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Contextualised performance: reframing the skills debate in research education

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In Australia, as in the UK, much of the skills debate in research education has reflected a deficit model, whereby candidates are deemed to be in need of supplementary training. In response to the demands of employers and governments, most universities have added employability skills to postgraduate curricula, while simultaneously boosting their efforts in relation to the enhancement of academic skills. Using an analysis of three conceptual frameworks identified in the literature, this article endeavours to reframe the skills debate by developing the concept of 'contextualised performance'. A key characteristic of this relational construct is the enactment of skills in a variety of authentic settings and challenging circumstances. The article concludes by establishing links with literature on curriculum and pedagogy, with a view to enriching discussion around what it means to assess the capability of graduates.

Keywords: research training; graduate skills; capability; student voice; curriculum

Introduction

Much has been written about the development of graduate skills and attributes in the field of higher education (Bridges 1993; Clanchy and Ballard 1995; Kemp and Seagraves 1995; Cummings, Ho, and Bunic 1997; Bowden et al. 2000; Fallows and Steven 2000; Boylan 2002; Hager, Holland, and Beckett 2002; Moore and Hough 2005; Hager and Holland 2006; Jones 2009). However, there are claims that much of this work lacks the support of a conceptual framework or theoretical underpinning (Barrie 2004, 263). While some initial investigation has been undertaken in the subset of postgraduate research education (Cryer 1998; Borthwick and Wissler 2003; Gilbert et al. 2004; Manathunga 2004; Kiley 2006, 2007), there would appear to be a correspondingly low level of conceptualisation.

The purpose of this article is to investigate the issue of skill development for higher degree by research candidates. In doing so, both practical and theoretical perspectives will be considered. By reflecting on developments in Australia and the UK and drawing on a selection of conceptual frameworks, the intention is to promote fresh thinking around the skills debate in the context of research education. The argument to be advanced is that, while complex systems of skills classification have contributed to much-needed conceptual development, opportunities for reframing need to be identified and extended. To that end, the article draws on research concerned with 'performers' and 'performance', with a view to shifting the focus from

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expectations to behaviour. The concept of 'contextualised performance' is presented with a view to shifting the discourse away from skills per se, and towards their execution in unfamiliar, as well as routine, settings.

The article draws specifically on a research project funded under the auspices of the Australian Learning and Teaching Council (ALTC), and implemented at the Australian National University in 2008. The primary objective of the 'Research Graduate Skills Project' was to map the territory in Australia of skills development for higher degree by research candidates. Key questions driving the research were *What skills are being developed?* and *How are those skills being developed?* The first phase involved a review of the literature and a scan of a wide range of university and related websites containing details of contemporary skills programs and activities for graduates. This was followed by the implementation of an extended case study of research graduate skills development at one Australian tertiary institution. Building on the outcomes of an external formative evaluation, the third phase involved further conceptual development, along with the construction of a website – www.gradskills.anu.edu.au – and related strategies designed to raise awareness of project outcomes and processes.

Given that contextualised performance is central to this article, it is useful to provide an initial outline of the concept in order for the reader to grasp a number of key characteristics. First, the focus is on the enactment of skills in particular circumstances and settings (e.g. high-level accomplishment, complex outcomes), rather than the classification of skills (e.g. research, generic). Second, the focus on enactment means that demonstrating skills is a relational exercise involving not only performers – candidates and graduates – but other individuals such as supervisors, researchers, peers and community members. Third, contextualised performance needs to be considered in relation to particular settings such as the field, a laboratory, department or workplace. Similarly, the circumstances in which these performances take place, for example, their contribution to collaborative projects or strategic initiatives, are also important.

In order to explain how the concept of contextualised performance has been constructed, this article begins by capturing key aspects of the contemporary skills debate in higher education from various stakeholder perspectives. This is followed by an outline of three conceptual frameworks identified in the literature that have been developed to promote higher-order thinking around skills development. The strengths and weaknesses of these perspectives and frameworks are then considered, and a further elaboration of contextualised performance provided. In the final section of the article links are established with select literature pertaining to curriculum and pedagogy.

