Life-Wide Learning; 'What matters to me as a teacher?'

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Professor John Cowan entered academia after a successful career as a structural engineering designer. His research at Heriot-Watt University, Edinburgh, where he was the first Professor of Engineering Education in the UK, latterly concentrated on student-centred learning and the learning experience. On moving to the Open University in Scotland, he encouraged innovative curriculum development and campaigned nationally for rigorous formative evaluation in higher education. His passion for and professional interest in student-centred learning now spans over 40 years. During that time he has placed an ever increasing emphasis on preparing students to exercise stewardship over their life-wide development while at University, and in lifelong learning thereafter. He continues to share his wisdom with higher education teachers at Napier University.

John's collegial spirit is well known. In describing himself he says, *"it's best just to think of me as a part-time teacher nowadays, with personal history to draw on and a willingness to share with some colleagues, if they want to innovate in areas where I have some experience."* SCEPTrE has benefited hugely from his willingness to share the wisdom he has gained from a lifetime of committed professional practice and personal and his own professional development (most recently in a set of ITunes podcasts).

Life-wide learning

I was introduced only recently to the concept of life-wide learning (Jackson 2008). I felt rather like Molière's (Jean Baptiste Poquelin, 1622-73) M. Jourdain, who was introduced in middle age to the concept of 'prose' – and immediately realized that he had been speaking in prose for most of his life. Here was I, for some years a pensioner, suddenly realizing that I had been engaged in life-wide learning for most of my adult life. And I was also realizing that I had been enthusiastically and actively promoting it with my students in most of my teaching. Why had I done so – and with what purpose and outcomes? Looking back, I realize that it all began from my very early professional experiences.

This highly personal account tries to demonstrate how I have integrated and put into action as a teacher the learning I have gained from experiences in different parts of my professional life.

A personal introduction

I was a fairly successful undergraduate student. I quickly learnt how to do what they expected of me in their coursework and examinations. I took what I needed from lectures and textbooks, and let the rest pass me by. I also made time for social and sporting activities. Soon I was well on the way to becoming an effectively responsive learner, a human "exam-passing machine - as indeed I had been at school – and a first-class honours graduate. But, even at that time. I was well aware of being far from satisfied with the limitations of what I was achieving.

Three days after I had completed my first year of university study in civil engineering, I began vacation work in a design office, as a fresh young indentured apprentice.   It was an unusual apprenticeship situation, for there were too many apprentices, and too few qualified engineers. So the apprentices had

to take on more demanding work than would usually have been the case. I realize now that this was my first opportunity to take responsibility for my own professional development, and to make my educational experience more complete.

There I encountered a situation which was quite different from what had been the case in my university-based education. Much was now expected of me from the outset. I was just given things to do and mainly left to get on with them. They were usually parts of jobs which mattered to a client, tasks unlike anything I had done before, and above all tasks which I had not yet been trained to tackle. I was expected to prepare myself with what I needed to know and be able to do. Most of this involved knowledge and abilities which had not featured in my first year studies. So, in order to cope, I had to borrow useful office textbooks, find the pages which would help me to meet these unfamiliar demands, and even take the right book home to be studied overnight. I was able to learn quickly but sparingly from my busy section leader, from my fellow apprentices, and from the senior partner who regularly went round the drawing boards, pointing out tersely where we were each going wrong, suggesting what we should give attention to, offering new options. I had to formulate good questions, to ask of seniors and peers in order to assist my learning and development, without my becoming a dependent nuisance. When I was asked if I could do something, I learnt that I often did no harm to my development and progression within the firm by taking a big risk and claiming "Yes, I can" – and then rushing home that night with yet another book to find out how to do it.

Three months later, when I returned to university for my second year of studies there, my perspective on education had been transformed. Stimulated by the confidence and insight gained during that challenging summer, I had come to know how I intended to manage my development. I was now determined to:

- Be responsible for effectively taking my own personal and professional development in directions which I would value.
- Actively follow up what I considered appropriate and substantial questions, chosen because their answers should help me to develop yet further.
- Make effective (but not exploitive) use of experts, resources, seniors and especially of peers whom I valued, to help me to progress.
- Regularly review my progress and forward planning, against professional and personal demands and standards.
- Pay adequate attention to my feelings and my values, as important factors in my development and my developing.
- Push myself to constantly take on new challenges through which I could develop myself, with the attendant and considered risks growing greater and greater every next time.

