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Yves Benett

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The Assessment of Supervised Work Experience (SWE)—A Theoretical Perspective

By YVES BENETT

Reader, School of Education, Huddersfield Polytechnic

1 Introduction

Supervised Work Experience (notably on Sandwich degree courses in Britain) has been the subject of a number of studies in recent years (see, for example, Callaway, 1982; Hollinshead, 1983; CNAA, 1984; DES, 1985). The present article owes its origin to a CNAA (1987a)[a] funded project on assessment procedures for Supervised Work Experience within a sample of courses at Huddersfield Polytechnic. It takes the view that there is a need for a substantial analytical appraisal of the process of assessment during Supervised Work Experience (SWE) in order to understand the multiple realities of the process and that this appraisal requires theory. Such theorizing should stimulate discussion which in turn should trigger practical developments (in the area of SWE assessments).

Two key questions which hang over much of the SWE assessment debate are addressed in this article in the context of recent developments in post compulsory education (and by drawing on various theories as appropriate). These two questions are:

(i) *What* should be assessed?
(ii) *How* should it be assessed?

Arguably, an even more fundamental question is: *why* assess SWE at all? However, the stance in the present paper is that whilst we must uphold the principle of the intrinsic worth of each and every individual (irrespective of his/her assessed capabilities), we cannot ignore the unequivocal thrust of present government policy concerning the development of a National Vocational Qualifications framework (DE/DE5, 1986). This policy is that standards of performance 'need to be defined' and their achievement 'verified by assessment' (NCVQ, 1987) and also, that 'some essential competencies can only be assessed in the workplace' (NCVQ, 1987). Furthermore, a number of other reasons for assessing SWE have been discussed at some length by Ashworth (1988). Thus, one reason is that the assessment of SWE fosters 'the integration of the theoretical and the practical'; another is that it provides 'a more balanced profile of the abilities of the student—so that not only is academic capacity recognized, but also those practical skills and personal qualities that make for effective action in the workplace'. Consequently, there does not seem to be much point in addressing the question 'Why assess SWE?' in the present article.

[a] The author acknowledges the support given by CNAA in his carrying out this research study over the period November 1987 to February 1989.

2 What should be assessed?

What exactly should be assessed on placements is clearly of fundamental importance. According to the relevant literature, what should be assessed includes, for example, practical skills, the application of theoretical knowledge, competence, attitudes, personal development, and experience (Mathews, 1986; Mitchell, 1987; FEU, 1986). The question then is: what precisely do these terms encompass? It seems that the definition of some of these terms must be a priority in any discussion of SWE assessments and the starting point must be the definition of SWE itself since the assessment of SWE can be no more precise than the definition of SWE.

2.1 Definition of SWE

Interestingly, CNAA (1987b) defines SWE as 'supervised *practical experience* acquired as part of a course, but outside the institutional context of the course'. McCulloch (1979) has analysed the definitions used by various institutions for 'practical experience' (admittedly, in schools and for student-teachers on CNAA validated B.Ed. courses). She established that the term 'practical experience' was not a unitary one. The fact that leaped out from the evidence was that there were three 'unique

features' which served to separate the student-teachers' 'practical experience' in schools from the rest of their course. These features were 'a theory/practical link, a locational change and a role change'. That 'locational change' is a key feature of work experience in general, is clear from the report of the Review of Vocational Qualifications (de Ville, 1986). Indeed, work experience is actually defined in that report as the 'placement of a student or trainee with a company or organization to give experience of the working environment'.

Although the above definitions do not articulate what precisely is meant by the term 'experience' in the context of supervised work experience, CNAA's definition does make it possible to develop a conceptual framework for studying SWE assessment procedures since it identifies SWE as a course component. The CNAA's definition thus opens up for discussion the aims, design, content, delivery and evaluation of SWE and the educational processes which underpin it. In other words, the definition enables us to subject SWE to close curricular analysis and to infer that such 'practical experience' as may be acquired from SWE must result from the learning experiences which are part-and-parcel of the curriculum process during placement. However, if placements are to be a medium for learning and if such learning is to be 'truly educative' (Brent, 1978), there must be a question about the nature of experience at the workplace. For it is conceivable that experience may be described as 'bad' if it is endorsing practices which one does not approve (Wilson, 1975). Also, the belief that, 'all genuine education' comes about through experience does not mean that all experiences are 'equally educational' (Dewey, 1916). Consequently, an adequate conceptualization of 'experience' is crucial and there is evidence of some conceptual murkiness in the notion (of experience). For example, it is difficult to make sense of the definition of 'experiential learning' as 'learning through experience rather than through study or formal instruction' (de Ville, 1986). Another example is the use of the term 'pure experience' in the Training Commission's (1988) definition of vocational education and training as 'the process of acquiring the range of knowledge and skills that are related to current or future work requirements by formal or structural or guided means (i.e. excluding *pure experience*)'.