Stakeholder perspectives

In the higher education literature on skills development reference to the terms 'agenda' (Fallows and Steven 2000), 'debate' (Gilbert et al. 2004) and 'discourse' (Craswell 2007) serves to highlight the extent to which this topic is regarded by some writers as contested and continuously evolving. Points of contention include the role of tertiary education in the context of emerging global economies and knowledge-based societies, and, more specifically, the role of universities and academics in preparing graduates for employment. While learning, scholarship and research have long been regarded as core functions of higher education, a more instrumental view has emerged in recent years, whereby outputs associated with these functions

increasingly are being tied to economic growth and national productivity. In order to gain greater purchase on the skills agenda in the university sector in Australia and the UK, it is useful to consider the perspectives of key players, namely, employers, governments and candidates. A discussion of the contributions of selected academics who have published in the area is contained in the following section.

Employers

The concerns of employers regarding the suitability of university graduates and post-graduates for employment have been identified in assorted publications from the UK and Australia during the past decade (Business and Higher Education Roundtable 1997; ACNielsen Research Services 2000; Davis et al. 2000; Gallagher 2000; Jagger et al. 2001; Allen Consulting Group 2004; Precision Consultancy 2007; Confederation of British Industry 2008; Murdoch 2008).

A dominant theme emerging from this material is that many graduates lack appropriate skills, attitudes and dispositions, which in turn prevents them from participating effectively in the workplace. Areas of concern are typically expressed in terms of deficiencies, especially in relation to communication, human relations and problem solving. Employers have expressed a desire for graduates who are 'well rounded' and cognisant of the working world and business practice, as distinct from being too highly specialised in narrow fields of academic study. To that end, they have advocated that graduates at all levels should acquire a set of transferable or employability skills. The following extract highlights the importance placed on the ability of university graduates in the UK to demonstrate these skills:

It is clear that what employers look for in graduates is a positive attitude and the wider employability skills needed to succeed in the workplace ... The message to students and universities is clear: while obtaining a good degree result is important, it must be achieved alongside the development of valuable softer skills to make the most of their opportunities after graduation. (Rugby Team 2007, 23)

Governments

Governments have contributed to the skills agenda in higher education in three significant ways. The first is by making the connection between education and the economy more explicit. A plethora of reviews, commissioned reports and programs have advocated the need to reform higher education, for example, by strengthening the links between research, innovation and national productivity (Harris 1996; National Committee of Inquiry into Higher Education 1997; Kemp 1999; Roberts Review 2002; Park 2007; Bradley et al. 2008; Cutler 2008; Department for Innovation Universities and Skills 2008; House of Representatives Standing Committee on Industry Science and Innovation 2008).

Second, governments have responded in practical ways to employer concerns about graduates and their capacity to make an effective transition from study to employment, while promoting their own agenda in relation to postgraduates' increasing contribution to the economy. The objective of the original UK GRAD Programme, for example, was 'to support the academic sector and other stakeholders to embed personal and professional skills development into research degree programmes' (this statement was accessed from the Research Councils UK website in February 2009:

http://www.rcuk.ac.uk/NR/exeres/D95DCD78-248B-4E59-A155-1A92C9219070_frameless.htm?NRMODE=Published). Moreover, in Australia the Commercialisation Training Scheme has aimed ‘to provide high quality research commercialisation training for the next generation of Australian researchers as a means of equipping them with the skills, knowledge and experience necessary to bring research-based ideas, inventions and innovations to market’ (Australian Government 2007).

Third, governments have triggered a series of mechanisms to foster greater institutional and sector accountability. Examples from Australia include the graduate skills assessment test (Hambur, Rowe, and Luc 2002), the higher education graduation statement (James and Meek 2008) and the excellence in research initiative (Australian Research Council 2008). These initiatives reflect a strong emphasis on the measurement of performance – generally on a comparative basis.

