A scoping exercise of work-based learning and assessment in multi-disciplinary health care in Scotland

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Summary: Work-based learning in health care is increasing due to demands for skill mix in the workforce. It brings specific challenges to employers, educationalists and students. A literature review was undertaken and a scoping exercise was conducted of work-based learning courses within Scotland. Ethical approval was acquired. Individuals were identified through Academic Heads, by snowballing and from University websites. Key people were interviewed and the perceived advantages and disadvantages of work based learning were identified. It can be labour intensive, difficult to assess and there are issues with quality assurance. However, its ability to link theory and practice, its relevance and flexibility were viewed as major advantages. It appears to be effective where there is very careful planning from both Universities and employers and appropriate resources are allocated. It is not a more economical method of education but practitioners state that it more effectively bridges theory-practice gaps than more traditional methods.

Key words: Work based learning; health care; multidisciplinary working; Scotland

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Introduction

The development of the workforce in health care is a global issue and the cornerstone for any functioning health system (World Health Organization, 2008). The training of new health workers and the development of new roles is a priority for sustainable health care. In the United Kingdom (UK) healthcare roles in the National Health Service (NHS) are changing to meet different methods of care delivery and changing workforce dynamics. Professional roles and boundaries are expanding and blurring and staff are being trained to assume different responsibilities. Traditional interdisciplinary working needs to change to embrace expanding roles and a greater emphasis on multidisciplinary input will be required to ensure patient centred care. The Knowledge and Skills Framework (Department of Health, 2004) and the work of Skills for Health (Skills for Health, 2008) both provide a framework for the educational development of the workforce to meet the needs of an evolving health care system. One method of educational delivery being explored is work-based learning and assessment (WBLA) as employers perceive this as a more cost effective method of achieving educational needs while facing competing service demands with the lack of infrastructure to support more traditional ways of learning and reducing educational budgets.

Globally, health care is facing an epidemic of type 2 diabetes and the UK is adopting a variety of methods to address the management of such people in multidisciplinary, community based models of care. To ensure that the workforce is educated and trained to meet the needs of patients different educational approaches are being considered. The Scottish Government Diabetes Education Group funded this scoping exercise to explore WBLA of accredited courses in health care to inform future educational initiatives in Scotland.

Background

Around the world universities are becoming much more diversified and more closely integrated into the wider world (Barnett, 2000; Symes, 2000). The trend towards globalisation and its effect on national

economies has led to changes in the relationship between universities and business and industry and one consequence of these changes is the expansion of WBLA programmes (McIntyre et al, 2000). Interest in WBLA in the UK higher education sector is increasing (Laycock, 2003; Brennan, 2005; Nixon et al, 2006), and is being driven by a range of factors including: widening access to education; more learner centred education; flexible delivery; and changing skill mix requirements in the workforce (Brennan et al, 1996; Boud et al, 2001a; Laycock, 2003).

In this study we used Seagrave et al's (1996) definition of WBLA where they distinguish between learning *for* work and learning *at* work. Both of which, they argue,

> ... need to be reinforced through work. Learning through work is integrated into the doing of the job: it includes the application of job-related learning acquired elsewhere and the skills and knowledge which are acquired in the process of doing the job. (Seagraves et al, 1996 p. 6)

A recent report found that the extent of the provision of WBLA varied and it was unclear how much learning of this type was being provided by higher education institutions (HEI) (Nixon et al., 2006). Reeve and Gallagher highlight the 'limited and marginal' (Reeve et al, 2005 p. 220) nature of the development of WBLA. A partial explanation for this lack of clarity may be that WBLA means different things to different people. There are a wide range of terms in use (Brennan et al, 2006) which can be, and are, used interchangeably (Nixon et al., 2006). Aside from the confusion this causes it can also undervalue the potential benefits of this type of learning (Nixon et al., 2006).

WBLA is viewed as a challenge for the UK HEIs with implications for pedagogy, education and practice (Symes, et al, 2000; Boud et al, 2001a; Boud et al, 2001b). Partnership between HEIs and employers is seen as one response to these challenges and as an essential element in the successful implementation and operation of this type of learning (Brennan et al, 1996; Portwood, 2001; Gallagher et al, 2004; Nixon et al, 2006). Others have argued that such relationships are far from straightforward, can be problematic and may actually hinder the widespread adoption of WBLA (Reeve et al, 2005). Reeve and Gallagher suggest that much of the literature advocating partnerships fails to acknowledge the real differences that arise from different conceptions of what actually constitutes knowledge and learning (Reeve et al,

2005). Also, it is apparent there is a range of different approaches being undertaken under the name of WBLA (Boud et al, 2001a). Others have highlighted the 'messiness' (Reeve et al, 2000 p. 3) involved in its implementation and the contested nature of some of the claims being made for this approach (Brennan et al, 2006).

