course participants in the 'co-creation' of knowledge (Lam & Shulha, 2015). Hooley and Moore (2005), in their evaluation of an innovative programme for pre-service secondary teachers, explain that a theoretical approach to evaluating an innovative programme is crucial if the evaluation is to provide meaningful data for programme improvement and make a meaningful contribution to knowledge. In much evaluation research, as the examples above illustrate, there are intersections between research and practice, and between researchers and practitioners. This was the case in this study. Virkkunen and Newnham (2013) refer to this more integrated researcher role as that of a 'researcher–interventionist'.

Data-collection methods

The main source of data was the final summative assignments submitted by the course participants. In this study, six assignments are represented as shortened vignettes that highlighted the course participants' expansive learning journeys. Vignettes were used because the assignments themselves were too long to represent in total. Vignettes are typically used in education research to highlight main ideas in shortened form, but also as a means of ensuring that participants' contributions are anonymised (Bradbury-Jones, Taylor & Herbert, 2014). There is considerable support in research methodology literature for the 'relevance of vignette work for teacher education and system development … including its application in teacher qualification programs and professional learning communities' (Schratz, Westfall-Greiter & Schwarz, 201:123). There is also support for the use of vignettes as a tool for exploring cultural identity (Crafter, De Abreu, Cline & O'Dell, 2015).

In addition, an external evaluator was appointed to evaluate the Work and Learning elective course. She was requested to observe the face-to-face sessions and the online interactions, to interview the facilitators and the course participants, and to study the assessment tasks. The external evaluator's extensive and detailed report (Wright, 2017) and the data on which it was based were drawn on for the purposes of this study.

Data analysis

The six vignettes were analysed against the types of transformative agency described earlier, and these were, in turn, matched to learning actions in the expansive learning cycle (Figure 1). Even though the class size was small, this was counter-balanced by having a strong methodological framework through which we were able to undertake a detailed analysis of the data gathered, as is typical in much qualitative research in higher education (Cousin, 2009).

Research findings

Exemplars of resistance from the external evaluator's report

All the course participants struggled with the theoretical concepts presented in the course and there was clearly resistance to this aspect. An often-expressed sentiment in the course evaluation (Wright, 2017) was the following:

> The theoretical aspect took a lot of reading and thinking to figure it out[;] the contact session did not really do that very well, as I look back now, or it could not address application/transfer issues to the actual assignment.

> I was confused by the terms and coming up with the 'germ cell' was a bit of a challenge.

The course participants not only found the theory challenging, but also questioned why theory was necessary in a course that was focused on practice or linking theory to practice. This was particularly the case for those who came from more vocational backgrounds (workplace-integrated learning learning or WIL):

> Make WIL more practical. Do not focus so much on theories. Structure the course and assignments in a practical way.

> Make this course a practical application. Do not make WIL a theory-based course.

> More can be done to make the course easy to understand and follow. Consider individuals who are directly from a practical and technical background.

Despite the initial resistance, as the course progressed, participants found that they were able to overcome the difficulties posed by the theory:

> Although the content is fairly focused on activity systems and the development of a germ cell to bridge the gap between the two systems, it did involve a lot of reading, as the content is completely new. However, once you did the reading, it became much easier to see the value of that reading and assimilate it into the tasks that were given.

While the external evaluation data focused on the participants' resistance to the intervention, the assignments, represented below as vignettes, provided data in support of the development of other forms of agency. The following six vignettes are synopses of the main responses to the learning actions of the expansive learning cycle, namely: problem-raising and questioning the current situation, analysing it and proposing new models in response to identified systemic contradictions.

Motor Mechanics (TVET college)

The problem outlined is becoming a common one in the further education and training (FET) sector: the inadequacy of students' college preparation for apprenticeships in workplaces, here within the field of Motor Mechanics. The problem is exacerbated by the available laboratories, which used to be for all students but are now being booked for a small, dedicated stream, one which attracts funding and status from the government. Thus the attempt by the course participant is to construct the in-between 'entity' to assist the majority of college students to transition more easily from college to apprenticeship.

In the college, there is the obvious problem of chalk-and-talk, 'the traditional method of lecturing where lecturers act like a church pastor dictating to students'. Teachers teach towards a more theoretical test and learners have limited opportunity to engage both cognitively and practically with the content and skills taught. As this course participant suggests:

> … This is because vocational education is taught as a collection of rules, procedures, theorems, definitions, formulae or applications that need to be unthinkingly memorised, and then used in the workplace. Learning to do is more important than knowledge and meaning. This practice has resulted in a narrowing of the curricula … .