So I had discovered for myself the importance of self-regulation (Zimmerman 2000), and the forms of self-managed learning that are now known as Personal Development Planning (PDP), and increasingly feature in university programmes (Jackson 2003).

Unfortunately, in the remainder of my university studies, I was offered little opportunity to engage with these priorities, other than in my spare time and during my summer periods in the design office. After graduation I went on to join the same firm, as a full-time designer. There followed 12 years of self-managed and quite successful personal and professional development, in which I came in due course to be responsible for the development of the apprentices in the large section which I was soon leading. I encouraged them to do as I had done, and was still doing. Once a year we each took time to review our progress, to identify goals, and to plan for the twelve months ahead.

Then I chose to become an academic. It was a shock to see higher education from the staff side. I found myself expected to deliver teacher-directed, teacher-managed, teacher-assessed learning. I demurred – but kept my reservations to myself. However, as soon as I could, I actively began to live out the principles which seemed to be serving me so well in my own life, and which I was soon to find set

out clearly, persuasively and authoritatively – and for me reassuringly - by Rogers (1967). Although I had not met the term at that stage, I was actually trying to promote life-wide learning. I was striving to prepare my students to exercise holistic responsibility for their personal and professional development after they graduated – by virtue of already having done so as students.

Gradually, in the days before mailbases, I built up my own circle of peers and authority figures with whom I found it helpful to air ideas, and from whom I might seek assistance with my challenges. They in their turn would make use of me, in a similar way. Had that not been so, I would have felt awkward about going back to them, repeatedly. This initially postal, then e-mail, learning community has been important to me, over the years, in my life-wide learning and that of my students. It was a while before I encountered the concept of socio-constructivism; but, again like M. Jourdain, I certainly practised it, even in these early years in academia. For my life-wide learning is a relational process, in which I nourish and maintain relationships in different aspects of our lives that help both parties to develop and accomplish more of our aims than would be possible were we simply self-reliant.

My pursuit of life-wide learning for my students

It is deceptively easy to formulate and declare principles, as I have just done here. It is less simple to apply them innovatively in real-life situations. In this section I will provide some examples which illustrate how I tried to incorporate the principles which came to matter to me from my own life-wide learning experiences. I will leave you make your judgements of their appropriateness and effectiveness.

1 Self-*managed* professional development (Cowan et al, 1973; Cowan, 1975; 1976)

The realisation that, during my experience as a practising civil engineer, I had learnt best when I managed my own learning, led me to create a Civil Engineering Learning Unit This was a centre, in which our first and third year students could choose their own ways to achieve their programme's intended learning outcomes in Structures, Materials and Design. They could manage, in their own time, their selection and use of the pre-recorded learning materials which I provided for the various possible routes to that learning. At the peak of our operation, we handled roughly 1200 student contact hours per week, and copied over 1000 audio cassettes per week, to support the intended learning. This cost-effective development led to a significant reduction in failure rates, and a wholehearted endorsement by an independent evaluator of the enhanced quality of the consequent learning and development (Cowan, 1975).

2 Self-*directed* professional development (Cowan, 1978)

My early experiences had led me to identify and pursue learning which had attracted me, and which mattered to me, for one reason or another. I had decided, for example, that I wanted and needed to learn more about tacheometry – so I did so. Working on the design of an innovative paper mill, I felt the need to know and understand how high quality twin-wire papers are produced. So I added that subject to my agenda. I was therefore much attracted to the approach advocated by Rogers (1967), who at that time was preaching the educational gospel of "Freedom to Learn". I subscribed readily to the principle that students should not only be able to decide *how* to learn, but also *what* to learn.

Encouraged by student and other evaluations of the Learning Unit, I recruited volunteers for a pilot development in which first year students would freely decide what they should learn about the properties and use of civil engineering materials. The choice was entirely open, provided they gave some consideration to the common construction materials - steel, concrete, timber and masonry. The pilot was judged successful, and the course was offered as an option. After detailed independent scrutiny, it went on to receive an "Education for Capability" Award from the Royal Society of Arts.

