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Smith, E., Clayton, B. (2012), How vocational education and training researchers use theory in their research, *International Journal of Training Research*, 10(3):251-258

Which has been published in final form at:

<http://dx.doi.org/10.1111/j.1442-2018.2012.00715.x>

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How vocational education and training researchers use theory in their research

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This paper is a preliminary investigation of the place that theory plays in vocational education and training (VET) research. Vocational Education and Training is an academic discipline whose theory base has not previously been analysed in detail. The VET research community considers itself to be somewhat undervalued both by the broader education discipline in Australia and by some stakeholder bodies. Yet the community and its experienced researchers have a high reputation overseas. It could be that a better articulation of the theoretical framework within which we work, and the bodies of knowledge upon which we draw, may lead to a greater utilisation of our work by the broader scholarly community and, importantly, by relevant policy-makers.

Background and literature

There are various definitions and understandings of what theory is. Cresswell (2009: 51) states that a theory is an interrelated set of constructs (or variables) formed into propositions, or hypotheses, that specify the relationship among variables (typically in terms of magnitude or direction). Silverman (2010: 109) says that 'theories arrange sets of concepts to define and explain some phenomenon'. Both of these definitions tell us that a theory explains how and why things happen

How does theory in social science differ from theory in science? Petre and Rugg (2010) state that all theory is more or less loosely based on scientific method – ie hypothesis testing - but that some disciplines deal entirely with 'social constructs' rather than things that exist independently of human beings. VET deals with people, who are unpredictable and individual in their actions and choices, and therefore research in VET is often qualitative rather than quantitative.

Cresswell (2009:52) refers to theories at different levels: micro, meso and macro. Macro level theories, for example, seek to explain how societies operate. Micro theories explain individual behaviour. Such theories can be applied both to the phenomenon being studied and to the way in which it is studied.

In the broad fields of education and of management studies, within which many VET researchers reside, there are theoretical divides both in the way in which research is carried out and in the interpretations of the data gathered. Fashions within these disciplines wax and wane. Similar divides are seen in other fields such as economics and industrial relations, which house a smaller number of VET researchers, although within these fields there is arguable less diversity, at least currently. There are also variations in the extent to which research is theorised, varying among sub-disciplines and across national groups. There is a bewildering array of qualitative theories for researchers to choose from. A recent series of articles in the BMJ for medical researchers wanting to venture into qualitative research listed 22 terms, many of them 'theories', in the first article in the series (Kuper, Reeves & Levinson, 2008).

VET is a discipline which has paid relatively little attention to its theory base. Funnell (1998), for example, in one of the few books devoted exclusively to VET researching (as opposed to VET research results) says that the term theory ‘raises many alarm bells’ and suggests that this may be due to the nature of VET itself as a practical discipline. Thus the current small-scale study may be of some value in shedding light on the topic.

Research method

A workshop for experienced VET researchers in October 2011, convened under the auspices of the Australian VET Research Association (AVETRA), included a session which explored the participants’ theory base. Participants each talked for a few minutes about their theory base and agreed to send a short statement for collation. No parameters apart from a general indication of an appropriate length were provided for this statement. Seven people responded to the call and their statements were collated. Following university ethics committee approval for this small-scale project, participants were subsequently contacted to confirm that they were willing for their statements to be included in a publication,

Researcher statements

The statements of the seven researchers are reproduced below. They are simply listed in the order in which they were received.

Researcher 1

My use and understanding of educational theories has always developed from my own educational experience both as a student and as a teacher. Back in the early 70s when I was undertaking my teacher training and undergraduate studies, the research that struck a chord with me was labelling theory and work in deviant school sub-cultures by researchers such as Hargreaves (1967 *Social relations in a secondary school*) and Lacey (1970 *Hightown Grammar*) which described learning settings I personally experienced. Their qualitative approach – mainly ethnographic, participant observation, and the way they presented their finding, lots of first person quotations, had a lasting impression on me. The sociological trends of the day appealed to me – phenomenology in particular, while behaviourist studies within psychological paradigms had the opposite effect.

After working several years as a fairly disillusioned high school teacher in the mid-late 70s, I did a Masters of education at one of the more radical (at the time) education faculties – at the UNSW. This introduced me to Marxist underpinnings, the work of Freire, radical deschoolers like Illich, Goodman, Holt, Postman and Weingartner, and in particular the correspondence theory of Bowles and Gintis. This research tradition provided me with explanations for my disillusionment with school teaching. I now had a macro socio-economic explanation for alienation and the culture and practices of schooling. Although such conflict theories have long been out of favour, the reproduction of dominant capitalist relations in educational contexts continues to underpin my research interests.