The problem of school-to-work transitioning is further exacerbated by changes in the motor industry. These include the relatively recent emergence of a plethora of new car models equipped with new electromechanical technologies. But the classroom 'tools' (models, teaching aids) have not kept up with these new developments and workshops where some of this transitioning may be facilitated are not available to students. Workplaces, furthermore, have organisational cultures and rules of operating which newcomers need to acquire but which cannot be learnt in class. Classrooms, for instance, highlight individual rather than collaborative achievement and so may be at odds with workplace cultures.

What, then, is the new vision for the programme? There is obviously the return of practical workshops which would need to happen, and also the upgrading of classroom models, but these developments would be hard to facilitate with limited resources. If it is not immediately possible to expose students to more authentic practice, then one interim idea would be to ensure that teaching staff are exposed to recent developments in industry so that they would be able to bring both advanced technologies and some idea of current organisational culture into the classroom.

Pharmacology (university)

In pharmacological studies, some of the same issues of disjunction between university teaching (lectures, notes, and so on) and pharmacy practice also apply. This disjunction creates a problem space between the two activity systems and so a new, shared object is needed between them. The course participant highlights a fundamental difficulty in professional courses, that is, that the curriculum becomes an end in itself rather than a means to empower the new professionals in society through providing them with relevant knowledge and skills. In addition, the problem is made more complex here, because the tightly controlled pharmaceutical industry has not kept pace with the changing, more general health role that pharmacists are expected to play in the community – an issue that her colleagues agree with. For the majority of workplaces and for the professional body, the object is dispensing medicines following the correct protocols, in an often isolated fashion. In practice, this is often about 'crowd control' (dealing with masses of orders and people) and acting solely as a dispenser of medicines.

But more broadly in South Africa, there is a new object for all health professions: that of improving healthcare for the community. And this involves collaboration between healthcare professionals in order to realise this object. However, the pharmacy is often left out on a limb in this respect. By understanding this historically accumulated tension in changing times, the course participant comes up with two new bridging concepts that may help to realise this

new approach. The first is that of the 'engaged pharmacist' who engages both with other health professionals and with the public, not just as a medicine dispenser but also as a health advisor. However, the problem of the pharmacist-as-medicine-dispenser may still exist, so an additional bridging tool is also needed. The course participant proposes a new tool, a medicine evaluation protocol that will extend dispensing into medicine usage and the pharmacist may then engage with health issues that may arise here.

Labour Relations (TVET college)

In Labour Relations, as with Pharmacology, the course tends to focus on completing and assessing the curriculum rather than on its relevance to the workplace, thus setting up a disjunction between the two sites. The course participant refers to the 'student bubble', education unto itself, and also what he refers to as the 'culture lag' between changes in industry and changes in the college curriculum – the curriculum, he suggests, may be out of date.

The course participant first proposes that there is an economic benefit to companies having students in the workplace, as in the 'Master' programme in Germany. His point is not about direct benefit, but that, when a student works in industry, industry can gauge his or her suitability for future employment. Moreover, the student can keep a logbook of what he or she is doing at work and this can be used as a bridge to help enrich the college curriculum and to keep it more up to date. In their logbooks, the course participant suggests, students will be able to encapsulate both openly and easily observable or coded, and less observable and uncoded, elements of industry culture. Therefore, the logbook should serve as an in-between tool that staff can use to help them take into account, and remedy, the culture lag between college and industry.

Legal studies (university)

Does the university curriculum really prepare students for working as legal practitioners? This is the question raised by the participant. Again, the issue of the curriculum being the focal point of the university rather than its relation to professional practice beyond the university, is raised. Furthermore, the rules of the curriculum concern, mostly, assessments, whereas those of the legal profession are about the ethics of practice. The objective of university courses is often to pass examinations, whereas, at work, it is to litigate in the best interests of clients, supporting them through representation with competent legal advice and action as opposed to theories, methods, tools and learning. There appear to be quite dramatic differences. In the opinion of the course participant, there is, consequently, a need to translate the theory and learning in the curriculum into practice. Both theory and practice need to be maintained, however, to 'bring a sense of the workplace into the curriculum while maintaining the theoretical aspects'.