Candidates

In contrast to the vociferous and public demands of employers and governments, the voice of research candidates in the skills debate has been largely muted or ignored. CAPA – the Council of Australian Postgraduate Associations – has been active in liaison with governments and departments, via submissions to national inquiries and responses to consultation papers. For example, in its submission to a national inquiry on research training, CAPA argued that ‘many postgraduates are already brimming with “work ready” skills’ (Council of Australian Postgraduate Associations 2008). Drawing on other research, CAPA pointed out that higher degree candidates make a substantial contribution to Australia’s research effort. Estimates of university research being conducted by postgraduates range from 30–35% (Powles 1984) to 65–70% (Siddle 1997). The National Postgraduate Committee of the UK has also argued that ‘postgraduate students make a significant contribution to the research undertaken in UK universities and the UK’ (National Postgraduate Committee of the UK 2006).

One aspect of postgraduate skills development rarely acknowledged, however, is the nature and extent of authentic ‘work’ undertaken by candidates prior to and during the course of their postgraduate studies. Australian statistics reveal that 40% of 15–19 year-olds and 52% of 20–24 year-olds currently enrolled in full-time study are also employed part-time (Australian Bureau of Statistics 2008). However, it is possible that the diversity – as well as the amount – of part-time employment undertaken by research candidates is underestimated. For example, a recent national survey of doctoral candidates in Australia revealed that in a given week, 35% of respondents participated in paid non-academic employment, 30% in paid academic work, and 19% in unpaid academic employment (Pearson et al. 2008). Select examples of academic work included teaching, marking and research assistance.

Conceptual frameworks

Needless to say, academics have also been active in the skills debate. Some have reacted negatively to aspects of the external push for generic and employability skills development in higher education. Clanchy and Ballard (1995), for example, have argued that ‘the checklist approach to “graduate attributes” is extremely dangerous. It inevitably encourages a fragmented curriculum and mechanistic approaches to teaching and learning’ (159). Others have responded more positively by formulating

strategies to support the development of these skills in undergraduates and postgraduates. One strategy has involved the construction of conceptual frameworks, three of which are outlined below, namely, 'generic capabilities' (Bowden et al. 2000), 'graduate attributes' (Barrie 2007) and 'research skills development' (Willison and O'Regan 2007).

Generic capabilities framework

A significant outcome of a project initiated in the late 1990s by the Australian Technology Network of Universities was the development of a framework for generic capabilities incorporating a number of dimensions (Bowden et al. 2000). Underpinned by a set of principles, various capability areas (e.g. communication, teamwork and problem solving) were identified along with four hierarchical levels of outcome, namely, 'scoping', 'enabling', 'training' and 'relating'. These levels were then positioned in a model relative to a third dimension concerned with 'situational variation'. The significance of this dimension is that individual student experience can lead to different outcomes depending on the situational context.

Describing their framework, these scholars invoke an image of a spiral to allow for potential discontinuity in the student experience in relation to the development of generic capabilities, rather than suggesting that all pathways reflect a strictly linear sequence. A student-centred focus to the development of generic capabilities, therefore, is an essential characteristic of the framework. In their words, 'far better to focus on real-life experiences and on what it means to develop such capabilities within them ... we advocate a strongly student-centred process and argue that the responsibility for managing it should rest primarily with the student in a context of university support systems' (Bowden et al. 2000, 11).

Graduate attributes framework

Based on empirical research, Barrie (2004, 2006, 2007) has developed a related set of theoretical constructs around academics' conceptions of generic graduate attributes. One of these constitutes a hierarchy comprising 'four increasingly complex, qualitatively distinct understandings or categories of description', namely, 'precursory', 'complement', 'translation' and 'enabling' (Barrie 2006, 223). This model depicts academics' understanding of attributes in a band ranging from narrow – the abilities that students bring to university (precursory), to complex – abilities that can transform knowledge and individuals (enabling).