My new area of work in 1980 – as a literacy teacher in prisons, caused me to question other dominant educational discourses. The prisoners I worked with didn’t fit the ‘illiterate’ label with its perceived helplessness and lack of agency. I was interested in how prisoners managed their literacy practices, and found myself aligned with the socio-cultural theories of the new literacy studies, drawing on the work of researchers such as Street, Brice Heath, Gee, Barton and Hamilton. As my later work in TAFE over the next 20 or more years took me into other areas, I utilised socio-cultural approaches to literacy and numeracy to understand the work and practices of local council workers and adult literacy students. Relatedly, in recent years, working with Jo Balatti and Ian Falk on the role of social capital,

I have developed further my understanding of social networks and the social theories of learning based on the work of people such as Lave and Wenger

Researcher 2

It is often said that “there is nothing more practical than a good theory” (Kurt Lewin, 1952). What Lewin was implying is the value of good theory in providing a guide or short-cut for the practitioner about what variables or factors we need to pay attention to, and what factors warrant less attention. A good theory is a practical guide, where evidence-based research has provided us with insights about what we need to do - based on the research and experiences of others - to achieve the best outcomes that we desire. These outcomes in the VET sector might be teaching a class more effectively, responding better to disengaged youth, promoting more workplace learning or encouraging higher rates of completions in our apprenticeships.

In my personal research journey, I was trained as a social psychologist, and therefore had from Day 1 a strong grounding in theory and theory development. Applying social psychological theory to workplaces moved me into organisational psychology and ultimately to doing my teaching and research in a Business School rather than in a School of Psychology. Notable theoretical influences that shape what I study today include Social Identity Theory developed by Henri Tajfel and John Turner to explain how individuals have multiple identities, and these influence how we see the world, and who we respond to those in our in-groups and those in out-groups. This theoretical tradition has influenced my work in VET and other organisations, especially around organisational and interpersonal communication, employee adjustment to organisational change, and leadership research.

Finally, the lifelong benefit of PhD training in psychology is the strong skills it provides in scientific research methods, especially the more quantitative side of data collection and analysis. However, towards becoming a more rounded social scientist, in the last decade or so I have grappled with the more qualitative methods, and learned much about the richness and subtlety that comes from applying more grounded theory approaches towards understanding human behaviour at work, including how we work in the VET sector.

Researcher 3

The discussion at the AVETRA workshop provided a great opportunity for me to reflect on the use of theory in my research. While my initial reaction was that I do not tend to use theory in my research, on reflection I concluded that I do – but that it is not necessarily the theory that is validated by the broader scholarly educational community. And so the discussion underscored the broader base on which we draw as VET researchers. In my research, the major areas in which I work are policy, the constituent parts of the VET system (companies, workers, learners and ‘intermediary bodies’ of one sort or another) and people’s engagement in work and learning over their lifespan. I am particularly interested in which makes individuals and organisations behave in the way in which they do. In this thinking I engage more or less unconsciously with ‘grand theories’ such as Marxism and feminism, institutional theory, economic theories, labour process theory and a range of management theories. My interest in these theories grows partly from my first degree which was a BA, my subsequent qualifications which include a Masters in Human Resource Management, my previous job experiences in human resource management and community work, as well as experience as a TAFE teacher and elsewhere in the VET sector, and my experiences as a political activist in my 20s. They form the way in which I look at the world, and therefore the way in which I conceive and execute research.

I also utilise ‘lower-level’ theories which help to explain why things happen the way they do, and have developed several of my own to do this; and when I am looking at pedagogical issues I consider a range of learning and teaching theories. In my engagement with economic theories like human

capital, and labour process theory, I often use the theory in order to critique it and find fuller explanations for actions that relate more closely to considering actors as people and not as ciphers in an economic or sociological landscape. My primary concern is not to criticise what's going on the world but to improve it; unlike some academics I am not interested in being pessimistic but in identifying and assisting the potential for people and groups of people to achieve what they want to, and for institutions to support them and to be helped to do so. For example, at the moment I am managing a three-year national project on perceptions of skill, and am particularly interested in finding out and ameliorating how entrenched interests seek to deny access of many groups in society to equitable access to high-quality training.

