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Philosophical and Ethical Issues in Work-Based Learning Educational Research: a review of four published works

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Abstract

This article explores four published articles, which transcend a ten year period, and help identify the evolution process, benefits and limitations, of Work-Based Learning (WBL). Although WBL can incorporate many meanings, it will be here considered in light of the approach which offers students the opportunity to optimise their learning, by combining their work experiences with those gained from their academic learning. The research for these articles dates from 1997-2007. In parts of that time, (particularly the start of that period), WBL had not substantially penetrated the academic world, but some of the traits associated with the field were already, being utilised in the higher education sector (e.g. 'distance learning'). Higher education facilities were opting to offer more flexible schedules, as opposed to flexible learning programmes. Exams were still the norm and following government guidelines, vocational skills (National Vocational Qualifications) were being offered by sponsoring colleges. The control, however, over managing similar programmes, remained with the colleges, as opposed to becoming part of a joint venture. Thus, WBL programmes, (still the exception rather than the rule), started 'serving' industry and business alike, by reviewing its benefits and methodologies; especially in the context of societal pressure to induce a 'work-life' balance, and an overarching national skills' strategy for lifelong learning.

The papers selected for this analysis are:

I. Stern, D. (1997) 'The Continuing Promise of Work-Based Learning', Berkeley: University of California, National Center for Research in Vocational Education - Centerfocus No.18

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II. Eraut, M. (2000) *Informal Learning in the Workplace*, Brighton: University of Sussex
III. Freestone, R., Thompson, S., Williams, P. (2006) 'Student Experiences of Work-based Learning in Planning Education', *Journal of Planning Education & Research*, 26: 237
IV. Walsh, A. (2007) *An Exploration of Biggs' constructive alignment in the context of work-based learning,* Birkbeck: University of London

These papers will be chiefly considered through the lens of Positivism for comparative and contrasting discussions, in order to determine how each of the authors have interpreted and applied these to their WBL research.

Keywords: work-based learning, positivist*, interpretivist, 'verstehen'*, constructivist paradigm

Positivism has played a key role in shaping the landscape for WBL. An analysis of these papers, the respective authors' perspectives and their application of research paradigms, will attempt to evidence if the ideals of Positivism are the most justifiable methods, or not, (for all stakeholders involved); to realise the vast learning opportunities afforded via, through and by work-based learning.

The ethical aspects of each selected article and their associated research paradigm(s) are considered and collectively addressed at the end of this paper.

I) Stern, D. (1997) 'The Continuing Promise of Work-Based Learning', Berkeley: University of California, National Center for Research in Vocational Education - Centerfocus No.18

This article demonstrates the value of *work-based learning* and the impact on learning outcomes and education attainment, (especially, when employment is taken up, at the same time as the 'studying' expectation starts). This article provides evidence, based on research and experience gathered over twenty five years, and is, generally, used to illustrate

that the actual number of hours worked by the learner can have a negative effect on continuing study and general development, in further education.

All research outcomes, however, revolve around a single researcher who draws upon secondary data obtained from other researchers. Despite alluding to the mixed scientific methods employed to test hypotheses and elicit information from the students (e.g. empirical research, observation, interviews and questionnaires), the actual underpinning paradigm remains relatively unclear. Thus, further investigation is necessary, if we would like to create a compelling case for a research approach supportive of a positivist perspective. It must be noted that this article may also contain a high degree of subjectivity, mainly due to its lack of substantive statistical analysis, or specifics to prove or, indeed, disprove both the hypothetical or theoretical thinking. The work, instead, seems to concern itself with general statements.

The ambiguity within this article does not appear to resolve our argument, that the positivist perspective may be relevant. This can also lead to other definitions regarding the nature of research which might also be considered. Could it also, for example, be claimed that the research method used in this article is also representative of an interpretative approach? According to Bryman (2001), interpretivism is perceived to denote 'the alternative to positivist orthodoxy that held sway for decades. It is predicated upon the view that a strategy is required that respects the differences between people and the objects of the natural sciences and therefore requires the social scientists to grasp the subjective meaning of social action.' interpretivism is, therefore, seen as a means to understanding human behaviour compared with the positivist approach which is sought to explain this behaviour. Marsh and Furlong (2002), in agreement with Bryman (2001), further explain that

> '..a researcher from within the interpretivist tradition is concerned with understanding, not explanation,[which] focuses on the meaning that actions have for agents, tends to use qualitative evidence and offers their results as one interpretation of the relationship between the social phenomena studied' (Marsh and Furlong, 2002: 21).