The course participant puts forward the need for a beginning, abstract concept that carries the 'code' of what is finally needed in the legal workplace and suggests the concept of 'advocacy' here. Advocacy is the art and skill of representing another person's interests in

some form of formal judicial process. Acquiring advocacy skills can be supported in two ways: through working in the law advice unit at the university (a free advice service for the community and university) and through emulating legal practice in moot (mock-up) courts. Through engaging in these activities, students are able to better comprehend the connections between theory and practice. This is because they can engage successfully in such activities only through acquiring substantial knowledge of the law. However, these activities (legal advice and moot courts) are currently either elective or voluntary.

In response, the course participant has been moving to make it mandatory in the future for all students at least to work in the advice unit, and he has presented this proposal to the Faculty Board. In addition, the lecturer has sought comment on his ideas from a British colleague. He also suggests an additional tool to promote this theory–practice project: the adoption of a problem-solving approach to legal education.

Transport studies (university)

In transport studies, the main issues are, again, first, that the university curriculum has not been keeping up with workplace changes and, secondly, that different industrial sectors operate under different norms, standards and guidelines and that one course cannot cover this variance. Sometimes, these changes in the workplace have occurred organically, whereas the university sits with prescribed regulations that it continues to teach. Any curriculum needs to prepare students for future work, but how can lecturers both keep up to date and prepare for variances? Furthermore, workplaces are often complex and practices cannot be gleaned simply by brief observation, because they have institutional cultures and memory as well as more overt rules (therefore both implicit and overt rules) with which to contend.

One way to help students and academics to navigate these difficulties, the course participant suggests, is to see work as a 'zone' of learning and students as somehow entering a boundary zone where they will encounter new activity. The participant then proposes the concept of a university, work and community meeting place, or an advisory body, in which information can flow both ways. Students, too, would be included here. He goes further by trying the idea out with his university colleagues to see what suggestions they have. They suggest that the advisory concept can be extended to include workplaces providing specific additions or amendments to the curriculum and providing opportunities for students to conduct on-site visits. There is also a nagging issue: that of students not being adequately prepared in employing quantitative techniques as a component of their studies, which the advisory body could deal with.

Military Academy (university)

This course participant is a Military History lecturer at a university academy for serving military officers. Officers take time off (up to three years) to study but gain no advantage in their prospects for promotion, despite the Defence Force's human resource (HR) management policy having been reviewed recently. The revised policy recommends that officers' promotion

prospects be enhanced by their engaging in academic or vocational studies. There are, furthermore, significant complications associated with the different cultures and the power relations between the academic project and the conventions of the military establishment. Not least of all, these are manifest in the physical location of the university and the recognition of its staff in the military hierarchy. Then, at university, critical questioning is often required, for example, as in the teaching of Military History. But this feature of academic studies clashes with the organisational culture, where following orders is more typical of military workplaces. In addition, there is the matter of hierarchy. At the academy, officers may be taught by civilians or by more junior officers who have higher academic degrees, and this tends to set up a tension between epistemological authority and military authority, most notably in the setting and assessment of WIL assignments.

The proposal for a bridging device was, in this case, for the Military History lecturer on the course to find ways, first, to promote and showcase his teaching in the workplace and among the 'generals', and, secondly, to link the conceptual models and case studies with those that are complementary to the more practical aspects of military training. These measures would, he foresaw, narrow the distance between the historical, conceptual and applied aspects of military training and practice. Another proposal he suggested would be to push for the HR policy recommendations arising from the recent review to be implemented without delay, so that academic study and qualifications could be fully recognised and aligned to career paths in the military, and promoted as such.

Discussion and analysis

The vignettes are analysed against the six types of transformative agency (resistance, criticising, explication, envisioning, committing, and taking action) and the learning actions shown in Figure 1.

Resistance

Resistance, as a form of transformative agency, stands out in the participants' experiences on the course. Resistance first emerged during the evaluation report (Wright, 2017) as initial resistance to the activity theory that underpinned the elective transitions course. The participants struggled to understand why a course about practice should be so theoretical. In general, the resistance of academic staff to teaching and learning theory is well known in the academic development literature (Quinn, 2012), possibly because academics focus more on their disciplinary norms rather than on how students learn them.

