
BRUCE A. CALWAY
Swinburne University of Technology, Lilydale, Victoria, Australia

ABSTRACT
What is it about the Australian society’s view of tertiary education that sees the imperative for integration of work and learning, but when it comes to choices the students and teachers pragmatically focus on content and assessment outcomes? Here I suggest that ‘work ready’ learning, focusing on vocational competencies, is not the equivalent to ‘work-based’ learning i.e. work and learning integration, even though elements of the former are encapsulated in the latter.

In this paper I suggest that few students will choose work-based learning (work and learning integration) because of pragmatic tensions and enculturation within the tertiary education environment that sees the imperative of vocational competencies and passing as greater than any desire to integrate work and learning as a ‘Real Life’ (abstract and ill-defined) learning space.

The tension extends to both students and teachers where teachers may well be seeking to engage students in ‘real life’, work-based learning but students simplistically demand, “what do I have to do to pass” and where teachers choose or are forced to be pragmatic and instructive in approach.

INTRODUCTION
In the constructive approach to learning and teaching (cf. Tam, 2000; Strommen, 1999; Wilson, 1997) (adopted by the Swinburne, Lilydale campus under study in this paper), learners are engaged or motivated to take on a more active role with teachers using what students already know and to build on that. Data collected in a 2002 study of learning approaches for students of the Information Technology, Systems and Multimedia (ITSM) Discipline of Swinburne University of Technology (Lilydale campus), shows that the students are demanding direct instruction and prescriptive assessment – not at all conducive to work and learning integration as a learning framework. Equally, a study of learning materials and Subject Outlines revealed a minimalist, prescriptive and content focus on the part of the teachers as authors of the learning material.

Do both teachers and students suffer the same malady – a malady that requires further investigation if we are to move to a workable and engaging ‘Participative’ (refer below) work and learning integration approach? My ongoing research proposition is that this tension (i.e. the learner-centric tertiary education environment that will see the imperative of passing and competencies as greater than any desire to engage constructive, integrative work and learning) is not covered at all well by extant learning theories or praxis.

What would constitute an ideal flexible ‘work and learning’ model? For the ITSM Discipline it would be: ‘real life’ problems and research providing the cases for study while flexible and linked learning materials (best contained within an online learning management system) provide the specific competencies and knowledge at an appropriate level that can be
assessed in terms of learning understanding not just prescriptive and rote assessments.

The learning environment would be participative and constructive where teachers and students receive real reward for effort, and where institutions provide real and flexible learning engagement therefore meeting the requirements of a socially holistic and pluralist learning imperative. Creation of this is an ideal participative model, however such a flexible higher education system is always under threat, under most threat from society (including Industry, Government, Institutions, etc.), teachers and learners themselves.

The demands on the education system both financial and structural are often ill-defined or conflicting in the Australian context of tertiary education. It almost seems incredible to think of teachers or learners choosing utilitarian outcomes above constructive and participative learning, however, my research has shown this to be a very real issue for the ITSM Discipline staff and students and that the social and student utilitarian learning model dilutes efforts by higher education institutions and teaching staff to create a collaborative, flexible and holistic higher education.

BACKGROUND DISCUSSION

Data collected from student and subject surveys, exam results, assessment items, learning skills inventories, industry projects, etc., over a five year period show that the implementation of a flexible and multi-modal learning environment that integrates information and communication technologies, student exchange, work-based and work integrated learning, learning management systems and classroom contact is problematic. This is expressed when only a small number of students choose studies containing work (real world, problem-based) integrated projects, as they are typically ill-structured or abstract problem situations.

One outcome of this paper is to inform individuals and groups, when developing integrated work and learning environments and curriculum, that learner-centric agency and mental models are a blunt instrument that can force higher education systems to be highly prescriptive and inflexible, and make it overly difficult to create a collaborative and participative environment. Sad experience, over a five year period, has shown me that even with good quality industry projects and collaborations, and a good participative learning and teaching environment and management systems there is no guarantee that students or teachers will engage the opportunities, causing dissatisfaction within collaborators, students and teaching staff, exacerbating an already tenuous situation.