Researcher 4

Coming from an HRD perspective I find myself both using learning theories and also using organisational theories.

In terms of mapping learning activity I have used activity theory and learning network theory, both of which focus on learning within organisational imperatives. I am still tied to the learning and motivational theory I learned over 35 years ago with Vroom and Kolb at the centre. Naturally the work of Knowles, Rogers and Vygotsky underpin these theories and CoP [Community of Practice] theory has been increasingly important in understanding informal workplace learning and culture development.

From my HRD perspective it is power that determines what learning is done and legitimised. I find actor network theory most interesting in determining why things happen, or do not, but perhaps find the slightly more optimistic structuration theory of Giddens a better research tool and have used it often and have many students using the same framework in PhDs. While it is a sociological theory, it can be adapted for organisational use. Institutional theory is also useful, if only to tell us why we continue to replicate what is safe and what our neighbours do!

In terms of theory to guide research studies, I have always valued Sharron Merriam's work (1996/2006) that condenses the essence of many 'greats' into an easy to read and use guide to research in educational arenas.

Increasingly I am being influenced by colleagues to pursue a 'critical realist' approach to research, which I think is a name for an approach I have used for a while, collecting multiple perspectives, mapping the territory but also search for the meaning emerging from within.

Researcher 5

On entering VET in 1983, I was immediately charged with the task of investigating why student attrition was so high in a number of TAFE certificate programs. This required me to work with people who were struggling with a range of critical issues in their day-to-day teaching practice. As a consequence, my research has been (and still is) about pragmatic problem-solving very much in the mould of Dewey and Glaser and Strauss. While I can draw this connection between theorists and my practice now, much of my research has been a theory-free zone. In the early years this was of some concern to me as I felt the need to present a much more formal or academic justification for what I was doing. Michael Scriven, with his feet firmly planted in the evaluation field, gave me some solace with his article *Minimalist theory: the least theory that practice requires* (1998). He proposed that while practitioners in any field need to understand something about what theories are and what they are trying to do, of equal importance is research that is guided by a practical framework – one which is constructed from the experience of those who are directly involved in the activities under investigation. Thus should be very much informed by the accumulated wisdom and practical knowledge of those working in the field. In line with this thinking, research for me has been less

about theory and more about following hunches, and reflecting critically on often easily-made assumptions. My focus has been to describe situations, explain issues, reveal plausible relationships and hopefully identify useable learnings from the process.

Researcher 6

For me there is no practice without theory or theory without practice. This won't make immediate sense if 'theory' is understood as those abstract productions of professional thinkers – for example, the theories of Newton, Marx or Darwin. These productions are certainly 'theory', but they each build on a more basic, everyday sense of theory. This ordinary level of theory refers to the principles we continuously extract from our experience. Whenever we notice and remember some relation or quality of things or people, we take away something that is likely to apply to other things or people in the future. This definition of theory harks back to the ancient origins of the word. In ancient Greece, a 'theoros' was a delegate from one city who visited, observed and reported back on the religious festivals held in other cities (Gadamer 1975).

One of the effects of the politics of theory is that the general area of VET is under theorised. A disdain for the skilled and knowledgeable practice of artisans and labourers is evident in the earliest official accounts of knowledge (e.g. Plato's Republic), and this aversion has ensured that theory about the heavens, logic, mathematics, etc., has developed to great depth over time while understanding of crafts, work practices, skills, etc., has traditionally been neglected. Attitudes have changed dramatically over the last few decades, with a massive expansion of knowledge about work and skill taking place. However, there are still large gaps in our understanding of the activities that make up VET.

A result of the patchy nature of VET theory is that research into VET is both highly challenging and intellectually exciting. It is so challenging because a wide range of theoretical perspectives from other more mature fields of inquiry can be and are being applied to questions about vocational education and learning. Since research always presupposes some kind of pre-understanding of the field of investigation before questions can be formulated and methods deployed, the VET researcher often must creatively appropriate ideas from other fields of research and modify them for service in new settings. This requires broad knowledge of social sciences and capacity to innovate with theory. VET research is intellectually exciting because so much new territory opens before the inquisitive investigator.