2.2 Experience

For an analysis of the concept of 'practical experience', Steinmaker's (1979) definition of experience is useful as it goes a long way towards clarifying the meaning of the term. He starts with the dictionary definition of experience as 'living through an event or events', and then gives his own definition of experience as: 'a hierarchy of stimuli, interaction and activity and response within a scope of sequentially related events'. His contention is that when individuals think of events from their own past, they think of the totality of an experience, of the sequence of the related activities within the experience, and of their involvement in those activities.

The implication for the present paper is that SWE must be seen as a whole and must be planned as such. The planning should encompass the whole sequence of activities, including pre-placement and post-placement activities, and the likely impact of individual interaction in that sequence of activities. Such planned experience should also take into account some of the 'core criteria' (for experience based programmes of study) which have been identified empirically (FEU, 1984a). One such criterion is that work experience should provide opportunities for students to develop the ability to solve problems and make decisions. However, the sort of 'practical experience' which is desirable for a particular student depends necessarily very much on him/her since students have their own conceptualization of supervised work experience; and their conceptualization imposes a structure on their experience and on how they make sense of it (Wellington, 1986). But, arguably, it should be part of each student's education that he/she should develop new conceptual schemes which can help him/her to enrich his/her experience at the workplace.

An additional matter is that whilst Steinmaker's definition, quite rightly, places some emphasis on the activities within an 'experience', one should heed Dewey's (1916) warning that 'mere activity does not constitute experience' and that practical activities can be 'intellectually narrow and trivial'. Indeed, a clear distinction must be made between experience and what has been learned through experience since, according to Evans (1983), without that distinction, discussion about experiential learning is confused. This distinction is crucial because as Evans (1988) goes on to argue, if the 'intellectual test' of moving from a description of experience to identifying the learning derived from that experience cannot be accomplished, there is no learning to assess, however important to the individual that experience may have been. The relevance of this point is that the answer to questions about what should be assessed during supervised work experience is (as inferred from CNAA's definition of SWE in Section 2.1 above) that it should be the learning derived from the experience. It behoves us therefore to probe the concept of 'experiential learning'.

2.3 Experiential learning

To be sure, Evans (1983; 1988) has investigated 'experiential learning' in the context of 'PRIOR LEARNING', that is, learning acquired before entry to any course in Further and Higher Education. However, the concept of 'experiential learning' as such may be traced back to the ideas of philosophers and psychologists (such as Rogers, 1967; Shaffer, 1978; Husserl, 1970; and

Dewey, 1916), and is apparently a 'respectable' term in learning theory (FEU, 1984a). The view taken in the present paper is that the ideas which underpin the assessment of experiential learning in 'PRIOR LEARNING' provide clues about the assessment of experiential learning in SPONSORED LEARNING (Evans, 1983) as well, that is, learning which comes from planned supervised work experience on a course. The reason is that 'at the heart of' any assessment of PRIOR LEARNING (as advocated by Evans, 1988) is the proposition that the identification of learning comes through 'systematic reflection on experience' and that an argument can be mounted that much the same can probably be said about planned work experience during a course. As an example, one might consider Stanton's (1981) model of the learning process on schemes of unified vocational preparation (which were launched some ten years ago and which incorporated a work experience component) and on subsequent schemes, such as the Youth Training scheme. In point of fact, Stanton's model shares some of the important features of Kolb's (1984) four-stage cyclical model of experiential learning, or 'learning by doing'—as a recent FEU (1988a) document prefers to call it. The four stages in Kolb's model are:

(i) concrete experience,
(ii) reflective observation,
(iii) abstract conceptualization, and
(iv) active experimentation.

It follows that the question of what should be assessed on placements leads not only to the answer that it is the learning derived from the concrete work experience during the placement, but also that it is the learning derived from the three other stages in Kolb's model, namely, 'reflective observation', 'abstract conceptualization', and 'active experimentation'. It is not possible to embark here on a discussion of Kolb's model and on its implications for the assessment of SWE (see, for example, Fitzgibbon, 1987) Nevertheless, a brief exploration of the concept of reflection seems necessary.

2.4 Reflection

Systematic reflection on experience is a matter of discerning the relation between what one tries to do and what happens in consequence; it implies pausing and, as it were, glancing backward on one's action (Schutz, 1967; Dewey, 1938; Boud, 1985). In the cyclical models of experiential learning mentioned above, reflection is concerned with what happens after learning experiences (whether on- or off-the-job) and how 'learning points' can be drawn 'from such experiences within an educational context. The methods used for such structured reflection may involve, amongst other things, obtaining full accounts of what has taken place, evaluating events, categorizing and analysing experiences, and drawing out lessons for the future. The recommended methods include the use of:

(i) diaries,
(ii) video and audio recordings,
(iii) peer appraisal,
(iv) structured discussions,
(v) structured checklists and questionnaires,
(vi) 'shared time' and 'mutual interviewing', and
(vii) providing 'models' of reflection (FEU, 1988a).

Such reflection serves to consolidate, interpret and pattern, to perceive attitudes and values, to develop concepts and theories (Stanton, 1981) and to carry forward what is learned from one's actions (Freire, 1972).