Thus, an exploration of 'how' the data is analysed, does not help to resolve the argument of positivist methodology, as being the method used by the author. Although a positivist epistemology has been more associated with quantitative techniques, like the examples offered by the author (i.e.'16 per cent of seniors responded to the survey', 'two out of three schools in 1977 were given academic credit ..'etc., [Stern, 1997]); interpretivism is more likely to use a qualitative approach, (thus data, then, is, helpfully, presented in both formats).

Even though Bryman (2001) and Marsh and Furlong (2002) use the term 'understanding', Schwandt (2000) traces the meaning of the equivalent German word *'verstehen'* as used by German historians and sociologists in the late nineteenth and early twentieth centuries. In its modern sense, to achieve *'verstehen'* is to achieve understanding through an interpretivist process. Bevir and Rhodes (2002) discuss a variety of interpretivist theories, including 'ethnology' and 'hermeneutics'. The latter examine criticisms of *'verstehen'* by some political scientists who remain committed to positivism.

Interpretative research claims that the subjects being studied can manipulate the image they project. This is exemplified in the article (under discussion) particularly in regards to the examination of the amount of hours worked by students whilst studying.

Cresswell (1994) does not assist in settling this argument either, as he states that 'qualitative research is interpretative research' but continues to argue that, qualitative researchers are also interested in the meaning of people's lives, the social structure they have created, and the ways in which they interact with each other, all elements which are indicative of positivist thinking.

A significant trait of the Interpretative research approach is investigation of the 'taken for granted', which in this paper, can be viewed as the relationship between the work-experience and its pertinence to the relevant course of study. The total amount of research (which was carried out over four years), engaged 2.000 students, at higher education level and 1.000 students, at community school level. Through the method of 'triangulation', consideration was also given to those students who were working in jobs not

connected to the institutes, (some were not working at all) with the remainder of this population enrolled in co-operative education (i.e. traditional school-supervised work-experience etc). Using this approach, it was possible to prove (which also reinforced previous studies held in 1990's), that "school supervision of students' work-experience may increase its educational value" (Stern et al., 1997).

The author, however, gets personally involved in this debate, (another interpretative trait), by agreeing that good instruction in general academic subjects can, indeed, build intellectual skills that are useful in the workplace (Stern, 1997). This, however, can be viewed as the author's own bias, as the statement is made with no specific reference to the relevant research.

This article is written in 1997, but many of the authors mentioned therein, wrote their contributions between the late 1970's and the early 1990's. The time span is, therefore, substantial and transcends eras of various approaches/arguments to research paradigms. The evolution of the concept of WBL can be seen through the respective 'rise and fall' of numerous of these research paradigm. Denzin and Lincoln (2000), address this evolution intending a deeper understanding of these points. For example, the period from 1900-1950 mainly concerned itself with the offering of valid, reliable and objective interpretations and was reflective of the positivist scientist paradigm. The period of 1950-1970, saw Positivism discredited, giving rise to Post-positivism, which rejected the scientific tenets central to the positivist paradigm. The period of 1970-1986, is referred to, by Denzin & Lincoln, as a period where several theories competed for attention. It was then, that 'the naturalistic, Post- positivist and Constructivist paradigms gained power' (Denzin & Lincoln, 2000). The last phase examined was during 1986-1990. The latter was considered to be a 'crisis of representation', and therefore, 'new models of truth, method and representation were sought' (Denzin & Lincoln, 2000).

The presented information, albeit analytical and in parts illuminating, has still failed to provide sufficient, reliable data to categorically delineate the benefits of WBL. It could be argued that tutors were not, in this case, moving away from their traditional academic roles;

as the benefits in doing so (for both tutors and students) have not been conclusively drawn out.

One could also argue that the lack of tangible outcomes obliges the reader to interpret for themselves the significance of these findings. Similarly, the time-span covered by the contributors to this article, might indicate that positivism could be included as a research approach, but perhaps more accurately, that the paper could also be associated with a number of different paradigms to those presented.