WBLA is not an easy activity to evaluate (Chapman, 2006), which is unsurprising given the range of activities, the growing array of different models and the number of definitions in use (Reeve et al, 2000; Rickard, 2002; Brennan et al, 2006). A recent review found the range of learning activities and contexts contributed to the apparent contradictions and ambiguities in the academic literature on WBLA in the UK and questioned some of the claims made on its behalf (Brennan et al, 2006). It has been argued that there is insufficient research evidence to support many of the claims made for this type of learning (Clarke et al, 2003; Flanagan et al., 2000; Boud et al, 2001c; Chapman, 2006) and that this should be addressed as a matter of priority (Clarke et al, 2003). Boud and Solomon (2001b) suggested that their book should be used as a foundation for further exploration and research into WBLA and as a framework for the development of this type of learning. Reeve and Gallagher (2000) also provided a framework for evaluation of work-based learning. However, there is not much evidence to suggest that such guidelines are being utilised in many of the recent evaluations of work-based learning in health care. This scoping exercise was to address the educational needs of the multidisciplinary team, excluding Doctors and Dentists as they already have dedicated funding and study time for ongoing professional development.

Methods

This scoping exercise was conducted during 2006. First, a substantial review of the literature was undertaken (see Table 1) of articles describing and evaluating the use of WBLA in healthcare settings over the last ten years.

Table 1
Work-based learning and assessment literature review

Databases searched:
Evidence Based Reviews; CINAHL; Embase; Medline; Professional Development Collection; *British Education Index; ERIC.*

Keywords and phrases included:
learning contracts; Higher Education; work-based learning; work-based assessment; accredited professional achievement; workplace; professionals allied to medicine; nurses; doctors; health professionals.

Dates searched:
1996-2006 although definitive material older than this was accessed.

Literature was evaluated to determine the structure and processes adopted; the procedures for development and support for WBLA; the perceived strengths and weaknesses and the governance and quality assurance of WBLA. We used this to create a template for interview topics.

Secondly, semi-structured interviews were conducted with individuals involved in WBL courses. The inclusion criteria for sampling were that courses had to be accredited by a HEI and address an area of healthcare. One national programme without accreditation, Flying Start (2008), was included as it carries such significance that to exclude it would be a serious omission. To identify the sample for interviewing, a letter was sent to Scotland's Heads of Academic Nursing and Allied Health Professions asking them to identify any WBLA programmes currently in their HEI and a contact person who would be willing to be interviewed. Specific individuals in other institutions were recommended by members of our steering group. Individuals were thereafter approached and asked to consent to a one-to-one interview and all accepted.

Concurrently to the interviews, the prospectuses and websites of sixteen HEIs in Scotland including all fifteen Universities and one Further Education College were examined. We searched for accredited degrees, diplomas, courses, modules, or any part of the aforementioned that contained any element of WBLA in healthcare related subjects. This was undertaken to ensure that a wide range of courses and options were targeted.

A total of thirteen individuals were interviewed and audio-taped.

These were undertaken in nine HEIs and one Health Board. The interview schedule had been verified for face validity with a panel of experts in this area. It contained open and closed ended questions and participants were asked about their views on the strengths and weaknesses of WBLA. All tapes were transcribed and thematic analysis used to expand on the topics identified. Ethical approval was obtained from the Faculty of Medicine Ethics Committee at the University of Glasgow.

Results

There was a range of articles that described WBLA in healthcare and a range of research reports evaluating the potential of this approach in this area (see Table 2).

Table 2
Articles on work based learning in healthcare

Topic	Number
Articles describing work-based learning	11
Papers evaluating work-based learning	15

The identified articles (not all are referred to in this paper) describe a range of work-based learning activities but there is little evidence of particular research themes emerging. Problems with data collection and analysis and the reporting of findings in a number of these studies made it difficult to accurately assess their findings. However, there were principles derived from these studies that were utilised in the interview schedule.

Our review of WBLA activity in HEIs in Scotland indicated that there is a range of courses and modules available in a number of institutions with well-developed and wide-ranging programmes in several of the universities. However, we did not find a great deal of WBLA in the accredited courses in health care. Again, a more detailed description of our findings is presented in our main report (Wright et al 2007)..

For the purposes of this paper we have described in more detail the results from our interviews with the individuals involved in the delivery of WBLA in Scotland.

Findings from the interviews

Interviews were analysed thematically using the topic guide as a framework

Perceived strengths and advantages

WBLA was viewed as a means of linking theory and practice (see Table 3). According to one respondent: 'there is no point in having a mainly theoretical course; it must directly link to changing clinical practice' (Respondent 1).