However, such reflection *on* action must be distinguished from 'reflection-*in*-action'. Thinking about doing something while doing it may be a contradiction in terms but it is central to the art through which practitioners cope in practice (Schon, 1983). What shapes the practitioners' 'reflective conversation' with the 'situations' with which they have to deal is their feel for the media, the languages and the repertoire that they use and the skill with which they manipulate these. Yet, however specific a practitioner may be in his/her analyses and explanations of his/her skill, there remains always what Polanyi (1958) calls a 'tacit component'. It seems that at the heart of every skill there is 'something unspecifiable' and that some particulars remain indescribable (Entwistle, 1976). The relevance of this point to 'practical experience' and to what should be assessed during placements is that an experienced practitioner may not always be able to convey the art of his/her practice merely by describing his/her procedures, rules and theories, nor may he/she enable a student to think like himself/herself merely by describing or even demonstrating his/her ways of thinking (Schon, 1983) Hence, what students may be expected to learn (during placements) from experienced practitioners is likely to be limited and the assessment of learning during 'practical experience' must take this into consideration.

2.5 Learning objectives

But granted that what should be assessed during supervised work experience is the learning which derives from the experience (aided by reflection) the next question is: what are the aims and objectives of such learning—since a formulation of these would facilitate the development of an appropriate framework for assessing the learning outcomes (Frith and MacIntosh, 1984)? As far as courses validated by CNAA are concerned, the aims of SWE have been stated in broad terms, under the 'Principles' for the award of the Council's first degrees (CNAA, 1987b; Section Bb, 5.9) and individual course development teams are expected

to subsume the specific objectives for their own courses under these stated aims. Thus, one stated aim is to give students opportunities to acquire some of the skills which are the normal requirement of the careers to which their courses relate; another aim is to develop students' 'familiarity with industrial or professional situations'. These are undoubtedly legitimate educational aims for vocational education courses.

2.6 Competence

However, it seems incumbent on course teams, when developing their own learning objectives for the SWE component of their courses, to do so against the backcloth of:

(i) the recent drive towards 'Competence and Competition' (MSC/NEDC, 1984; DE/DES, 1988) and
(ii) recent government policy concerning arrangements for specifying standards of competence across all occupations—as stated in the 1986 White Paper 'Working together—Education and Training' (DE/DES, 1986).

For, the perspective which stands out particularly clearly in these recent official documents is that the government considers that it is essential to ensure a workable and effective system for the practical assessment of 'competence' at the workplace and that 'a priority' for the National Council for Vocational Qualifications (NCVQ) is 'to develop and secure a system to enable people to gain credit for performance in skills and competence tests carried out in industry'. The primacy now given to workplace performance is thus undeniable. The NCVQ (1987) framework aims to provide vocational qualifications which are based on 'employment led standards of competence'. Indeed, any National Vocational Qualification now embodies a statement of competence achieved to given standards and the statement is provided by employers (and others). A case in point is the Hotel and Catering Training Board's CATERBASE (FEU, 1987; HCTB no date) scheme which has pioneered the new style of standard setting and assessment. It is a modular scheme for the Catering industry and each module specifies concise 'performance criteria' which must be met in order for an individual to be credited with that module. These 'performance criteria' are concerned with the demonstration of knowledge as well as with 'practical demonstrations'. CATERBASE candidates are assessed in their workplaces during the normal course of their work. Assessment is carried out by trained individuals who have day-to-day contact with the candidates at the workplace. Although CATERBASE was piloted with YTS trainees, the claim is that it is 'applicable to all trainees' (Fennell, 1987).

The trend then in vocational education generally, is towards the specification of standards of competence, as defined by learning objectives and performance criteria (FEU, 1984b; 1986; 1987), and towards the assessment of competence. Such assessment may be made:

(i) 'within or outwith the normal work process' (Mitchell, 1987);
(ii) on courses offered either by educational institutions or by employers, whether independently or in collaboration (CNAA, 1988, Section B11); and
(iii) on the basis of PRIOR LEARNING achievements (FEU, 1984b; Crook, 1988).

Since a National Vocational Qualification (NVQ) is composed of a number of units of competence, each capable of being recorded separately, the opportunities for the accumulation and transfer of credits for demonstrated competence may prove to be attractive to many adults. The machinery for credit accumulation and transfer is already in place under the NCVQ's National Record of Vocational Achievement and is operating within Employment Training (Guy, 1988). As far as higher education is concerned, the CNAA's (1988) Credit Accumulation and Transfer Scheme (CATS) is well established.