II) Eraut, M. (2000) *Informal Learning in the Workplace*, Brighton: University of Sussex

This paper begins to discuss the move away from positivist research methods and attempts to justify the implementation of a more accepted mixed scientific method pertinent to interpretivism. It could be argued that the type of research used here, is on a very small scale, of a subjective nature, strongly favouring the interpretative perspective. However, the shift from Positivism is not a dramatic or radical one, as the new interpretivist paradigm still retains strains of the positivist research methodology. Thus, it possibly contributes to the view that this newer approach does not totally undermine the ideals of positivism but refines them in an attempt to take a ('calculated') step forward.

To illustrate this tacit transfer, the researcher uses data collection methods ('observation' and 'interviews') to *test* the level of understanding regarding, for example, 'informal learning', within the workplace. The data is analysed and interpreted through 'hypothesis-testing' (method associated more with a positivist approach); in order to construct theories surrounding the learning process. As the researcher (intentionally) avoids the use of statistics from quantifiable data (in an attempt to steer clear of research tools associated with positivists?), the article is then focusing more on specific, concrete data rather than generic, or evaluative data. The research methodology, therefore, is of a qualitative approach, whereby the information gained from interviews (like the ones presented in this paper) is, indeed, the most common method used in this form of research. The process, for example, highlights 'how' people learn to do a task and 'how' they behave. This is in preference to the use of 'questionnaires', (mainly used by positivists); as

Interpretivists, usually, consider these unsuitable, (eg: facts can also be gathered at 'interview' stage).

Eraut's use of 'observations', has perhaps avoided the rationale behind explaining critical incidents; as he seems to have desired to test 'how' individuals learned, from practices and not situations, (again indicative of straying from positivism, as positivists were driven by a need to explain such behaviours). Eraut explains that an interpretative perspective focuses on interaction between people, as such actions are meaningful, but does not offer any explanation on the causes of these actions, just their effects on the learner. The approaches used by Eraut demonstrate how those elements (which are both tangible and intangible) can be explained through comparisons, while 'learning' is taking place. Although some interactions are more deliberate than others it is hard to be objective when human behaviour is so unpredictable.

Eraut's framework is conducive to an interpretative approach, as it reflects those aspects which challenge positivist beliefs; these tend to support that if information cannot be validated by the senses (and measured), then it is considered irrelevant. The continual use of the first person by the author adds a personal perspective to this article and while it engages the reader in an 'open' discussion, it could also be argued that it induces a degree of scepticism, concerning the consistency of the findings. However, the author, subsequently provides reassurance in that '..the range of contexts where [they] researched [were] very wide, [and] there [was] little danger of [the researchers] having expectations strong enough to cause researcher bias' (Eraut, 2000).

'Informal learning' functions as a contrast to 'formal learning' which Eraut (2000) defines through his 'continuum theory'; where both learning styles are at either extreme. ' Informal learning' is, for instance, 'implicit, unintended, opportunistic and unstructured..' and can take place in areas surrounding the 'formal learning' activities; while 'formal learning' is both planned and structured and takes place in appointed educational institutes. Furthermore, Eraut suggests that it [informal learning] provides a greater flexibility or (even) total freedom for the learner and is being increasingly used within adult education. This is the first indication of an initial introduction into a *Work-based learning* ethos, whereby,

learning takes place in the absence of a tutor. Is it the case that this enables a view that there are other alternatives to learning that could offer the learner a viable option- (an option which the positivist standpoint would not consider?). Eraut states that 'workplace learning takes place on-the-job rather than off-the-job' albeit frequently in an unstructured form and it is argued that learning can also happen in places in, or, near formal educational settings. However, Eraut possibly weakens his own argument, by stating that 'the transfer of knowledge from education to the workplace is much more complex than commonly perceived' (Eraut, 2004a: 11). Both the author and in this context, the workplace, could be viewed as being 'under-researched', especially regarding outcomes, which appear to be very limited. So, despite creating an opportunity to change teaching methods, is Eraut failing to exploit this, by not providing firm evidence to support it?