Researcher 7

My theoretical base is shaped by the kinds of problems I sometimes understand and elaborate. Because I am mainly interested in human learning and development, albeit for work, those theoretical bases are required to understand the nature and kinds of knowledge that people need to learn to be effective in work and working life and some consideration of the processes that constitute these changes within individuals. Initially, my enquiry commenced with a consideration of the cognitive contributions to these issues, and in particular, cognitive psychology. That was quite helpful because this set of ideas informed about the kinds of knowledge that experts appear to possess and as such constitutes the goals to which learning for occupations might best be directed. That literature also was helpful in providing an account of the internal processes of the mind and body's contributions to how individuals learn and develop. Yet, because there is a need to understand the contributions of what exists beyond individuals in the natural and social worlds in which we inhabit it is important to engage other kinds of a literature. Therefore, the contributions of anthropology, cultural psychology and activity theory, including socio-cultural constructivism have been helpful in understanding the ways in which the interactions between the person and the worlds they inhabit shape their learning and development. Within Vygotskian inspired socioculturalism this process is referred to as being inter-psychological, those that exist between the person and the world beyond them. Although some

views within this field suggests that the social world is highly deterministic, perhaps in the ways that the brute world can be, that there is a direct translation between what experiences humans have and what they learn. That is, there is an intra-psychological legacy (i.e.-learning) of a particular kind that arises from particular kinds of experiences. However, from my doctoral studies, became apparent that individuals negotiate what their experience or they learn from them, not the least being upon what they have experienced in the past. Hence, much of my work in the last decade has been focused upon the relationship amongst the unique socially derived contributions of the person, the circumstances in which they engage and also how brute facts shape that learning. The relations among these three elements are complex, overlapping and by degree, situationally and personally shaped.

In more recent times, and with emerging findings from psychology premised upon how individuals' mind and neural systems respond to experience, the continuing concerns about the embodiment of knowledge and the role of dispositions (i.e. subjectivity, interest, intentionality etc) are causing some reconsideration to the kind of bases that I am using to explain human learning and development. So, I am currently engaging afresh with literature from anthropology, psychology and also other accounts which speak to the embodiment of knowledge as a way to further develop the bases upon which the processes of human learning and development progress. Because much of the focus of my research and theorising is how these processes occur within the circumstances of work, I am of necessity engaging with cul-de-sacs about learning far more than about teaching, for instance. Nevertheless, these foundations should be helpful to understand how individuals can best be assisted to learn (i.e. taught, mentored, guided, instructed), as well as how experiences might best be organised to assist that learning. Moreover, such perspectives engage with the necessary consideration of how individuals need to act to make sense of the requirements for work and be able to utilise effectively what they know, and extend that no link through their work: bringing working and learning together.

Findings

Analysis of the researchers' statements is carried out in two ways

Firstly: What types of theories are discussed? Two aspects are considered: do researchers' favoured theories relate to research approaches (ie those theories which guide our *research processes*) or do they relate to what might be termed the '*substantive*' (discipline-based) theories we engage with in VET, such as theories of pedagogy or economics. Table 1 presents the findings, with up to two examples provided from each researcher.

TABLE 1: TYPES OF THEORY MENTIONED BY RESPONDENTS (UP TO TWO PER COLUMN)

Researcher number	Theories relating to research process	'Substantive theories'
1	Ethnography, participant observation	Marxism, socio-culturalism
2	Scientific method, grounded theory	Social psychology, social identity
3	-	Economic theories, labour process theory
4	Critical realism	Activity theory, network theory
5	Evaluation theory	Dewey
6	-	Platonic philosophy
7	-	Cognitive psychology, socio-culturalism

Table 1 indicates that in researchers' minds, theories relating to the matter of what they are studying (ie 'substantive' theories) predominate above theories relating to the way they research. It is recognised, of course, that these may be intertwined to a greater or lesser extent. However since researchers were given no guidance about what types of theories they should mention, it is inappropriate to ascribe too much emphasis to this finding.

Secondly: Where did these researchers learn about and embrace these theories? The analysis in Table 2 uses the researchers' own accounts to draw up a list of experiences, sites and texts which are mentioned. The fact that any person did not mention any of these does not mean, of course, that they were not influenced by it.

TABLE 2: PROVENANCE OF RESEARCHERS' THEORIES

Researcher number	Studies (ie as a student)	Work (outside academia)	Specific researcher(s)	Key texts	Other
1	√	√	√	√	
2	√		√		√
3	√	√			√
4	√		√		
5	√	√		√	
6				√	
7			√		

It is interesting to note that five out of seven researchers mentioned their own university studies as important in shaping their theoretical frameworks. In some cases these were mentioned as being decades ago, in others more recent. The next most frequently-mentioned source of theory was a specific researcher who was named.