However, there is the danger that these powerful pressures on vocational education can easily turn college teachers into no more than weak echoes of currently popular trends and it is therefore important to unpack the meaning of the term 'competence'—and to question the practicality and cost of assessing competence at the workplace! A source of 'confusion' seems to be the language used to define competence (MSC, 1986). In point of fact, the term involves a number of inter-related definitions such as those of task competence, job competence, functional competence, occupational competence and vocational competence, (see, for example, Levy, 1987). However, a general definition which sheds considerable light on the concept is that competence is 'the possession and development of sufficient skills, knowledge, appropriate attitudes and experience for successful performance in life roles' (FEU, 1984b). Mansfield and Mathews (1985) have suggested that the various definitions of 'competence' to be found in education and training reports imply that competence involves 'the application of knowledge and skills' and that it is 'exhibited through purposeful and real, rather than simulated activity'. They claim to offer 'an operational definition' of 'job competence' (in the context of work based learning) and offer an indication of its composite elements. Thus, according to them, 'job competence' has three inter-related components which 'are to do with tasks, task management and the role/job environment', respectively. These components require different categories of skills.

This is not the place either to differentiate between tasks and functions (YHAFHE, 1986) nor to question the use of terms like 'skills' (see Wellington, 1987), 'tasks' (see MSC, 1986) and 'role' (FEU, 1986), except to say that the analysis of occupations in terms of 'functional areas' rather than in terms of tasks seems promising as a basis for standardizing what it is that is being assessed at the workplace. And also, although 'competence' is 'a very slippery notion' (Nuttall, 1986), the distinction between 'competence' and 'performance' helps to clarify the meaning of the former: 'competence' refers to 'the basic ability to perform' (Nuttall, 1986) whilst 'performance' refers to 'the demonstration of the competence on a particular occasion or under particular circumstances'. Competence is thus a 'hypothetical construct' (Mitchell, 1987) of what an individual is theoretically able to do and this ability is judged by the performance(s) of what he/she actually does in particular circumstances. In other words, it is the individual's performance which is assessed but inferences are drawn from this assessment in order to make statements about the 'underlying competence'. Thus, whilst the distinction between 'competence' and 'performance' may not demystify the concept of 'competence' altogether, it contributes to:

(i) an understanding of what it is that is being assessed,
(ii) an enhanced awareness of the proposition that performance at the workplace may be combined with other information to enable one to make generalizations that lead to the assessment of competence (Mathews, 1986; 1987).

But in spite of the clarification achieved through the above distinction, the introduction of the term 'competency' in the—rhetoric of competence seems to cloud the issues still. For a 'competency' is defined as 'a small finite piece of behaviour' (FEU, 1987) which can be measured, and the presumption is that 'vocational competence' (that is, competence in a specific occupation) may be assessed by listing a set of specific competencies which details general competence in the occupation (FEU, 1987; NCVQ, 1987).

So much for the recent developments in the move towards competency-based vocational education in this country. Historically, competency-based education in general is an adaptation of the behavioural objectives' movement (Collins, 1987) which, arguably, developed in line with J S Mill's account of 'rational action' (Grosch, 1987). The behaviouristic stance is that what can be said about human action can be represented in the form of 'observation statements' and that, ideally, these statements will call for precise and measurable observation.

Now, the arguments for and against the specification of learning objectives in behavioural terms and hence in competency terms have been well rehearsed (see, for example, Wesson, 1983). However, probably insufficient attention has been paid in the relevant literature to work experience, as viewed from the perspective of 'purposive action'—the term 'action' being used in this context in a special way (Schutz, 1971). It designates human conduct as an on-going process which is devised by the actor in advance, that is, which is 'based upon a preconceived project', regardless of whether it is overt or covert (an example of a covert action being when one attempts to solve a scientific problem mentally). The assumption in this conceptualization is that the person is the source of acts of intention and hence the creator of 'meaning' and action; and that in 'projecting' they place themselves, in their imagination in his imagination, at a future time when their action will already have been accomplished. 'Meaning' in this conceptualization is the result of an interpretation of a past experience looked at from the present with a reflective attitude (Schutz, 1971). From this perspective, the world of work for students is infused with meaning which they themselves create through their own purposive acts, and which they can communicate. The nature of learning activities at the workplace emerges not so much from 'the ingredients of a competency-based recipe' (Collins, 1987), as from the reflective interaction of the students in the actual 'situation' of the workplace. Whereas underpinning the competency-based model is the belief that it is possible to predict and describe competencies in some detail prior to their performance (Grosch, 1987), from the perspective of purposive action, projects of action are constantly in the making and re-making as their defects and positive aspects become evident. Much is learned about confronting problematic 'situations' for which one is not entirely prepared and steps are taken to try and accommodate modifications to one's original plan of action. This on-going process (the action) is just as important as any outcome (or performance) that may be observed.

It follows from this line of reasoning that whilst the advantages which a competency-based model of SWE offers for assessment purposes are considerable, there must be a question as to the appropriateness of using this model as the sole basis for SWE assessments. There seems to be a strong case for advocating that SWE assessors should also consider the flow of events within students' projects at the workplace, together with such matters as:

(i) how the direction taken in elucidating problem(s) is determined,
(ii) how modifications to plans of action are accommodated,
(iii) how far the individual student is developing a critical consciousness of himself/herself and of his/her actions (and hence developing an ability to learn from experience) and
(iv) what meaning the individual bestows upon his/her actions.

In other words, the suggestion is that when assessing SWE one should evaluate the learning process as well as the learning outcomes.