A further trait of interpretative methodology is the use of phenomena (e.g: research into the use of scientific knowledge, as frequently used by nurses and midwives) (Eraut et al., 1995). This is another example of applying scientific methods, in order to explain certain behaviours while providing fresh dimensions to further expand the approach adopted from a positivist perspective.

In the objectivist **/** positivist paradigm, a researcher would look at the indicators of behaviour that are tangible, measurable and reproducible. It would be reasonable to assume that someone repeating the work (at a later date) would be able to produce very similar, if not identical results, (e.g., in line with what is -commonly believed to be- the case, in natural sciences). However, qualitative researchers eschew the notion of exact reproducibility, but look, instead, for verification of data. Methods of data collection which embody these concepts, such as 'content analysis', 'secondary analysis' of material (already published), and 'interviews'; have, therefore, been selected as suitable means of gathering new evidence to study the research problem.

The timing of the publication occurs around the year, 2000. Although many of the issues raised are still applicable, there is strong evidence to suggest that these ideas have since been, even further, refined, as the ethos of WBL and the debates around the question of its future direction have equally, evolved. For instance, Denzin & Lincoln (2000) argue

that, in the constructivist paradigm: 'terms such as credibility, transferability, dependability, and confirmability replace the usual positivist criteria of internal and external validity, reliability and objectivity.' However, it is evident that the research carried out by Eraut et al., has been used to mould the development of further educational research and paradigms.

III) Freestone, R., Thompson, S., Williams, P. (2006) 'Student Experiences of Work-based Learning in Planning Education', *Journal of Planning Education & Research*, 26: 237

Is this paper failing to build upon the work of Eraut, in engineering a move from Positivism to a more current interpretivist approach to research? This article, however, seems to be replacing the confidence and credibility lost (?) by the positivists (e.g. previous paper). This piece of research deals with the actual situation and location in which the learning takes place (i.e. the University of New South Wales [UNSW]) – the paper examines the principles and merits of *work-based learning* through researching a cohort of student 'planners' as they progress through their studies. The UNSW's viewpoint considers that the 'Bachelor in Planning' degree, which the University seems to regiment, is the only gateway to a career in Planning. Stakeholders involved are reluctant to change its procedures, despite the availability of empirical research and against a backdrop of arguments in favour of change which highlight the benefits of incorporating, for example, some practical experience into the course curriculum. If this is viewed as an 'one-truth' approach, then it is definitive of a positive paradigm.

Furthermore, the paradigm, in this article, concerns itself with how society and education are studied through the use and application of scientific, quantitative methods and empirical research. The latter point is consistent with Positivism, which is founded on the application of mathematics and statistics, in order to, for example, assist the study of education. The education system, historically, dates back to being under the rule and control of the church. This association, possibly, helps to offer an explanation to the UNSW position, in that the original theological understanding of Positivism, showed that society operated through a code of laws- anything outside these laws was irrelevant (e.g., 'free will', 'chance', 'emotions' etc). Trochim (2006), for instance, endorsed this linkage by stating that 'in a positivist view of the world, science was seen as the way to get at truth, to understand

the world well enough so that we might predict and control it. The world and the universe were deterministic - they operated by laws of cause and effect that we could discern if we applied the unique approach of the scientific method'.

The three questionnaire surveys carried out at six month intervals, before, during and after the WBL takes place, produce data that is measurable and quantifiable and typical of the research usually associated with a positivist approach. These studies compared normative values, which could not be validated by the senses, with positive values which emanated from findings sourced from empirical research; thus resulting in scientific theories which adhered rigidly to the appropriateness of conducting research. The application of such beliefs also meant that the scientists themselves had to be devoid of values, in order to ensure that the output and knowledge remained valid. In this case, the research objectives were to gauge expectations, measure knowledge gained and evaluate the real-life experience through the work-placement.

In the absence of exploiting any clear and definitive benefits from WBL, with regards to student learning and the respective structuring of this learning, this article opts to select contributors from before, or around the time of Eraut, to expound the case of positivism as opposed to, possibly, driving the forces for change. This is illustrated by Baum (1997) and Minnery (2000), who identified that there is still a lot of discussion around the benefits of adopting a positivist approach to the incorporation of a skills' practice element within an academic 'Bachelor Degree' or 'Masters Degree' course. One could, therefore ask: did this give the UNSW, the reason to remain resolute? Was it possible (if so desired) to offer any guarantees that the findings of this research could be considered as a catalyst towards change of positions and/or processes of the existing status-quo (re: the programme examined)?