In a subsequent paper, Barrie (2007) extends his model to include the ways in which academics understand the teaching and learning of generic graduate attributes. This construct identifies a further six categories of description, namely, 'remedial', 'associated', 'teaching content', 'teaching process', 'engagement', and 'participatory'. The first two descriptors (remedial and associated) are represented as 'supplementary' aspects of the undergraduate curriculum. The remaining descriptors reflect increasing levels of 'integration'. The majority of categories are depicted as having a focus on the 'teacher and teaching', with only two – engagement and participatory – directed primarily towards the 'learner and learning'. For example, the participatory category is described so that 'generic attributes are learnt by the way students participate and engage with all the experiences of university life' (444–49).

Research skill development framework

Willison and O'Regan (2007) have developed a framework that can be used to chart and monitor students' research skill development. With a focus on undergraduate students, the framework is based on the premise that 'the fundamental facets of inquiry are, however, identical, with common processes being acted out across all research endeavours' (399). Six facets of the research process are identified, namely, that students embark on inquiry and so determine a need for knowledge/understanding; find/generate needed information/data using appropriate methodology; critically evaluate information/data and the process to find/integrate them; organise information collected/generated; synthesise and analyse new knowledge; and communicate knowledge and understanding and the processes used to generate them (400).

The six facets are located in a matrix relative to five levels of student autonomy.

Autonomy in the research context ranges from student engagement with closed enquiries directed towards a pre-determined outcome, involving a high level of structure and guidance, using prescribed methods and processes, through to open enquiries involving high levels of autonomy and self-determination in terms of what is investigated and how it is done. (400)

The authors point out that, although these facets generally follow a linear progression, research is 'frequently recursive', suggesting that some students may find themselves revisiting particular facets in the light of changing circumstances.

Initial discussion

Before examining in more detail the perspectives and frameworks outlined in the preceding sections, it is useful to provide a brief note regarding the language of the skills debate in research education. One scholar has observed that 'the term "skill" is clearly used in a variety of types of contexts, and it is vital that no a priori assumption is made that the term is used with the same meaning in different contexts' (Holmes 2000, 203). A review of the literature reveals that several terms are in common usage, some of which are being used synonymously and interchangeably. Examples include skill, competence, attribute, quality, ability, capacity and capability. For the purposes of this article, the term skill is defined broadly. However, the outcomes of the ALTC project suggest that it is possible to identify two dominant categories: namely, academic and employability skills.

Academic skills typically include an understanding of a coherent body of knowledge, the ability to undertake research, and the ability to analyse information and apply knowledge. However, some variation can be identified in relation to the types and level of skill required for bachelor, master's and doctoral degrees. The AQF – Australian Qualifications Framework (2003a, b) – and the UK Training Requirements (Research Councils UK 2007) contain statements about what is expected of higher degree candidates. While both refer to the making of a substantial and original contribution to knowledge, the Research Council's document provides significantly more detail regarding the ability to demonstrate a range of research skills and techniques (6 specified), research environment skills (7 specified) and research management skills (4 specified).

Employability skills tend to embrace an array of abilities that have been compiled under various auspices in the form of lists, that range from a few dot points to more

detailed descriptors. An example of the former is provided by Government Skills Australia (2006), an agency that has specified eight such skills: namely, communication, teamwork, problem solving, initiative and enterprise, planning and organising, self-management, learning and technology. Further examples from the UK can be found in the literature (Turner 2001; Mason, Williams, and Cranmer 2006), with the joint statement of the Research Councils (2007) including reference to a graduate's ability to demonstrate personal effectiveness (7 specified); communication skills (5 specified); networking and teaming (3 specified) and career management (4 specified).

It should be acknowledged, however, that there is a trend towards greater recognition of the complementary nature of these categories. For example, the academic and employability skills from the AQF and the Research Councils UK are published as discrete components of unified statements on what candidates should be able to demonstrate by the time they graduate. It is also the case that 'generic capabilities' are sometimes used as an umbrella term covering a variety of student knowledge, skills and attributes. For example, in Australia, the Council of Deans and Directors of Graduate Studies (2005a, b) has developed a framework and guidelines to support best practice in generic capabilities for doctoral candidates.