Yet another consideration is that if 'practical experience' during placements is to contribute to the development of competence (as understood above), a tantalizing question for any course with an SWE component is this: what are the aspects of competence (that is, the knowledge, skills, understanding, attitudes, role and experience) which cannot be wholly acquired, except by practice, on the spot, that is, at the workplace? A related question is whether these are the aspects of competence which should be formally assessed. To illustrate the point, one could ask these questions about the 'practical experience' of student teachers on degree courses in Education. One would find that it will probably be generally agreed that 'practical experience' can develop:

(i) an awareness of what it is like to teach (or facilitate learning) in the 'real' world of the classroom, laboratory, workshop or salon, and
(ii) the confidence in the student teachers that they can indeed help pupils to learn.

Yet the pertinent point is whether these are the aspects of student teachers' development on which the assessment of 'teaching practice' should focus or whether it should focus instead on tasks which could be said to be central to teaching, such as:

(i) organizing knowledge so that it can be transmitted to pupils and students, and
(ii) understanding pupils'/students' interaction with the subject matter (Wilson, 1975)

2.7 Experiential knowledge

There is another point to consider. For, if supervised work experience is, in effect, a way of creating meaning and a way of knowing, the question is: what is the knowledge that is acquired at the workplace (as part of the development of competence)? Even a cursory answer to this question requires that a distinction be made between 'practical knowledge', 'experiential knowledge' and 'propositional knowledge' (Heron, 1981a, b). Practical knowledge is 'knowing how to do something'—as exemplified in the exercise of some skill or proficiency. It is familiarity with what it takes to do a task. It is akin to Ryle's (1949) concept of 'know-how'. Propositional knowledge is knowledge of facts or truths as stated in propositions, that is, in statements that are either true or false but that cannot be both or neither (Brent, 1978). It is synonymous with Ryle's concept of 'knowing that'. 'Experiential knowledge', on the other hand, is 'knowing an entity—person, place, thing,—process, etc.—in face-to-face encounter and interaction' (Heron, 1981a) and through sustained acquaintance. If one attempts to put one's 'experiential knowledge' into words, one reduces it to propositional knowledge (Burnard, 1988). Yet, the meaning of experience needs to be made manifest and communicated (Reason, 1988) and, in the SWE context, a common way of finding out about students' 'practical experience' on placements is to ask them to produce a report or make a presentation. Undeniably, this reductionist approach is useful for assessment purposes since it enables assessors to partake of the work experience and provides learning opportunities to students. Nonetheless, it should be recognized that as with the 'tacit component' of skills, part of one's experience 'must remain unexpressed' (Burnard, 1988)—and hence it is not amenable to assessment except covert self-assessment.

2.8 The theory-practice relationship

But what then is the status of the knowledge (the practical cum experiential/propositional knowledge) gained from 'practical experience' at the workplace, and what is the relationship of such knowledge to the knowledge of 'theory' acquired at College? The importance of these two issues must not go unrecognized since the value attached to SWE and to its assessment (within the overall assessment scheme for a particular course) may well depend on the strength of views about these issues—and as mentioned above (in Section 2.1), the 'theory/practical link' is one of the three 'unique features' of 'practical experience'.

The theory-practice relationship is, in point of fact, quite problematic. Traditionally, the relationship has been viewed as applying theory to practice, with practice being viewed as 'mere technique subordinate to theory and lacking the status of knowledge' (Usher and Byrant, 1987). The problem has been discussed from a sociological perspective (Taylor, 1977), and Evans (1987) has described the complexity of the mental processes involved in applying theory to practice, albeit specifically in the case of 'teaching practice' (for student teachers).

Interestingly, various schemes of initial professional education view the theory-practice relationship at degree level quite differently (Barnett and others, 1987) and this diversity is not just a surface phenomenon. To take the so-called 'caring professions' for example, it is seen as 'crucial' that on degree courses in Nursing, theory should be 'generated from', and 'critically inform' practice and that the knowledge base for nurses should 'be developed from and underpin practice'. On the other hand, degree courses in Pharmacy are 'predominantly theoretical'. The emphasis is on scientific knowledge and theoretical understanding. Pharmacy students are required to complete a separate, practically-oriented, post-degree year, in a professional setting, in order to qualify—and College lecturers do not perceive this year as one of their responsibilities. Yet another variant of the theory-practice relationship can be seen in degree courses in

Education for school teachers. The significance of theory stemming from and illuminating practice is evident in such Education courses in the way that abstract theory is giving way to professional studies and to opportunities to discuss and reflect on 'practical experience'.

However, there must be a question as to the extent to which the potential of 'reflection-in-action' for generating theory during placements can be realized. For one thing, an aspect of the 'reality' of the workplace is that it may well constrain reflective practice even if there is, in some sense, time to think; for another thing, students and/or their supervisors at the workplace may not always be able to articulate what they are doing and to participate in structured reflection of the sort indicated above (in connection with experiential learning).