3 Promoting a questioning culture (Cowan, 1987; 2006a)

During my time as an apprentice civil engineer I had learnt that the quickest and one of the most effective ways to learn was to ask searching questions of people who were much more experienced and knowledgeable than I was. Consequently I enthused when I chanced on Postman and Weingartner (1971, p34), who epitomised the questioning learner in telling terms:

> "Once you have learnt how to ask questions – relevant, and appropriate and substantial questions – you have learnt how to learn and no one can keep you from learning whatever you want or need to know".

Suddenly I became aware of my hypocrisy. I claimed to value searching questioning – but I still subscribed to a university culture in which the main demand on students was to answer their teachers' questions (other than in the previous example, of course). I resolved to do something about this inconsistency.

I made it a requirement for my first year students of civil engineering to post, on the notice board in our crush area, a question written on a card. This question should be about some aspect of civil engineering, should be worth asking, and should be such that no other first year student could tell us the answer. If any student knew the answer, they could write it on the card (contributing to class and sometimes staff learning), and gain bonus marks for that. The card would then be taken down. The notice board attracted much attention. Every student managed to produce a worthwhile and as yet unanswered question before Christmas. I then rated the postings as one, two or three person questions – and invited bids from students in this class who would undertake to obtain the answers for us, as assessed coursework. After Easter, answers were presented in class and subjected to vigorous questioning, since the subject matter was examinable in June.

In this way I had established a question asking and answering culture – but at a price. The following year one of my colleagues led strong staffroom criticism. "These students keep interrupting my lectures to ask questions." "Are they trivial or irrelevant questions?" I asked in some concern. "No – but they're questions I don't want to have to answer until their final year!" No comment.

4 Self-*assessed* professional development (Cowan, 1986; 1988; 2006a)

A university had rated me a first class honours graduate; but *I* had judged myself to be seriously lacking in several respects which I deemed important. It was thus the judgements from *self*-assessment which had mattered to me, and drove me on to my next development activities. For the judgement to which I gave and still give most attention is my own self-assessment. It occurred to me that it also be useful to develop objective self-assessment on the part of students, before they graduated.

Consequently my final step towards offering completely self-planned, self-directed and self-assessed professional development took the form of a major third year course in Design, featuring genuine self-assessment. Here students each chose their own weekly goals, took comment on these from fellow students, managed their learning activity, and presented evidence of outcomes at the end of the week to peers, again for comment. They were committed to consider the comments from their chosen peers, but were free to disagree with or disregard them. At the end of each term, they self-assessed themselves to their declared criteria, in an objective way. If they did so, their grades were accepted. Even as a pilot, this radical programme was accepted by the relatively conservative and searching Joint Board of Moderators of the relevant professional bodies.

5 Using peers (Weedon & Cowan, 2002; 2005)

My development has always owed a great deal to collaboration with others, being supported by them and on occasions providing support to them. This interaction with peers is central to developing, for me; so I have sought in my courses to encourage (somewhere) the same type of constructive interaction for the benefit of my students. I am still actively progressing this approach to lifelong professional development (Francis & Cowan, 2007).

My most suitable example of this approach comes from a later stage in my academic career, when a colleague and I were responsible for penultimate year project work in Social Sciences in the UHI Project (an acronym which it is forbidden to spell out!). We depended on what I would now call learning communities (Francis & Cowan, 2007). The project groups comprised students at separate geographical locations who were supported electronically by a facilitative tutor. Assessment was based partly on the group's development of their project and partly on their individual and initially constructivist development of their abilities of enquiry and critical and reasoned thinking. Groups were encouraged to be much in contact - by e-mail, on discussion boards, in chat rooms, occasionally by video-conference, and very occasionally face-to-face. Their development became essentially a socio-constructivist activity. Students rated the facilitated and structured peer interaction as the most effective contribution to their learning and development.

6 Becoming a reflective practitioner (Cowan, 1991; 1999)

As I have described, early circumstances encouraged me to be what I would now call a reflective practitioner. During that first working summer, my progress depended on my timely anticipation of my immediate needs, which I was to much later to call "reflection-for-action" (Cowan, 2006a). While interacting with peers and seniors, I frequently experienced immediate insights, as reflection-in-action (Schön, 1983); and at the end of that summer, my review was a reflection-on-action (Schön, 1983). So when I later encountered literature which extolled the usefulness of reflective journal writing, I was a ready convert to the contribution which structured reflection could make to my students' development. I opted to begin at the beginning of their tertiary studies, where a colleague and I were attempting to develop in our first year students of civil engineering some of the generic abilities which should stand them in good stead in their studies, their careers and their lives. That was a big target!