Discussion

The statements show large differences in the way that the participants talk about theory and the importance it holds for them. Researchers describe a range of theories and the effects that these theories have upon them. Some appear to be deeply imbued with a theoretical sense; others, as it were, 'pick and choose' depending on what they are researching.

The diversity of theoretical backgrounds is an asset for the discipline and the sector it serves because the body of researchers appears not to be hidebound or wedded to one type of theory. Publications are likely to be robustly peer-reviewed by people who are not necessarily aligned theoretically with the same way of seeing the world. There are disadvantages, too. Publications may be distributed in a large range of journal types spanning different disciplines, and therefore sometimes lost to the field. The field may not be well recognised in mainstream 'parent disciplines' such as education and management, let alone what could be termed the 'grandparent' disciplines such as psychology, sociology and economics.

Many VET researchers in Australia and, indeed, other countries, undertake research that is commissioned or 'tendered out' by national and State governments or other funding bodies.

These bodies rightly wish to see outcomes in terms of policy and practice and are (one assumes) not so interested in theoretical bases for the research nor, necessarily, for advancement in the discipline. While researchers have the option, of course, to develop further the findings of these projects, the fact that projects were necessarily conceived in a certain way may preclude a deeper development of the analyses. While these observations may be true of many disciplines, the fact that the VET research community is small in size (and hence individual researchers may have a heavy load of such projects), and also is generally deeply committed to the improvement of policy and practice, might mean that the challenge is particularly prevalent in VET.

What are the implications of the findings for policy and practice?

For researchers – the implications are that it is possible to construct multi-disciplinary teams within the discipline of VET as well as by looking outside the discipline; and that they can draw on extensive theory base through discussion at conferences etc. A further implication is that researchers need to be able to articulate this diversity and richness.

For the VET sector – the implications are that VET needs to acknowledge and utilise the strength of the data produced by this diverse body of researchers, in the formation and improvement of sector-level and institutional-level policy and individual practice.

For universities – Universities need to recognise that in VET researchers they have an unusually talented and diverse group of researchers who need more recognition and support.

For government and intermediary bodies – there needs to be recognition of a rich source of knowledge and an unusually diverse range of perspectives.

Conclusion

This is of course only a preliminary examination of the field. It is limited by the small number of participants, although as a proportion of the experienced VET researcher population in Australia the number is not insignificant. The researchers were not responding to any set questions or even themes, but simply made their own statements, and so no inference can be drawn about the possible response of the body of researchers as a whole in relation to any individual point made by any one researcher. The paper therefore does not make an attempt to *map* the theoretical field of VET research, but merely provides an insight into it.

The researchers' written statements differed from their initial contributions at the meeting and can be assumed to have been influenced by the contributions of others. It would be interesting, to take the research further, to ask the researchers whether others' statements resonated with them and in what way. Also, it might be interesting to find out more about 'where they got their theories from', as several respondents did not volunteer information on this point.

A further examination of the issue would need to include consideration of the nature of the VET discipline, and in turn this would involve discussion of what VET itself is. Researchers' responses could be then related back to these understandings.

To examine the effects of the short-term policy-driven nature of many VET research projects, it might be interesting to ask funding bodies outside the nationally-competitive sphere what their views would be about a more theoretical approach to funding submissions, and also to ask the researchers about the attractiveness and the feasibility of, as it were, 'back-filling' theory into completed research.

The researchers' statements and the body of Australian VET research indicate that many meaningful studies have been undertaken based on substantive theoretical propositions and standpoints. The eclectic range of disciplinary backgrounds, even within the small group of researchers whose words are reported in this study, indicates that analysis based on a range of perspectives and deep knowledge of a range of bodies of knowledge is provided across the body of VET research and within research teams.

References

- Cresswell, J.W (2009). *Research design: qualitative, quantitative and mixed method approaches (3rd Edn)*, Sage Publications, Thousand Oaks, Ca.
- Funnell, R (1996) *Handbook for research in adult and vocational education*. NCVER, Adelaide.
- Kuper, A, Reeves, S & Levinson, W (2008) An introduction to reading and assessing qualitative research. *British Medical Journal*, 337, 16 August.
- Petre, M & Rugg, G (2010) *The unwritten rules of PhD research (2nd Edn)*. Open University Press, McGraw-Hill Education, Maidenhead, Berks.
- Silverman, D (2010) *Doing qualitative research*, Sage Publications, London.