However, research in the area of professional education has moved the issue of the theory-practice relationship forward by proposing a 'partnership model' (Barnett, 1987) for the relationship between practitioners and academics and by distinguishing between 'formal theory' and 'practice-derived' or 'practitioner theory' (Usher and Byrant, 1987). Formal theory is generated through conceptual representations of an abstract kind, and gives priority to explanatory models. 'Practitioner theory' is the product of 'situational thinking'; it is a vehicle for understanding and validating the choices with which the practitioner is confronted and the judgements he makes about how to act. The process of theorizing in this case embodies a repertoire of reasons for acting and entails borrowing concepts and model constructs from formal theory. Hence, the representations and explanations of formal theory can be of assistance to practitioner theory '*not* as directly applicable to the problem of the moment but as a source of metaphor and sensitising concepts with which to view in a different way and to reformulate the problem'. As far as SWE assessments are concerned, the issue then is not how do students apply theory to practice but instead in what ways:

(i) are students' judgements and understanding assisted by conceptual representations and explanatory models,
(ii) do students 'review' their practice through theory, and
(iii) do students explore the interdependence and interpenetration of theory and practice.

3 How should SWE be assessed?

It transpires from the discussion so far that much turns on exactly what it is that students (as intending engineers, accountants, systems analysts, teachers, and so on) are expected to acquire on placements. However, it is convenient at this point to look also at what is quite properly another area of concern, namely, how to assess SWE; in other words, a penetrating question is how exactly (at the workplace) does one go about, for example:

(i) developing criteria for selecting appropriate opportunities for students to demonstrate their competencies,
(ii) deciding the SWE assessment framework,
(iii) developing marking/grading schemes and deciding the relative weightings for such matters as, communication skills (of various kinds), reflection and analysis,
(iv) moderating SWE assessments,
(v) reporting competence at the workplace (that is, making generalizations about the likely achievement of a student beyond a specific workplace).

It goes without saying that a number of factors impinge on procedures such as these, including, for example,

(i) *who* is responsible, for *what*, to *whom*, and *when* (during placements),
(ii) the distribution of caseloads amongst visiting tutors, and
(iii) the willingness of workplace supervisors to participate in the assessment process.

There are thus several tangled issues here. However, at the risk of over-simplification, one can begin to disentangle these issues by stating that assessment should be seen as a process rather than as a discrete event (YHAFHE, 1986), as 'a series of interconnected steps' rather than simply as 'the distinct act of marking or grading a particular performance'. As understood here, assessment refers to the process of reporting the achievements of individual students on placements and should not be seen as 'the poor relation of some "proper" assessment' (Mathews, 1987) The process involves making decisions about:-

(i) what information is relevant,
(ii) how to gather the information, and
(iii) how to report the information (Wilmut, 1980).

The inherent difficulty here is that making decisions about the relevance of the information entails having a set of criteria for judging such information, and, in turn, this implies that there exists a set of principles which one values and which provides the framework for the kinds of information to be gathered in relation to the achievements to be reported (Harlen, 1980). Furthermore, the fact that it is thought worthwhile to look for certain kinds of achievements usually means that these are looked for in a certain degree, and in terms of expected levels of achievement, that is, in terms of standards of performance. (Harlen, 1980; Straughan, 1980; Benett, 1986.)

However, a distinction should be made between the application of standards which are 'crisp, unambiguous and precise' and the making of judgements (Eisner,

1979). For example, the aesthetic quality of a student's painting on a degree course in Art and Design may not be subjected to the mechanical application of prescribed standards but this is not to say that judgements cannot be made about the quality of the painting by comparison to a whole range of criteria or that such judgements are 'will-o'-the-wisp, cavalier, irresponsible conclusions' (Eisner, 1979)—even if, as Ashworth and others (1988) claim, assessment is, after all, 'the product of an elusive and largely uncontrollable interpersonal process'.

Actually, the problem of marshalling evidence (at the workplace) on which to base judgement is compounded by a number of factors; one might mention, for example, the workplace supervisors' perceptions of students, their (the supervisors') ego—defensiveness, and their stereotyping of students' characteristics, motivation and role (Ashworth and others, 1988). Nevertheless, these and other possible confounding variables in assessing students at the workplace do not amount to an argument for jettisoning SWE assessments altogether (and it should be said that college-based assessments may be similarly affected). Instead, they point to the need for a closer look at the 'reliability' and 'validity' of assessments. For, although 'reliability' and 'validity' are two fundamental principles of classical test theory, interestingly, their applicability has extended into the area of qualitative research (Kirk, 1986; Yin, 1984). Hence, the position taken in the present paper is that these same two principles may also be applied to qualitative observations of performance at the workplace since one is dealing with performance standards, and with the degree to which students' achievements match these standards. However, it is not possible within the scope of this study to explore the relevance to qualitative observations (of performance) of the various kinds of 'validity' and 'reliability'. It is sufficient here to clarify the meaning of these terms and to highlight the likely ways in which the validity and reliability of SWE assessments may be enhanced.