Experiments and surveys are used to test hypotheses about human behaviour and the associated relationships which can be influenced by concentrating on its positive or negative reinforcers. This led to Positivism being discredited in the 1950's, because the application of scientific experiments themselves could not be observed and validated by one's senses. Therefore falsification of results became a strong possibility.

Consistent with the positivism's school of thought, the article developed the University's argument that, (within Sydney), this programme was the only one that satisfied the 'Planning' requirements. There were simply no alternatives offered- could deviance from this have, therefore, harmed and/or reduced the, arguably, 'controlling' element that the programme was claiming to have over society (e.g: 'one truth'). Would it be reasonable to assume that the refusal to recognise the validity of the research findings could have been the main contributor, towards the reduced employment of what is described, in this article, as the 'sandwich year'?

It could also be argued that, the integration of WBL into academic programs due to its rapid evolution since the 1960's, has created confusion around the actual meaning of *Work-based learning*. The production of a myriad of available research literature, competing explanations and variety of associated terminologies has, in fact, created further complexities. Martin (1997), illustrated that the WBL characteristics in themselves were also 'highly variable..(but) genuinely collaborative partnership(s) between the employers and the University appear the most effective mode (of learning),(while) unsupervised learning (appears) the weakest.' Again a reasonable assumption could be that the UNSW viewed 'collaborative partnership', as a dilution of their position (or control?); as opposed to considering the possible benefits that such an approach would bring. It could, however, also be argued that the research carried out, (by the three surveys), may not have captured the relevant information needed, in order, to reassure the UNSW to *shift* their positions.

Reeder (2000), would have influenced the stance taken by the UNSW and perhaps, amongst other academic professionals, would resist WBL practices by stating that [WBL], 'restricted the role of academic staff to troubleshooting, and paid little attention to the students' understanding of the experience'.

The clarity or integrity needed to resolve the academics' dilemma, is further hindered by presentation of a list of 'recurrent issues' as they attempt to provide some consistency through interpretations of various approaches to WBL. Freestone et al., (2001), pointed towards a major review that took place for Bachelor degrees using a mix of

qualitative and quantitative analysis of student evaluations and stakeholder workshops. This increased the levels of student support from the universities and introduced more explicit reflective learning. However, the assessment materials remained tangible (they, for example, consisted of a portfolio of obligations, a work-experience diary signed by the employer etc). It was also shown that Wilson, in 1989, reported that the assessment of WBL programmes employed various tools and techniques, which were supportive of the WBL objectives, but still problems existed, therein, for the education personnel. This could have strengthened the UNSW's perspective, that WBL posed more of a threat to these stakeholders, (in their roles as educators), responsible for Sydney's *only* recognised degree in 'Planning', as opposed to considering the benefits WBL could/would provide to their students and employers?

Due to the multi-faceted nature of WBL, the need for comparing and compiling validated data on the placements, as well as the need for quality assurance, gave rise to Zegwaard, Coll & Hodges (2003), proposing an evaluation-based framework. This differed from the quantifiable needs of the positivists, whereby passing an examination was to be used to validate the learning that had taken place. This is, however, in contrast to WBL, whereby the assessment would justify that the knowledge has been transferred. This framework consisted of a suggested three assessment model comprising of the 'student', the 'employer' and the 'university'. These assessments addressed the employer's view on competencies, the negotiation of placement objectives, as well as a portfolio approach to assessment.

A more in-depth examination of the methods used to carry out the surveys produces evidence of strong links to a positivist perspective. The interviewers captured the opinions of stakeholders (including themselves), in which they offered their 'own observations and experiences as educational providers' (Freestone et al., 2004). The questions posed, such as 'how satisfactory did you find..' and 'are you comfortable with..' could be viewed as leading questions which, possibly, allow the interviewer to manipulate the respondent to elicit the required/desired response, in order to confirm the interviewers suspicions or theory. It could be argued that the researchers' own view that the working experience was a mere activity or 'hoop to jump through' was actually promoted; instead of creating an

opportunity for the interviewee to 'voice' their opinion- the latter may have proven that work experience was, indeed, a motivating factor that was bringing through a greater degree of integration within the academic learning.