However, all is not lost; knowing about the issues and that there has been considerable recording of best practice (by WACE and other institutions) for work and learning integration will aid learning and management systems and a work-based learning strategy (both the problem solving collaborations and the competencies learning) can be enacted within a single flexible participative model. Whether students and teachers engage such an outcome is a different issue and subject to ongoing research at Swinburne, Lilydale campus.

If literature reporting on integration of work, online learning technology and curriculum is to be taken at face value there are considerable examples of implementations with positive outcomes. However, there seems to be an assumption within the research reported that students will perpetuate a self-motivation and constructive learning scenario based upon exposure to such a educational construction alone.

It was during the developmental generations of the ITSM Discipline participative learning environment that students were encouraged to be far more adventurous and engaged learners in line with the Lilydale campus' liberal and work-based learning assumptions and philosophy. As one author suggests:

'... we should look for pupils to be successful in exams of course, but much more than that we should be seeking to turn out young men and women who are hungry for learning, set firm on the track of life-long learning, not utilitarian learning, not 'just in time' amassing of facts but a love of learning, a delight in exploring new avenues.'


However, this has not proven to be the case with ITSM Discipline students who were shown to be choosing a utilitarian learning paradigm above any participative, self-reliant work-based and/or constructive learning paradigm (Galway, 2003). The studies I have conducted (reported
in other papers/reports) show that the ITSM Discipline students have not changed in their learning perceptions or learning approaches over the five years of the study, regardless of the ITSM Discipline learning environment developments. This came as a shock to the ITSM Discipline and staff given the positive pronouncements in the literature relative to the use of online and work-based learning paradigms. Why is there no change? What is the problem? One reason I pose for this problem could well be:

That the dominant learning and teaching variable (agency) is the perception of staff, students and society of the importance of skills (generic and discipline specific competencies) and that the technologies and pedagogy will consequently be used in a pragmatic manner to support such an agency.

Students in Australia are undertaking degree studies and increasingly studying and working (i.e. paid work) simultaneously (e.g. McInnis, Center for the Study of Higher Education). This could be a catalyst for why they are seemingly adopting pragmatic learning approaches and adopting online learning technology as a convenient content acquisition mode for study. This is evidenced by students demanding ALL learning materials to appear in the one online/virtual or print-based learning guide resource and not require them to access multiple resources (e.g. libraries, other texts, papers, etc.). Students would therefore remain focused on process and assessment as the outcome of their study. This would seem to be exacerbated because of a learning enculturation from secondary college and from societal perceptions of higher education as a vocational prerequisite, and they do not see the relevance of any change to self-reliant or participative learning.

SWINBURNE WORK AND LEARNING INTEGRATION

For Swinburne University of Technology, Lilydale campus, there are three dimensions to work and learning integration (work-based learning, 'real life'). My studies of the ITSM Discipline have shown the number of students undertaking the subjects called 'Work Integrated Learning' (WIL - LZZ301) and 'Industry Based Learning' (IBL - subject code LZZ306, or 312) relative to the number of graduates is a very low percentage. Less than 2% per annum are choosing IBL and an equally low percentage choosing WIL projects - < 5%. Swinburne, Lilydale campus use of the terms WIL and IBL, etc., is:

Industry Based Learning (IBL) — where students can participate in industry within a paid position. Each position or placement is for a limited period of six or 12 months duration. Placements are supervised by an industry sponsor and by an academic mentor. All placements are competitive and only available to students with a steady record (credit average or above) and who have completed the first two years of their undergraduate degree. The university seeks sponsor industries and manages the student placements for the duration of that placement. Sponsors emanate from a variety of industries and are commensurate with the major studies that students complete. Only one to two percent of students who would be entering their third year of study would enter industry based learning placements. IBL placements are not for credit toward the student's degree, however, there is a statement on the testamur.