3.1 Validity of SWE assessments

'Validity' concerns what it is that is being assessed (Frith, 1984; Benett, 1986) and consequently takes us back to the issues discussed in Section Two above. However, many other implications flow from this definition of validity. For example, although, ostensibly, the fact that SWE assessments are contextualized must ensure their face validity, particular attention needs nonetheless to be paid to:

(i) sampling appropriate opportunities and critical experiences, and
(ii) making relevant observations.

Also, multiple sources of evidence should be used in order to allow a broad range of issues to be addressed and hence the divergence or convergence of the assessments to be highlighted. One way of implementing this idea is for assessors with different expertise (though within the same subject area) to be involved in the assessment of the same student in the workplace.

The validity of SWE assessments may be further enhanced by:

(i) stating the conditions under which observations are made (as is the case for statements for competencies, see FEU, 1987),
(ii) describing the intentions behind students' projects,
(iii) encouraging students' participation in the assessment of their competence and giving them access to the assessment,
(iv) identifying the limitations of one's own interpretation of students' projects (in one's capacity as an assessor),
(v) checking out with other participants in the assessment process (and indeed with one's own experience of the workplace) the evidence on which assessments are based,
(vi) investigating the relationship between SWE assessments and other course assessments (bearing in mind, however, that divergence may be equally enlightening), and
(vii) providing a 'clear rationale' (Mathews, 1987) for generalizing about a student's competence on the basis of a sample of his/her observed performance.

3.2 Reliability of SWE assessments

Reliability concerns the precision and consistency of the assessment procedures used (Frith, 1984; Benett, 1986). It has to do with the estimate of errors in assessing. At the workplace errors may arise from such diverse sources as:

(i) the variations in the tasks set to students and
(ii) the idiosyncratic differences between assessors.

Applying this notion of reliability to SWE assessments (both qualitative and quantitative) implies in the first instance, eliciting consistent observational data at a specific point in time so that, for example, different assessors assessing concurrently an individual student would come to agree amongst themselves on a particular assessment. The assessment might be made at the workplace itself (by such people as Work Supervisors, Visiting Tutors and External Examiners) or at college, for example, at the presentation of an SWE-based project report to a panel of assessors. Admittedly, a consensus among assessors may simply reflect the fact that they have similar standards in relation to the work being assessed rather than that the work is 'objectively' of a certain standard (Jarvis, 1984). However, the issue of

objectivity in assessments generally cannot be taken further here. All that may be said is that where assessment criteria have been clearly identified, made explicit and agreed (after free and open discussion, and dialogue), they may have some claim to objectivity (Benett, 1986).

Another pertinent point is that students on higher education courses are unlikely to be assessed at the workplace on tasks (such as machining a component to a given tolerance) for which it is 'relatively easy to specify and apply consistent standards' (EDUCA, 1988) consequently, achieving consensus among assessors may be problematic for the complex tasks in which such students may be involved.

Reliability in terms of consistency over time is also problematic; this is because one expects students to develop competence during placements and consequently it is change (in the appropriate direction) rather than consistency that one is looking for in monitoring such development.

A few promising strategies for attaining greater reliability for qualitative data have been proposed in connection with qualitative research (Kirk, 1986) and the suggestion here is that they have some applicability to the collection of data for SWE assessments. The strategies include, for example:

(i) documenting the procedures used, including how conclusions can be drawn (so that a reliability check can be made, at least in theory, by following the same procedures)
(ii) standardizing the procedures for the collection and recording of data
(iii) putting assessors' observations about students into perspective, that is, taking into account the cognitive idiosyncrasies of assessors and the likelihood that their perceptions of students are inevitably conditioned by their own education, experience and values.

3.3 Assessment Profiles

In recent years, certain assessment techniques have been heralded as new (European Community, 1984; Rumney, 1989). 'Profiling' is one of these and discussions of assessments at the workplace have probably been given a new turn by its introduction. Profiling is a systematic procedure for recording personal development and achievement whether as a result of PRIOR LEARNING or of SPONSORED LEARNING and whether within or 'outwith' the normal work process (FEU, 1984c; Broadfoot, 1986). Its growing importance seems to be due to the fact that it is generally recognized that personal qualities and skills which are often valued by employers are not necessarily reflected in the single grade of an examination result or in a 'brief, often stylized, personal testimonial' (Mortimore, 1986); and that there is therefore a need for more detailed information about individuals—be they college students, trainees or school leavers. Profiling is an attempt to remedy this deficiency and a profile is a document which describes as accurately and as succinctly as possible the skills, knowledge and experience of an individual relative to a particular curriculum (FEU, 1984c; Stoney, 1988) It gives a rounded picture of a particular student, based on observations over a period of time and referring to a wide range of qualities, 'not solely academic' (European Community, 1984).

The development of a profiling system for supervised work experience in higher education raises questions which go beyond the range of our discussion here. However, it should be pointed out that assessment profiles are at present incorporated in the assessment frameworks of a number of work-related education and training schemes such as the Training Commission's schemes for Youth Training and Employment Training respectively, and some Further Education schemes under the aegis of examining/validating bodies such as RSA, CGLI and BTEC (FEU, 1982). Furthermore, profiles are used for the detailed reporting of assessment outcomes both at the level of course/programme modules or units and at the level of individual competencies (EDUCA, 1988).