This may have tainted the feedback from the research, as interviewers always retained the element of discretion to represent the collated information in a format and manner they deemed appropriate. This was exemplified where students felt they were not adequately prepared to embark upon the work-placements. The researchers tended to represent such views as being negative feelings towards the work-experience, without considering (in any depth) that any negativity could have been stemming from the fact that students were simply ill-prepared. Would a review on how these questions could have been positively worded have been a catalyst for the UNSW to rethink its approach- especially, when, for example, the students introduced the fact that they were feeling valued (not being treated as an 'office junior' etc.), an element which, undoubtedly, countered the positivist perspective of discounting feelings and emotions.

The researchers subsequently grouped the responses into what they considered to be the main themes. They concluded that 'students and not just employers valued the development of both technical and soft competencies' (Zegwaard, Coll & Hodges, 2003). This outcome explicitly omitted the University's position which remained that of resisting an alternative approach, as it was falling outside the norm of the 'Planning' field. Was it the case that in order to support the stance of the University, the researchers cited individual disappointments with the work-experience?

By putting the onus of the possible removal of the work-experience element (as it was not an assessed module), onto the students, the researchers helped reflecting the positivist ideology of continually resisting any alternative teaching methods (e.g., an integrated *Work-based learning* approach), by holding on to what was considered to be the 'one truth' ?

IV: Walsh, A. (2007) *An Exploration of Biggs' constructive alignment in the context of work-based learning,* Birkbeck: University of London

This article provides an interesting view of the learning process in which Walsh presents a justification for examining the contribution of Biggs' Constructive' paradigm to the evolution of WBL. This paper deals with evidence which causes a shift of focus from the educational institution, as the main stakeholder in the learning process, to empowerment of the student, with respect to the learning that is taking place.

The main focus of Constructivism is to get the student actively involved in the learning process and to construct the knowledge which has been gained from this learning; thus reducing the pedagogic role to a supporting, or mentoring one. This differs from the traditional positivists' approach within higher education- the latter still supports that progress can be easier gauged through quantifiable methods (such as the use of semester-taught modules, which are tested through formal examinations etc..).

This paper could be argued that it has all the hallmarks of a research methodology supportive of a positivist perspective. It uses, for example, scientific methods to produce quantitative data from the research subjects, using statistics and empirical research. The use of the numbers also encourages the application of a greater degree of objectivity; in parallel, the work facilitates measurable responses gained through such research. This is then further developed to explain how a learner constructs newly acquired knowledge. However, it could also be argued, that this analysis creates an environment that begins to permit the introduction of another paradigm supportive of the view that human intervention in student learning, remains unavoidable. This, however, dramatically differs from the positivist methodology, which suggests that, by focusing on objectivity, emotions and meanings become omitted.

In alignment with this opinion, Schwandt (2000), identified that there exists an interdependence between Positivism and Constructivism, which he defined as,

> 'the means that human beings do not find or discover knowledge so much, as [they] construct or make it. We [human beings] invent concepts, models and schemes to make sense of experience, and we

> constantly test and modify these constructions in light of the new experience' (ibid: 197).

Walsh suggested that although knowledge is based on individual experience, while it increasingly becomes less reliant on the tutor, the latter is, however, placed at the centre of the research.

Biggs's consideration, also, induces a need for uniformity and compatibility between the curriculum, teaching methods and appropriate assessments. Throughout this paper, Walsh contributed to the Constructivism argument. It is the assessment element that provided a framework to structured learning, outside the higher education system, which shows the reversal to that pursued by the positivist ethos (e.g., UNSW, in the previous paper). Biggs, labelled the term teaching method (which bore more relevance to the higher education institutions) as a 'one-way' process- it is not until later on, that Biggs introduced the term teaching/learning activities (TLA's). This was considered more appropriate, in order to illustrate the reflective partnership between the student and the academic member(s) of staff; thus proving Martin's (1997), point for the need of collaborative partnership(s) - (could it be argued that the latter was feared by the UNSW?).