However, recent research points to the development of a deeper understanding of the skills required by higher degree candidates, particularly in relation to levels of variation that have been identified. Jones (2009), for example, has argued that, rather than being 'super-disciplinary', generic attributes are highly context dependent. In a study of critical thinking, problem solving and communication across five fields of study, Jones found that 'generic attributes are interwoven with the culture and content of the discipline' (94). In another study concerned with employer perspectives of post-graduates in engineering, Adams, Mullins, and Zander (2008) found that informant comments 'were frequently more complex and presented a richer picture than provided by the listings of desirable generic skills or professional attributes' (11). For example, their research revealed 'inherent contradictions in employers' simultaneous valuing and criticism of the qualities of autonomy, independence, determination, persistence, and attention to detail developed within the higher degree research experience' (3).

An analysis of the conceptual frameworks outlined in the preceding section also reveals a desire to generate a more in-depth understanding of skill development. As part of their rationale, each framework is advanced as a 'conceptual tool' or 'resource' designed to facilitate dialogue and action, with a view to enhancing the development of graduate attributes and skills. These frameworks also classify various capabilities, attributes and skills into a number of 'levels'. This would appear to reflect the intention of these researchers to construct a more accurate picture of what is required by students. The importance of context is also emphasised, with attributes and skills viewed as being developed in particular settings. A matrix or two-dimensional figure has also been used in each of these models as a means of depicting the nature and extent of the relationship between key variables. Finally, there is a focus on student-centred approaches to the development of skills and attributes.

Given the limited extent of theoretical underpinning and conceptual development that has been identified (Barrie 2004), it is important to acknowledge the valuable contribution these frameworks have made to furthering academic understanding of graduate skills development. A major strength is their capacity to reveal a much higher level of complexity around graduate attributes and skills than has been acknowledged previously. Not only do they highlight the significance of diversity and variation, but

also the need to accommodate these aspects in subsequent initiatives of a theoretical or practical nature. For example, each model challenges the assumption that key skills should be developed in a logical and sequential manner. A sense of a multifaceted phenomenon is conveyed with many factors and pressures at work. The proponents of each model advocate that more research and development is required in order to generate reform: for example, in the areas of curriculum and pedagogy.

At the same time, however, these frameworks have their limitations. To a large extent their reductive nature – whereby attributes and skills are broken down into increasingly smaller elements – risks fragmenting contemporary approaches to students' learning and development. By focusing on the parts, one can lose sight of the whole. While each framework advocates the need for the reform of contemporary approaches to the development of attributes and skills, there is limited evidence of the extent to which they are underpinned adequately by theoretical constructs. There is also a sense that these scholars want to promote flexibility on the one hand, yet adhere to predetermined levels and categories on the other. For example, even though hierarchies are employed in each framework, it is acknowledged that not all students should be expected to move from one level to another in a logical sequence.

Contextualised performance

An alternative way of framing the current debate around skills development is to prioritise performance over performativity. The postmodern concept of performativity can be used to portray the skills agenda in higher education as part of broader schema concerned with increased efficiency and productivity. According to Lyotard (1984) 'the goal is no longer truth, but performativity – that is, the best possible input/output equation' (46). Through this lens, the demands of employers and governments to improve the quality of graduates (outputs) can be seen as being achieved through a focus on front-end skills training initiatives (inputs) – where the objective is to prepare students to a high standard before they enter employment. Moreover, aspects of this agenda often reflect an increasing commodification and marketisation of higher and research education, along with the explicit linkages with economic development and national productivity. In contrast, by focusing on research candidates' accomplishments and strengths, a more even balance can be established between efficiency and productivity on the one hand, and effectiveness and continuous professional learning on the other.

Some scholars have utilised the concept of the student as 'performer' in contemporary discourse around postgraduate education and training. Harvey (2000), for example, discusses an approach in which students are treated as 'intellectual performers' rather than as a compliant audience. In order to address the 'sterile debate' about whether employability skills should be embedded in the curriculum or taught in separate units, Harvey argues that the focus needs to be on empowering students to become critical learners (11). Expanding his argument, Harvey portrays this approach as one that 'transforms teaching and learning into an active process of coming to understand. It enables students to go beyond the narrow confines of their academic discipline to applying themselves to whatever they encounter in the post-education world' (13).