Work-Integrated Learning (WIL) — not all students have access or results commensurate with an IBL placement, however, all students entering their third year of study have the option of undertaking a work-based project. The projects are sourced by the students and where possible, undertaken in small groups of mixed disciplines (e.g. one student from IT, one from Marketing, one from Management). Projects must be completed by the group within a single semester of sixteen weeks. No payments are received and no guarantees given that a project will be completed or functional. Students completing the WIL subject are expected to present several assessment items - the project is for credit as a single subject toward the student's degree. As with IBL, very few students make use of the WIL opportunity as a means of gaining work-based experience.
Problem-based case studies -- Each subject and year level of the ITSM Discipline has what is called an active and multi-modal learning environment. This environment is presented through classroom-based workshops/tutorials and web-sites. The web-site contains two levels of content -- the first being a series of learning objects where students gain specific knowledge about a particular topic and/or competency. The second level is a series of case-based lessons where students are presented with scenarios and cases that required contextual and conceptual thinking if they are to be resolved. The cases are drawn from industry scenarios and are focused at the work-based experience where knowledge and skills will require blending and abstraction to new and novel situations. The lessons draw upon the individual topics and competencies that are designated for that particular case and situation. The premise of the learning environment is to provide relevant, flexible and work-based studies. All students studying the ITSM Discipline subjects engage this learning environment.

With these work-based learning situations, presented for each student and prepared by the teaching staff, it would not be unexpected that students would leap at the opportunity to engage such options. The reality for the ITSM Discipline is the antithesis of what could be considered self-directed or participative learning. Instead students through university administered subject surveys were demanding a prescriptive formulaic process for study. Any attempt by staff to have students explore problematic cases or unstructured assessment around various 'real life' contextual and conceptual abstractions were met with a resounding "tell me what I have to do to pass", a minimalist paradigm where the only thing in view is 'to pass' the subject without visiting any or many of the learning experiences available. These observations have been not only recorded in the student subject surveys but also within an analysis of student learning skills inventories. This is not to say students are commensurately unmotivated for, in fact, student motivation was recorded as moderate to high in most subjects offered. (Calway, 2003)

This raises the possibility that students, while espousing that work-based learning is of value, do not pursue such activity as a priority when undertaking their degree studies. It would seem from the ITSM Discipline experience that students are strongly focused upon assessment at the expense of holistic learning and work-based experiences for a reason. Does this mean that all universities have a similar scenario? In short the answer must be 'no' for there are instances within Swinburne and other universities (e.g. Babson College) around the world where students actively engage work-based learning environments. However, it must be noted that the learning and academic culture in these instances are work-based as a focus and that enrolled students must undertake IBL and work integrated projects as a condition of graduation. Unfortunately, such proactive work and learning integration is rarely attained nor are the majority of staff qualified to participate or supervise such work-based learning.

Does this therefore mean students must be forced to engage work integrated learning using every learning motivation, learning skill, learning style, etc? A daunting task if, as a teacher, all you have ever observed is an instructive mental model for learning. In many ways the fact that students are 'required to' is probably sufficient to drive them to a utilitarian learning approach even in the most constructive work-based paradigm.

IBL in many respects is one enculturation of a participative learning engagement as a true partnership of students, teachers and industry sponsors. This model, employed by Swinburne presently provides for paid student placements on a competitive basis for students at the Lilydale campus. Some other departments of Swinburne require that students complete one or more placements as part of the degree studies and as a requisite component of completing an undergraduate degree. No formal classroom studies are required during an IBL placement nor are there any specified topics or skills development. Rather, it is the out-working of skills and knowledge acquired during the first two years of formal learning that are actioned. Where IBL therefore could be seen to fail as a work and learning integration is in the very area of assessable learning and competencies.
PARTICIPATIVE LEARNING ENCUULTURATION

I use enculturation here as an active and holistic verb where a sustained participative cultural context of work and learning integration is envisaged. I cannot at this point see a universal participative culture, however, I do:

- Provide and investigate examples (artefacts and people);
- Encourage and orchestrate student/student, educator/student, educator/educator interactions; and
- Directly research, encourage and teach the model espoused through action inquiry.

Tishman et al. (1992) spoke of enculturation this way when they suggested that teaching by enculturation is holistic in nature and that this model subsumes the traditional instruction models rather than replace them.