With the TLA in place, the student (who now 'drives' the learning) can also (through their own behaviour and understanding) dictate the level of the actual learning to take place. Walsh acknowledged this. Biggs attention concentrates in the fact that students already have a level of knowledge gained through their own life experiences. These experiences, in turn, become part of the learning context. Constructive practitioners had to then embrace this knowledge and, usually, counsel the students, to further develop and refine it. Perhaps, this is a radical view, different from that held by positivists, (eg: previous articles), as the latter considered that learning was, fundamentally, *driven, structured*, as well as *validated* by the various teaching institutions.

This argument resonates with WBL- it, primarily, focuses on the learning activities, rather than the taught subject content. Academic staff, frequently, help students to structure and challenge their own learning, through similar negotiated 'learning contracts',

or 'agreements'. This tested framework could be mapped across and applied, in many sectors of the business world (e.g., Higher Education, the workplace, etc).

Biggs (2003), argued that 'building such performances of understanding into the course objectives, aligning teaching to them, and designing assessment tasks that confirm that students can or cannot carry out these performances..' is bound to be helpful to the students' understanding of the given task. As constructivism, in this case, is based on the student activities, it would imply that the motivation to successfully complete the WBL course, must come from the student, as the tutor(s)' role becomes one of support, focusing on assessing and monitoring progression.

According to Biggs, this intervention emanates by the consideration that, in order, to design students' learning, the latter should be revolving around 'evident' activities. For example:

- What the student should be able to do or understand at the end of the learning experience?
- What activities the student should undertake in order to earn these?
- How can the tutor find out if the student has learned this successfully?

The nature of these questions and their respective answers, are more output focused in nature, than previously accepted and are illustrative of another attribute supportive of the constructivist paradigm.

This article was written in 2007 and (despite the 'shortness' of time) the development of WBL has been considerable, since then. The advantages of 'opening-up' the learning environment as a more collaborative one (as considered by Walsh), has enabled it to encompass, elaborate and build upon many of the benefits of work-based learning that have been already highlighted by previous research. The boundaries between education and business have, increasingly, become more faint, with teachers and lecturers willingly delivering formal, accredited education and training programmes within, (or for) various organisations.

The UK government has also accepted that the WBL methodology can offer many advantages to all stakeholders in the learning process. There is also recognition of the contribution to the current and future economies and, usually, Governments make finances available for innovative initiatives (e.g., 'Foundation Degrees', 'Modern Apprenticeships', etc). In WBL terms, these initiatives typically identify industry-specific knowledge and skills, coupled with collaborative partnerships between the 'student', the 'employer' and the 'educational institution'. The intertwining of practical, vocational and academic knowledge and skills is now recognised as a major contributor to the development and implementation of *work-based learning*, within, both, the employment and educational sectors.

Ethical issues

The ethics involved in each of the articles examined vary. Those which are within the traditional approaches have evolved to become more consensual in adopting a participative role, within the research, for the learner. There is a lack of negotiated consent gained by the researchers There is, however, correlation between the evolution of the concept of WBL illustrated and the degree of autonomy given to the student, (or learner), spanning from 1997-2007; as access of participation increases, but so does awareness around other ethical considerations (ie: race, colour, sex, age etc..). To effectively address the ethical issues apparent, this section will illustrate the various points from two perspectives: 'qualitative / interpretative' and 'quantitative / positivist'.

The 'quantitative / positivist' approach expounds that there is only 'one truth', usually, evidenced through scientific methods- research results can therefore, become reliable knowledge (everything else remains irrelevant if it cannot be *validated* through the senses). This approach using quantitative methods of research is typical of a traditional approach which Beauchamp et al., (1982) refers to, as "a sharp line between the 'prescriptive' (moral-political) and the 'descriptive' (scientific-methodological) component." The latter, although not commonly used today, is still very prevalent within the medical field.

In the article by Freestone et al., most of the information obtained for the research, derives from the 'Planning' students in UNSW- this, however, poses doubt over the levels of anonymity (not gathering 'identity-specific' data) and that of confidentiality (not revealing 'identity-specific' data), afforded by the answers provided. As the UNSW, was the only University offering a 'Planning' degree (and was vehemently resisting the benefits of *change* imposed by the evolution of WBL?): would it be a reasonable assumption to consider this as indirect pressure on students to conform with the University, hence influencing their responses to the researchers' questions? This is, perhaps, consistent with the students being treated in a Utilitarian fashion (e.g., an 'end', instead of a 'means to an end'). Also, could the latter point give the student(s), much more autonomy to 'voice' their opinions and perhaps identify opportunities for *change* in delivering the degree which they would welcome, through WBL methodology?