Pearson and Brew (2002) employ the term 'skilful performer' in their discussion of research training and supervision development. Like Harvey, these authors are concerned about limiting contemporary discourse to narrow definitions of employability

skills that students need to acquire, together with a bolt-on approach to skills training. In their words:

another difficulty with defining sets of generic skills, like time or project management, is that this neglects to consider what is needed as a complex outcome; i.e. a skilful performer, rather than someone who can list their skills; someone who not only knows about what to do but knows how to apply that in practice. (137)

The point of departure is the notion of a complex outcome – the performer – rather than a set of atomised skills that an individual needs to acquire.

Holmes (2000, 2001, 2006) also brings into question further aspects of the conventional model of skills development in higher education. In a series of publications he has developed and refined a ‘practice-identity model of performance’ where performance is conceptualised as interpretive construction, rather than something directly observable in an individual student or performer. This model contains five key elements, namely, activity, practice, identity, interpretation and performance (see Holmes 2000, 207, Figure 18.1). As Holmes explains, ‘for any particular situated activity to be construed as performance-of-a-kind, there must be some set of social practices, appropriate to a social arena, such that the activity is taken to be an instantiation of one of them’ (2006, 113).

In other words, the activities of postgraduate students need to be interpreted in relation to operating academic cultures and practices, on the one hand, and their emerging identity as researchers, on the other. In an extension of the model, Holmes has represented graduate identity as a set of ‘zones’, reflecting the extent to which the claims of an individual are affirmed or disaffirmed by others, namely, ‘agreed’, ‘failed’, ‘imposed’, ‘indeterminate’ and ‘under-determined’ (Holmes 2006, 116). He then employs the notion of warrants to show how the claims of students – especially with regard to graduate employability – need to be seen in relation to employers and other occupational gatekeepers.

The concept of contextualised performance builds on much of this work, given its focus on the successful demonstration of skills in multiple settings. In addition, it draws substantially on the notion of capability and the adoption of a more holistic approach to performance, as distinct from remaining contained by narrowly defined statements concerning particular skills, attributes or competencies. Stephenson (1998), for example, has defined capability as ‘an integration of knowledge, skills, personal qualities and understanding *used appropriately and effectively* – not just in familiar and highly focused specialist contexts but in response to *new and changing* circumstances (2, original emphasis). As a means of enriching discussion of contextualised performance, links with literature on curriculum and pedagogy will be established in the next section of this article.

Curriculum and pedagogy

As Fraser and Bosanquet (2006) have argued, ‘the term curriculum is familiar in school education, but more ambiguous in its usage in a higher education context’ (269). In a study that sought to identify academics’ understanding of curriculum, these researchers constructed four categories of description reflecting curriculum product (i.e. unit or program) and process (i.e. student experience, teaching and learning). Barnett, Parry, and Coate (2001) have posited previously that curricula should be understood as embracing the three domains of knowledge, action and self, which need

Table 1. Traditional and emerging curricula (Barnett, Parry, and Coate 2001, 437).

Traditional curricula	Emerging curricula
Knowing that	Knowing how
Written communication	Oral communication
Personal	Interpersonal
Internal	External
Disciplinary skills	Transferable skills
Intellectual orientation	Action orientation
Problem making	Problem solving
Knowledge as process	Knowledge as product
Understanding	Information
Concept-based	Issue-based
Knowledge-based	Task-based
Pure	Applied
Proposition-based learning	Experiential learning

to be not only represented, but integrated across the curriculum. The distinction made by these scholars with regard to ‘traditional’ and ‘emerging’ curricula is shown in Table 1.

A strength of these studies is that they make explicit some of the contemporary understandings around curriculum in higher education that have previously remained obscure. While the literature on curriculum and pedagogy in research education is not extensive, there is evidence to suggest that these issues are becoming of increasing interest to academics and researchers. Connell (1985) was one of the first to articulate the significance of these issues in the context of doctoral supervision: ‘Like other forms [of teaching] it raises questions about curriculum, method, teacher/student interaction, and educational environment’ (38).