Each week we ran workshops along socio-constructivist lines. These were a new departure for the tutors, and an unfamiliar and unattractive challenge for the students, for which they showed little initial enthusiasm. I have written elsewhere (Cowan, 2006a) about the consequent risks of failure for the tutors, and the demands which this generated for us in our open ended facilitation of our potentially critical students. We took a big risk on the first occasion when we asked each student to compile a reflective journal, engaging with the question "What have I learnt about learning or thought about thinking which should make me more effective next week than I was last week?" In our Rogerian facilitative commenting on these journals, we then simply prompted writers to plan to test out their conclusions.

At that time, the civil engineers were taught Maths, Physics and Chemistry in a large class with all first year engineers taken together. So we were able to chart the progress of our students, relative to those in mechanical and electrical engineering, in these core subjects which we did not teach, and in which we believed the generic skills on which we were focussing should be proving relevant. We found a marked improvement on the part of many of our students in their ranking order in the composite class (Cowan, 1987), an improvement which it transpired they would maintain in their second year of study. During a later evaluative visit for his own purposes, Gibbs found to his surprise (and to mine) that some students continued to keep reflective journals in their second year, though this was not asked of them. This was the only instance I can recall of students undertaking coursework which was not asked of them.

7 Giving importance to affective needs (Garry & Cowan, 1987)

It is probably not necessary to read between the lines of this account to form the impression that I was often uncertain, apprehensive, self-critical – and also lonely – as I faced self-set demands which were new for me. Affective support which I valued and which was effective was most important to me, at these times

So it was with strong affinity that a colleague and I summarised for a conference 25 years ago what we had encountered as the main support needs, when our students were actively developing cognitive and interpersonal abilities. We portrayed this as a fish ladder, with fish-needs lying in deeper and deeper pools, and requiring different types of support if they were to jump up and progress. [Sadly, when I first tried to produce a diagram, clip art offered no salmon, and I had to make do with sharks (as in the original Fig 1). I ask kindly readers to exercise poetic license in considering this -for me, historic - graphic.]

In our self-managed development

declare

seek privacy

Open

explore

Known

listen!

Undefined

Unperceived

We should deal with our needs according to the way they are held
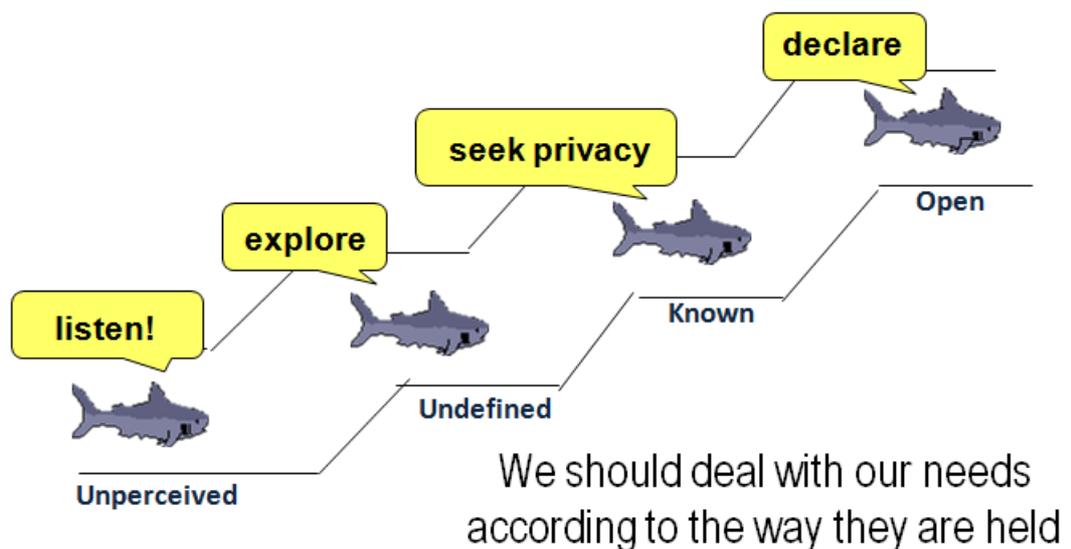
Figure 1: Fish ladder of support needs

We tried to bring out important distinctions in this figure. We suggested that learners can have four important categories of needs for support, each of which call for attention of a different sort:
- Learners who know what help they need, can succinctly declare it openly, and have no compunction in doing so. They simply require a direct answer.
- Learners who know what help they need, but are embarrassed for some reason about asking for assistance, require security before they feel able to declare their need, and probably still wish to do so confidentially.
- Learners who are aware that they need something, but cannot specify what it is sufficiently to indicate how they can be helped, want an opportunity and (preferably) empathic assistance to explore possible options for resolution of this undefined but important need.