That the disaggregated nature of the information in a profile is potentially of considerable use for diagnostic purposes and for monitoring students' progress is probably beyond dispute. However, there does appear to be some unease about the danger of developing a 'checklist mentality' amongst assessors (Evans, 1988). It may also be objected that the very possession of a profile may be used as evidence of specific weaknesses against individual students. This objection brings us to a concern of this paper, namely, that a crucial factor in the assessment of SWE is the assessor's own construction of 'reality' at the workplace. Inevitably, his/her construction is in terms of his/her own expectations and his/her subjectivity (as already indicated) in perceiving personal qualities such as 'dependability', 'sociability', 'perseverance', 'personal effectiveness', 'initiative', and 'self-confidence'—the very qualities often of interest to employers! However, Stanton (1984) has offered some guiding principles for tackling the problem of profiling such personal qualities.

The critical technical issues in any profiling (such as, the scaling, weighting and combining of items in profiles and the reliability of profiles) have been addressed by Nuttall and Goldstein (1984). It seems that profiling systems which incorporate scales of measurement (in an attempt to obtain quantitative assessments of learning outcomes) are 'technically weak'. Also, a major technical difficulty in developing profiles (whether for quantita-

tive or qualitative assessments) is to work out statements which succinctly and unambiguously define levels of attainment and differentiate clearly between them (Evans, 1988).

3.4 Self-assessment

The challenge to would-be developers of SWE profiles would thus appear to be considerable—even if the development of a common, context-free profile (that is, one that was independent of course, subject area and workplace) was out of the question. Yet, one of the attractive features of the profiling process is that it provides students on placements with opportunities for systematic reflection on their 'practical experience' and therefore with a basis for self-assessment (with or without the help of Workplace Supervisors and/or Visiting Tutors). The general proposition is that such self-assessment is likely to help students on placements to gain in self-confidence and self-esteem. It (self-assessment) is not to be seen as 'an unwarranted assault on the student's personality' (Hogg, 1977). Instead, it is intended to be a useful 'teaching tool' to help students obtain a sense of high standards (Jarvis, 1984) and to encourage them to become self-initiated and self-directed learners.

This last point is of crucial importance for the development of enterprising graduates—an aim of the Enterprise in Higher Education Initiative (DTI, 1988). However, self-directed learning in the learning milieu of the workplace is not the same as 'discovery learning' (FEU, 1988a). Self-directed learning at the workplace takes seriously the existing stock of knowledge (Wesson, 1986) and recognizes the contribution of those who, like Workplace Supervisors and Visiting Tutors, can represent 'public traditions of knowledge and skills' whilst collaborating with them (the students) in the development of appropriate individual programmes of study and projects of action.

4 Conclusion

It transpires from the foregoing analysis that the assessment of planned, supervised work experience is much more than an auditing function. Such assessments emerge largely from the context of the learning milieu itself and from dialogue with individual students whilst taking into account the extent to which appropriate predetermined learning objectives and competencies may be achieved. Students' own intentions with regard to their projects and the meanings which their on-going acts (within such projects) take for them come under close scrutiny—these meanings being created in the interaction with what is going on at the workplace. Whilst the task of Workplace Supervisors and Visiting Tutors is to highlight the subjective experience of students, it consists also in helping them to reflect and think beyond their direct experience (Bruner, 1967), and the assessment of SWE should take into consideration how far they are able to do so.

The history of assessment can sometimes appear to be 'a series of fashions each of which is a reaction (or over-reaction) to the "status quo"' (EDUCA, 1988). The approach in the present paper has therefore been to question in a fundamental way what should be assessed and how, during placements, in the context of recent developments which are currently influencing the assessment scene. In the last analysis 'practical experience' is about knowing what it's like to be an engineer, a systems analyst, a teacher, an accountant, and so on. It is about developing a view of professional/occupational life born of first-hand contact with the 'realities' of the workplace and of reflection and analysis. Viewed in this way the assessment of 'practical experience' is indeed a tall order!

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Acronyms used in this article

BTEC	Business and Technician Education Council.
CGLI	City and Guilds of London Institute.
CNAA	Council for National Academic Awards.
DE	Department of Employment.
DES	Department of Education and Science.
DTI	Department of Trade and Industry.
FEU	Further Education Unit.
HCTB	Hotel and Catering Training Board.
MSC	Manpower Services Commission.
NEDC	National Economic Development Council.
NCVQ	National Council for Vocational Qualifications.
RISE	Research Into Sandwich Education.
RSA	Royal Society of Arts.
SWE	Supervised Work Experience.
TC	Training Commission.
TP	Teaching Practice.
VET	Vocational Education and Training.
YHAFHE	Yorkshire and Humberside Association for Further and Higher Education.
YTS	Youth Training Scheme.