The theoretical approach pursued by the course facilitators, which the course participants initially resisted, was something thrust upon them. Similar forms of resistance have been observed in teacher education, where teachers resist engaging in expansive learning (Guzmán, 2018), and in workplaces, where management attempts to influence changes in response to difficulties (Haapasaari et al., 2016). Such resistance may set up an information-seeking

dialogue with managers or facilitators, or engage participants in reflection on the problem, and so support their development of transformative agency (Sannino, 2010).

Judging by the comments in their evaluations, after reflection, the participants endorsed the need for theory and the expansive learning approach. In retrospect, a more practice-oriented approach to activity theory was needed, based on case studies on its use in school-to-work transitions (Wright, 2017).

As Haapasaari et al. (2016) and Virkkunen and Newnham (2013) remind us, resistance to change (in dealing with accommodating transitioning) can also come from within one's own institution or from external sources. The TVET college course participants, for example, spoke of their institutions allocating resources to more well-funded programmes rather than supporting transitions in those programmes that most needed them. In the case of pharmacology, workplaces tended to cling to the more traditional 'medicine-dispenser' role rather than that of an integrated medical professional. Questioning such moves can develop into a useful dialogue between lecturers and these groupings.

Although not directly referred to, it can be inferred that workplaces needed affordances[1] for students' transitioning learning. 'Affordance' here refers to the type of support offered by expert practitioners to help students with their workplace learning, and this can be both positive and in some cases negative, effectively constraining student learning (Billet, 2009:835).

Criticising

Criticism of the current relationship between the educational institution and the workplace revolved round the lack of articulation between them. All the course participants were critical of the current relationship of their educational institution to relevant workplaces. This was not surprising, because they were asked, as part of the course, to raise the difficulties being experienced. In most cases, this was because the institution focused on matters it considered important to itself, the curriculum and assessments rather than on the complex nature of workplace-based learning and change. These difficulties were often quite nuanced: for example, where the regulatory authority extolled rigid and discrete ways of operating that did not reflect international models of professional practice.

Explicating

'Explicating', as a form of agency, refers to an awareness of new opportunities, that things can be done differently, often with reference to past problem-solving success (Virkkunen & Newnham, 2013). Explication was one of the least-represented transformational types in the

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1   Affordance: For example, design students are encouraged to contribute to a work team tasked with designing a new insignia for a fruit juice company, rather than being assigned to more low-level procedural work.

course participants' texts. One exemplar drawn on was the German tradition of high-level apprenticeships that bridge the university–workplace divide. Another example was the 'Defence Review', which could raise the status of academic studies in a military environment.

Envisioning

Along with criticising current practices, envisioning new possibilities to bridge the institution–work divide was a strongly represented form of agency. The course participants proposed new concepts (e.g. the engaged pharmacist, advocacy), bridging structures (e.g. advisory bodies) and bridging devices (e.g. workbooks, working in community advice centres). This is not surprising, because the aim of the course was to provide the course participants with the means to suggest new bridging possibilities for the future.

Committing

Commitment, as a form of agency, was more difficult to discern from the course participants' written assignments or from their evaluations. Commitments are typically expressed in terms of speech acts, or as verbalised intentions for the future, such as 'We intend …' or 'We are going to …' (Virkkunen & Newnham, 2013:233). A possible reason for the absence of commitments was that they were not specifically asked for in the assignment; nor were the participants asked to share any future consequential actions that had actually been taken.

Taking action

Regarding future action, there was only one example: a proposal to make undergraduate community advice centre work mandatory was taken to a university Faculty Board. The same course participant also expressed a commitment to assessing the impact of student engagement in moot courts on their theoretical and procedural learning. Although important, these types of future action typically occur after the completion of the initial phases of the expansive learning cycle as 'experiments' (Engeström & Sannino, 2010), a point not generally reached in a relatively short course.

Transformative agency and expansive learning

The expressions of agency exhibited by the course participants occurred mainly in the first three learning actions of the expansive learning cycle: questioning, analysing and creating a new model (Figure 1), because the nature and extent of the course could only propose ways in which difficulties may be resolved. An intervention provides an impetus for participants to develop their agency (Haapasaari et al., 2016). Furthermore, it is possible to locate these expressions of agency as emerging from contradictions in the activity system itself (Figure 2).