- Learners who have needs of which they are blissfully unaware, can often only come to realize the existence of serious and unperceived weaknesses, and come to deal with them, through frank confidences conveyed by respected others.

We had found that needs, like salmon in a fish ladder, could effectively jump up form one of these levels to the next, and the next, given the appropriate stimulus, encouragement and support

All of these types of needs, barring the first one, embody affective as well as cognitive or interpersonal factors. In learner-directed life-wide learning, it is for the learner to take an initiative in recognizing and dealing appropriately with such a range of possibilities, and actively seeking appropriate support. In so doing the assistance of a supportive, but not directive, facilitator is both a desirable and an effective use of learning resources (Cowan & Chiu, 2009; Chiu & Cowan, 2010).

8 Having the courage, confidence and sense to take 'risks'

During my professional life, first as a practising engineer and then as an innovative university teacher, I have ever been aware of taking risks in breaking new ground, certainly with considered optimism, but usually without grounds for *knowing* that I could succeed. I felt that people cannot progress without doing something novel – either new for them or perhaps entirely without precedent (as in Example 4). Doing something without precedent, however well planned and considered, naturally brings attendant risks of failure.

I once designed an industrial building to be constructed from the roof downwards, eventually to sit on foundations which were to be newly constructed at the end of the process. Neither the client nor the contractor believed that this bizarre scheme was possible, although no other option had b en suggested to cope with the constraints within which we had to operate. I only obtained reluctant agreement to proceed, by taking on the men and plant as my direct responsibility. That contract was a big risk. If it hadn't been carried through successfully in the very restricted time available to us, my firm would never have had any further contracts from that client (or perhaps from others).

Similarly, all of the educational innovations in my previous examples took great risks – given the possible consequences of ineffective education in a year of my young students' lives. Admittedly I never innovated educationally without providing a safety net for the students who were to be experimentally involved. And happily I never had to use any of my carefully planned safety nets. But they were always there! And if I had had to use them, it would have been a severe blow to my reputation – and my confidence.

So success and development, for me, have usually only occurred through risk taking. Consequently I have tried to build in to my programmes opportunities for students to take risks. They have done so in pursuit of goals which they deemed important, but which took them into unfamiliar educational territory, and often took their tutors there, too. They have done so without fearing the consequence of a penalty for failure. Such risk taking has been profitable for many of my students, who have taken opportunities to approach their development in a risk-taking style.

For example, I recall a third year student, who (like his classmates) had been offered curriculum space in which to pursue a goal of his own choice, without risking being penalised for lack of success. He came to tell me in embarrassed frankness that, during his whole scholastic career, he had been petrified by information technology and computers. So he had cheated his way through assignments and examinations. He now wanted to try to find a way to overcome that fear, and put his dishonesty behind him. How he tackled that challenge in self-directed development is an inspiring – and lengthy – tale. Suffice it to say that six months later, his considered and conscious risk taking had paid off. He went on after graduation, with great success and personal satisfaction, to teach computer work inspiringly to primary school children.

I recall three students from the far east, who were similarly faced with the opportunity to set their own goals and take risks in so doing. They sensed that learner-directed learning was important to me and in our system. "We have come from a teacher-directed culture", they explained. "We want to develop the ability to be learners who direct our learning." I asked how they proposed to do that, and they responded that they wanted me to teach them (dependently!) to be independent of a teacher. I did not point out that this request was a contradiction in terms. This student-managed development would thus be a risk for them – and a risky and demanding remit for me. We negotiated an acceptable plan together. It's another long story, but we (or rather they) succeeded.