In more recent times scholars have begun to explore in greater depth the curricular and pedagogical aspects of education for higher degree by research candidates. For example, McWilliam, and Singh (2002) have argued that the enactment of a new research training curriculum ‘opens up new spaces for higher degree research as a pedagogical endeavour while leaving little space for any residual monasticism that might still be lurking in sandstone corridors’ (15). Their argument is that the curriculum comprises new modes of knowledge that are ‘being produced by risk-conscious academic knowledge workers and non-academic others who are seen to both represent and understand the demands of knowledge work in commercial settings’ (15). This implies that contemporary research candidature is a highly complex endeavour, requiring a more sophisticated approach than the simple provision of supplementary transferable skills courses or work placements.

Gilbert (2009) argues in a similar way that ‘there is value in considering doctoral training as an issue of curriculum as well as one of pedagogy’ (56). Highlighting different forms of curriculum, namely, *intended* (e.g. skills), *enacted* (e.g. experiences), *hidden* (e.g. values) and *informal* (e.g. peers), he believes that it is possible to view the PhD degree as incorporating multiple approaches to learning. Gilbert also argues that ‘a curriculum is an articulation of and from practice’ (57), noting that only recently have attempts been made to formalise doctoral training, rather than continue to construe it as a form of apprenticeship taught ostensibly by example.

Various pedagogical theories have been developed and used subsequently by scholars to help interpret or explain the way in which students learn and develop. Select examples that can be viewed as informing the concept of contextualised performance include experiential learning (Kolb and Fry 1975), reflection-in-action (Schon 1987), cognitive apprenticeship (Collins, Brown, and Newman 1989), legitimate peripheral participation (Lave and Wenger 1991), communities of practice (Wenger 1998), work and practice-based learning (Beckett and Hager 2002) and peer learning (Boud and Lee 2005).

While it is beyond the scope of this article to discuss these theories in any detail, it is instructive that Lave and Wenger (1991) distinguish between a 'learning curriculum' and a 'teaching curriculum' (97). They consider the former to be 'essentially situated ... [and] not something that can be considered in isolation, manipulated in arbitrary didactic terms, or analysed apart from the social relations that shape legitimate peripheral participation' (98). While most of the above theories contend that learning is situated, they also tend to embrace the idea that it is a dynamic exercise that primarily involves doing – as well as thinking, reflecting, refining and so on – in a social context.

By linking contextualised performance with select literature on curriculum and pedagogy, it is hoped that the potential for enriching the discussion on issues associated with skills development will be enhanced. Rather than viewing contextualised performance as an end in itself, as the title of this article suggests, it is more effectively considered as a means of reframing the skills debate in research education. Moreover, this has the potential to inform broader discussions around what it means to assess the capability of graduates, and how such assessments might be conducted, recorded and communicated. Acknowledging that much valuable work has been conducted on the expectations of stakeholders and the classification of skills, the time has come to redirect our attention towards the ways in which higher degree by research candidates enact those skills in multiple settings.

Conclusion

This article has argued that, in Australia and the UK, the skills debate in research education has been driven largely by employers and governments, with universities moving to implement more structured approaches to the development of employability and academic skills. Representatives of postgraduate students have rejected deficit models of skills development, advocating that greater recognition needs to be paid to the skills they already possess, as well the contribution they are making to contemporary research. Unfortunately, however, their voice has not always been heard – let alone acted upon. Recent research on the conceptualisation of research skills and generic attributes at the graduate level has done much to raise awareness of the complex nature of skills development in tertiary institutions. Given that published research has been concerned with higher education in general, and has been essentially reductive in nature, there is a need to identify and explore additional conceptual and related possibilities, especially with regard to higher degree by research candidates. To that end, a reframing of the skills debate around contextualised performance has been proposed. It is important to emphasise that this concept is presented as value-adding contemporary research, given that it draws on a number of conceptual frameworks and establishes links with literature on curriculum and pedagogy. Hopefully it will also enrich discussion around the development, assessment and reporting of graduate capability more broadly.

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