Enculturation at both the Centre for eBusiness and Communication and the ITSM Discipline, as a philosophy, has developed from a goal of self-actualised learning as a social construction that has resulted from complex processes of reforming and improving the educational activities of the Centre and the ITSM Discipline. This social construction is measured through change, where changes come from the cyclical effort of combining theory and practices involved, making the changes and reflecting on what has been learned. This is typical of an Action Research approach (cf. Stringer, 1999) used by education researchers undertaking community-based and/or systematic construction.

Further, participative self-actualised and self-directed learning, (cf. Knowles, 1975, 1984; Houle, 1984; Hiemstra and Sisco, 1990) affords a number of connotations, from learners motivated in a prescriptive and dependent study regime through to learners generating their own study material and path of learning. The former suggests a strong use of instructive learning with the learner environment taking on a high degree of directed action.

Whereas the latter is far more participative i.e. self-actualised learning where the learner and teaching construct the topic, time, place and pace. Therefore, there is a discernable pluralism as:

- Self-motivated, directed learning - where the knowledge is directed but where the learner engages the learning;
- Self-motivated, self-directed learning - where the learner takes an active part in a structured learning environment. An environment that encourages subjective interpretation of learning within a stimulus contextualisation.
- Self-actualising, self-directed learning - where the learner creates a learning path in accordance with an individual action to create a context or influence an extant context (i.e. construction, Bruner, 1960, 1986, 1990).

In essence, these are similar in that the learner is making an individual response to learning. However, there is one notable differentiation in that the sphere of individual contextualisation is objective for the one and subjective for the others.

In a survey (Calway, 2003) (using the self-directed learning instrument, http://www.distance.syr.edu/sdskills.html) conducted with students in first, second, and third years of undergraduate study, students believed they were moderately self-motivated and moderately self-directed. While the academic staff agreed with the students in terms of self-motivation they disagreed regarding self-direction, suggesting students were low and/or did not understand this aspect. Self-direction of a learner does not seem to be associated with the dependence or independence of the learner, rather I suggest it is associated with the needs (insecure through self-actualised) focus of the learner that need to be met, e.g. independent learners can have multiple levels of self-direction and engagement.
This has lead me to the view that what was being observed ran contras to the assumptions of work and learning integration in that self-actualised learners seem to be a product of a learning construction. This dichotomy could loosely be viewed in terms of Maslow's hierarchy of needs (e.g. Norwood, 1999) where the student is overtly progressed along a path of objective security to the point of self-actualised engagement. That is, a traversing from "not knowing what they don't know" and being insecure as learners to "knowing what they don't know" and "knowing what is worth knowing" and able to engage self-actualised learning given appropriate conditions (the debate of whether we are a product of a social construction is not attempted here). At Swinburne University of Technology, Lilydale campus, both the undergraduate ITSM Discipline and postgraduate Centre for eBusiness and Communication learning and teaching environment are an experimental site for participative learning enculturation, albeit still in its infancy.

SUMMARY AND CONCLUSION

Society, industries and institutions of education have conceptions of what is expected of tertiary education as a cultural norm and consequently what teaching and learning constitute within that normalisation. Certainly transference of competency focused knowledge and skills loom large as do outcomes in the form of degrees, graded subject results and the like.

Data collected in a 2002 study for students of the ITSM Discipline of Swinburne, Lilydale Campus shows that the students are demanding direct instruction and prescriptive assessment – not at all conducive to work integrated and constructive learning. I suggest that few students, or for that matter teachers,
will choose work-based learning because of the pragmatic tensions and enculturation within the tertiary education environment. The tensions caused for teachers, students and learning exists where industry and teachers may well be seeking to engage students in work-based learning, as a 'real life' abstract and ill defined learning space, but where students simplistically expect "what do I have to do to pass" and ALL parties revert to pragmatic focused instruction.

Within the Australian context, society in general and industry in particular have a vocational work-ready ideal for education. This is not of itself good or bad, however it does belie a pragmatic content-based imperative that prescribes for students that results for subjects studied and degree qualifications are more important than the disposition to work-based learning, interdisciplinary complementation and collaborative participation.

REFERENCES AND BIBLIOGRAPHY