I recall a timid UHI student of social sciences who had come to see that her project should entail unstructured interviews, but who was petrified by that prospect. She took ample reflective time for her anticipatory process analysis, working out how she should and could - possibly - tackle what she saw as a risk of intense embarrassment if she dried up and could not find or formulate the next question. She went out to find and interview her first subject in great trepidation, and came home to reflect that it hadn't gone too badly. After further reflection which was first reflection-on-action and then for-action, she saw how to make improvement on the morrow, with the next interviewee. And her confidence steadily rose with her developing ability, in successive reflections – and from her further risk taking.

Every time going near the edge..... makes it easier to go nearer next time
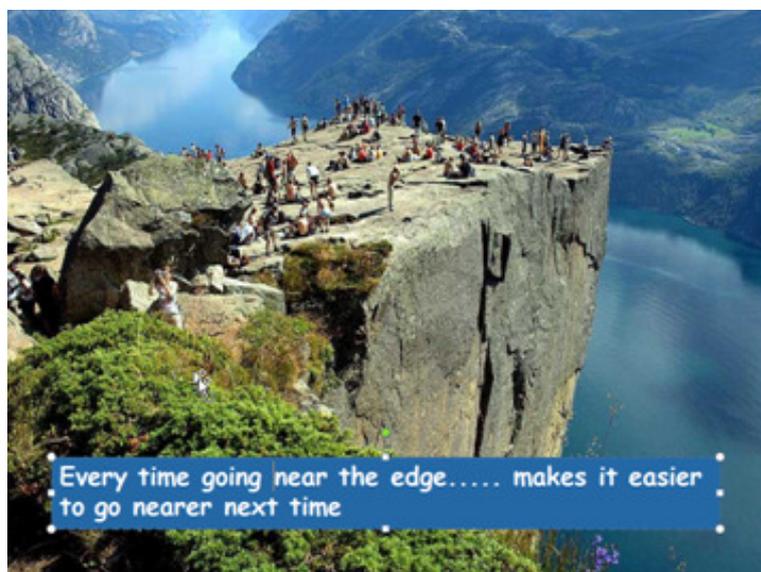
Figure 2 Taking risks

All of these students, and many more, faced what they saw as serious risks of failure in their ambitious ventures in life-wide learning. All discovered that, having faced up to their risk, it was easier next time to go beyond that now familiar challenge. For they had found that they could then almost confidently take further risks, which they could not previously have contemplated. If they talked or wrote subsequently to me about their risk-taking, I would congruently share some of my experiences over the years in my educational work in developing countries. There I often took risks which carried me beyond any previous experiences, out of my comfort zone and right to the edge of what I was prepared to hazard. When the risks came off successfully, it was then easier to go nearer to the edge, next time – according to the metaphor I have summarised in Figure 2.

How do I sum up my life-long, life-wide learning?

My (long) adult life has regularly featured personal and professional development which has been self-directed, self-managed and self-assessed. This has depended on my ability to question and reason and to innovate creatively, all of which has often been undertaken in constructive interaction with others,

particular in respect of my affective needs. Much of this process has centred on objective reflective review, and has involved taking carefully considered risks.

I recognize that my development and activities have been driven partly by the needs and interests of others, and have also been helped and facilitated by others. This is the social dynamic within which socio-constructivist life-wide learning takes place. Perhaps we pay insufficient attention to this matter in a higher education system that is still focused on individual achievement.

If I were given the opportunity (with hindsight) to start again, I would not want to make many changes in the way I have approached my development. Mind you, I admit and have acknowledged that I sometimes got things wrong (Cowan, 1984b; 1989; 2006b). Nevertheless, as a university teacher, I hope I would adhere firmly to the principle that what is sauce for the goose can, and should be, sauce for the gander. In the fragments of activity in higher education which I have reported here, I have found that life-wide education, as I have experienced and wished it for myself, can be established in viable and effective experiences for students. This seems to me to be a desirable preparation for their subsequent stewardship of personal and professional development in the remainder of their lives, according to principles which my history appears to endorse. Since I can recognize the processes which have been constructive in my own life, I believe intuitively that trying to arrange similar experiences for students is the right thing to do. And I welcome the fact that universities like the University of Surrey are thinking seriously about how to encourage, recognize and value institution-wide the learning gained through the many different parts of learners' lives while they are studying at university.

The title I was given for this brief paper on life-wide learning was "What matters to me as a teacher?" My response is that what matters to me as a teacher is exactly what matters to me as a learner.