The initial resistance to the theoretical approach to the course can be understood as a contradiction in the subject element of the system. For professional or vocational practitioners,

'theory' is something that is seen as less relevant than practice. The role of the course facilitators was then to show the course participants how theory could be put to use so that they might develop their agency to resolve curriculum problems.

When the course participants spoke of the focus of the curriculum being on the institutional needs (curriculum and assessment) rather than on what is needed for the particular occupation, the issue lies with the object of the activity. In the terminology used by Virkkunen and Newnham (2013:18), there is 'an object–tool reversal'. The tool – for example, the curriculum – that is aimed at facilitating the achievement of a broader societal goal (i.e. developing young professionals) is seen by the educational institution as an end in itself. Righting this reversal can result in course participants becoming aware of the opportunities for change in creating better linkages between the curriculum, pedagogy and future workplaces.

In discussing the opportunities for change, the course participants often referred to embedded systems of influence within either the educational institution or the workplace. For example, in the case of pharmacology, the professional body plays a pivotal role in determining the focus of the curriculum, which may hamper the introduction of more societally focused educational practices. In legal studies, acknowledging and possibly recruiting the Faculty Board to buy into new initiatives appeared to be helpful. In the colleges, the influence of government funding bodies is disparate, and this may militate against developing new initiatives; but, at the same time, this situation may motivate the course participants to exert their agency. These factors can be understood as problems arising from within the division of labour, with some community members having more influence than others, often to the detriment of boundary-crossing curriculum initiatives.

Conclusion and implications for future courses

In examining the present course, were we able to provide its participants with the means to understand the transition between curriculum and workplace? Were we able to help the participants to transform everyday experiences and issues into more systematic and theoretical understandings? Did course participants gain transformative agency, that is, the agency to transform experiences into new ways of thinking that are sustainable over time?

Although their work may have been uneven, and the participants initially struggled with activity theory, overall we feel that we can make the claim that the course participants were supported in the development of their transformative agency. Part of our claim is based on what the participants were able to do in their assignments, that is, to 'reconceptualise' experience and create new possibilities for change in their practices. In addition, as the external evaluator wrote in her report after observing and interviewing the participants:

> During the process [of the course,] participants developed a sense of personal agency and intended to take their work forward into the 'real world', beyond the course. Those who did well had not progressed without struggles, but seemed to

> have tried to help themselves to cope to overcome those challenges, e.g. [by] taking notes on new concepts, reading diligently to understand theory, etc. The outstanding work of some of the participants was highlighted by the external examiner, who recommended that their work be developed for publication. (Wright, 2017:51)

In discussion with the external evaluator, a course facilitator raised the issue of the scope of the problems that the course participants were dealing with, and the theoretical tools required to deal with this:

> Also, although participants had begun by identifying a relevant, practical (concrete) problem, some of these problems had been 'very big' for honours level; and the escalation of these problems to the abstract (e.g. in the notion of a contradiction) could have been eased if there had been more scaffolded guidance for participants, with 'accessible' examples illustrating troublesome concepts, along with guided readings (Wright, 2017:46).

The participants did struggle with activity theory, in particular with the contradictions and their resolution through bridging concepts. A more structured approach to developing the course participants' theoretical understanding, and a greater use of practical exemplars, was therefore suggested by the evaluator. The course facilitators should also have provided more scaffolding for the course participants' assignments. Furthermore, conceptual difficulties made giving and receiving feedback problematic. However, the course participants reported on learning how to understand and resolve curriculum problems in a more systematic manner through using activity theory, and therefore gained a sense of greater agency in their teaching and curriculum design.

The extent to which the commitments and actions expressed actually bear fruit in the long term could be followed up only through longer-term tracking of the course participants (Haapasaari et al., 2016). We believe this to be a limitation of the study, because on-the-ground change may occur only long after the intervention itself (Virkkunen & Newnham, 2013). This could create difficulties for more longitudinal reporting. At the time of writing, however, one participant had used their learning on the course to develop a teaching portfolio and to submit a scholarly article for publication on university and work transitions.

The use of expansive learning to develop the course participants' transformative agency, while useful in professional or vocational education, need not be restricted to this sector alone. As Englund (2018) and Englund and Price (2018) have highlighted, developing the participants' transformative agency in a curriculum is also important in times of transition at universities. Such an approach could provide a new way of thinking about the development of the academic participants and also a new line of research into academic development.

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