According to Connolly, (2003) the students should have been offered an option to participate or withdraw.

> '..it should be made clear to participants that they have the right at any time to withdraw from the research, either temporarily or permanently, without the need to provide a reason. The extent to which they are also able to retrospectively withdraw any consent they may have previously given and to require that their own data, including any recordings, be destroyed should also be made clear'.

All data was collected either at an interview with the researcher, or through short questionnaires completed on campus. The level of student consent was absent. If this consent had been secured in the first instance, it would have, perhaps, mitigated the need to establish the necessary levels of both anonymity and confidentiality. The learners, however, appears that had little option but to conform to specific laws (or general regularities), due to the scientific research (there was only one degree offered for 'Planners'). Though the student had an opportunity to 'voice' an opinion regarding the usefulness of work-placements, the University did sustain that offering a 'sandwich' year would translate to the student, individually, managing the process. This was neither

structured, nor tailored to meet the individual's needs for learning. Indeed, anywhere the WBL methods were being offered, they were being institutionalised by the conventional approach to delivering education through 'classroom' and 'lecture-halls'. There is no evidence of negotiation with the students.

Could this treatment of students be considered as research misconduct, as they (students) were indirectly coerced into giving answers which the University may have desired? What, would the outcome be, if the necessary freedom to respond as they wished to was afforded an outcome that would have been less predictable? What if the students were afforded the necessary freedom to respond as they wished to? Punch (1986), however, stated that '..ethical misconduct may be portrayed as a necessary or common aspect of field work by some researchers'.

Although the growth in the use of 'interpretative / qualitative' methodology has challenged the ethical principles of the traditional approach (e.g. the measurement of beliefs, attitudes, customs etc..), research misconduct is also worthy of consideration, mainly due to the lack of statistical information provided. This could give rise to the potential of misrepresenting the facts deriving from the research, or (even unwittingly) fabricating the results to encourage, or influence decisions.

Also, in the articles by Freestone et al., (2006) and Stern (1997), there is mention of funding being received or made available to the researchers, which possibly placed additional pressures. Would the latter hoping to achieve the desired outcome for their funders, as anything else may have resulted in loss of future business? If the UNSW was confronted with data sourced from the research carried out (i.e., students demanding a change in the 'Planning' Degree programme, or the issue over the duration of the incorporated work-experience module), would they (university) have complied? .

The contemporary approach requires less involvement from the learner. Where negotiated 'learning agreements' and/or 'learning plans' are involved, the degree of the student's commitment is, generally, greater. The learners are usually, in these cases, motivated to learn through involvement and participation in their development

programmes; as demonstrated in some of the articles examined. Students can exercise greater influence, both in terms of individual progress and process.

In many instances (Walsh, 2007) students were well aware of what was expected from them, the desired outcomes which they needed to achieve and how these would be assessed. This *involvement* reaches the 'core' of qualitative methods as they 'are best suited to getting at what the voices have to say and what they mean' (Howe & Moses, 1999: 38).

Although WBL is still evolving, it is evident that this evolution brings with it, at least, some significant benefits. These benefits would, amongst others, consist of greater emphasis on ethical considerations and their fair (re)presentation, using both sides of (eg: benefits and limitations) the qualitative and quantitative research methods. All articles examined tend to allude to an increase in the understanding by researchers, as to the importance of obtaining the necessary levels of consent and associated autonomy, confidentiality and privacy from the research subject and the presentation of their findings. Also, a more participative role for the student / learner in their development and how this will be assessed and/or measured through an agreed 'learning plan' or 'personal development plan', is also examined (with various degrees of analysis).

Whichever method, however, is adopted to carry out the research, it is evident that stakeholders must now, generally, be able to substantiate their findings and the reasons for their research, in order to avoid, even unintentional, misconduct, misrepresentation and uphold the ethics expounded by the overarching monitoring institutions.

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