References

Chiu, Y C & Cowan, J (2010) Dealing with Affective Needs in E-learning, in *Cases on Successful E-Learning Practices in the Developed and Developing World: Methods for the Global Information Economy,* ed B A Olaniran, NY: Hershey, IGI-Global pp. 42-57.

Cowan, J, Morton, J & Bolton, A (1973) An experimental learning unit for structural engineering studies, in *The Structural Engineer*, 51(9).

Cowan, J (1975) The Feasibility of Resource-Based Learning in Civil Engineering Education, unpublished thesis for the degree of PhD, Heriot-Watt University, Edinburgh.

Cowan, J (1976) Must self-instructional materials be firmly structured and directed towards lower-level objectives? Vol. X*, Aspects of Educational Technology,* Kogan Page.

Cowan, J (1978) Freedom in selection of course content: a case study of a course without a syllabus, *Studies in Higher Education,* 3(2).

Cowan, J (1984a) Learning contract design; a lecturer's perspective, *Royal Society of Arts,* occasional Paper No 7.

Cowan, J (1984b) Learning from mistakes - a pragmatic approach to Education for Capability, *Programmed Learning and Educational Technology,* 21(4).

Cowan, J (1986) A learning contract approach to the study of design, *Civil Engineering Education (ACE)*, Spring.

Cowan, J (1987) Education for Capability, unpublished higher doctoral dissertation, Heriot-Watt University, Edinburgh.

Cowan, J (1988) Struggling with self-assessment, in *Student Autonomy in Learning*, ed Boud, Kogan Page.

Cowan, J (1989) Four fatal errors equal two lessons learnt, *Education and Training Technology International* 26(2).

Cowan, J (1991) Commenting on learning journal entries, *Education and Training Technology International* 28(3).

Cowan, J (1999) Reflection – a Personal Account, in *Practice Guide 8: Developing as a Teacher*, *Course H852*, Milton Keynes: The Open University, pp. 24-28.

Cowan, J (2006a) *On Becoming an Innovative University Teacher*, 2nd edn, Buckingham: Open University Press.

Cowan, J (2006b) Third thoughts, in *British Journal of Educational Technology,* 37(4), pp. 633-5.

Cowan, J (2009) Learning to be Professional: Reflective thoughts on a life-time of trying, in *Learning to be Professional Through a Higher Education* , ed N J Jackson, e-book. Available at http://learningtobeprofessional.pbworks.com/Learning+to+be+Professional%3A++Reflective+thoughts+on+a+life-time+of+trying

Cowan, J & Chiu, Y C (2009) Dealing with affective needs in e-learning – contrasting or complementary pedagogies?, in *NACADA Conference on Personal Tutoring and Academic Advising, April 2009*, accessed 20 January 2010. Available at http://www. .ac.uk/wpresearch/docs/NACADA/JohnCowan.pdf

Francis, H & Cowan, J (2007) Fostering an action-research dynamic amongst student practitioners, in *Journal of European Industrial Training*, 32(5), pp. 336-346.

Garry, A M & Cowan, J (1987) To each according to his needs, in *Aspects of Educational Technology,* vol. 20, Kogan Page.

Jackson, N J (2003) PDP and self-regulation. Available at http://normanjackson.pbworks.com/self-regulation+and+personal+development

Jackson, N J (2008) A Life-Wide Curriculum: Enriching a traditional WIL scheme through new approaches to experience-based learning, in *Proceedings of the WACE Symposium Sydney 2008.* Available at http://www.acen.edu.au/images/resources/conferences/wace_conference_08/e-proceedings.pdf

Molière (Jean Baptiste Poquelin) (1622-73) *Le Bourgeois Gentilhomme,* Act II: 4.

Rogers, C R (1967) *On Becoming a Person,* London: Constable.

Weedon, E M & Cowan, J (2002) Commenting Electronically on Students' Reflective Learning Journals, in *Improving Student Learning, Theory and Practice Using Learning Technology*, ed C Rust, pp. 99-110.

Weedon, E M & Cowan, J (2005) The Kolb Cycle, reflection and all that …, in *Improving Student Learning – ten years on,* ed C Rust, Oxford: Oxford Centre for Staff & Learning Development.

Zimmerman (2000) Self-regulatory cycles of learning, in *Conceptions of self-directed learning, theoretical and conceptual considerations,* ed G A Straka, New York: Waxman pp. 221 et seq.