Table 3
Advantages and disadvantages of WBLA

Strengths	Weaknesses
Student centred	Flexible learning and assessment challenges quality assurance and national comparisons
Integrates theory and practice	Students as part of the workforce
Insight to practice	Student isolation
Socialisation and team-working	Assessment issues
Flexible methods	Requires formal educational input
Formal education	HEI difficulties with student issues
Variety of assessments	Lack central body to scrutinise
	Students must be highly motivated and dedicated
	Labour intensive for mentors and HEIs

It was also seen as a way to provide insight into current practice and as a means of helping students gain work experience. It assisted with socialisation and team-working, and was seen as a way of providing relevant, flexible learning. Work-based learners were in an environment conducive to learning and the fact that learning could be delivered in the clinical environment was also regarded as an advantage.

Perceived weaknesses and disadvantages

Difficulties with assessment were seen as a major drawback. There were concerns about the potentially subjective nature of assessment and our participants raised issues around the development of standardised assessment criteria, and the authenticity, credibility and quality of WBLA programmes. One participant felt that its: 'weakness is mostly assessment, its subjective nature. It depends on the reliability of what is being measured and how you standardise that.' (Respondent 2)

Other issues were related to the amount of time and effort required to undertake WBLA, the lack of control over students on placement and the potential isolation of students.

Preparation of students

In some institutions students were introduced to the techniques involved in this type of learning at the start of their courses. A number of participants described how learners were assigned facilitators who assisted with such issues as the clarification of learning outcomes, or provided an introduction to the learning environment. According to one: 'You need to make sure that they are in an environment in which they can learn. You need to prepare the infrastructure.' (Respondent 3)

Most institutions' undertook an assessment of students' learning needs: in two, for example, these were articulated as part of a personal development plan. In just over half of HEIs the students' workplace mentors were selected by the employers and on several courses students had input into the selection process. Most respondents outlined the systems in place for supporting students within their institution. These varied between HEIs but each provided at least one academic tutor or support person. Several participants specified how work-based learners had access to all the usual student support services.

Learning needs, learning agreements and learning outcomes

The arrangements for learning agreements varied between HEIs. In two, discussions involved the university, the learner and employing organisation. In several institutions there was no employer involvement, and discussions took place between the academic staff and the student.

Working with employers

Participants identified a number of strengths and weaknesses with regards to working in partnership (see Table 4). Good partnerships

between employers and HEIs were highly valued by both. According to one respondent this type of relationship has the potential to promote multiprofessional working. Other benefits of a closer relationship included: increased access to the HEIs courses; collaboration between students, employers and the HEI; and courses would be more responsive to the needs of employers. Disadvantages cited by our respondents included: students having to manage competing demands and the potential to damage multiprofessional working.

Table 4
Partnership working

Strengths	Weaknesses
Highly valued by employer and HEI	Staff relationships between HEIs and clinical areas
Could promote multiprofessional working	Could hinder multiprofessional working and lose focus on patient client
Increase access to HEI programmes	Competing demands on students
Tripartite working	
Needs of employers drive agenda	

Learning outcomes

These were compiled in the institutions in a variety of ways. For example, in one, NHS Education for Scotland (the national body responsible for education of the NHS workforce) developed the outcomes, in another they were written by academic staff. Several institutions compiled their learning outcomes in association with national professional bodies, such as the UK Nursing & Midwifery Council or the Allied Health Professions Council, while others involved the students themselves. In one HEI learning outcomes were compiled through discussion with learners, NHS representatives, academic staff and service users and carers, in another they were devised by students and their employers.

Assessment

In a number of HEIs learners have input into their assessment process. In one, students' performance was observed during placement by a

member of the academic staff. This was followed up with a viva after which staff and students discussed whether the learning outcomes had been achieved. In another HEI the learning agreement is an individual contract and assessment is built-in through discussion with the students, who also select their method of assessment. This is scrutinised by assessment and programme boards to ensure it meets quality assurance benchmarking criteria. A similar process operates in another institution, where the practice educator and the student meet to decide on what evidence can be presented to support their attainment of the competencies laid out in the module descriptors. According to the respondent: 'the student is involved in collaborating with the assessor for practice elements.' (Respondent 4)

Accreditation and validation of courses

Programmes, courses and modules in work-based learning were accredited and validated solely by the HEIs in several instances. In another, the University undertook the accreditation and validation of the majority of programmes. In others the process was dependent on the type of learning contract that had been negotiated with the student. Those undertaking 'themed' learning contracts, or contracts that had input from the business sector, for example, could be jointly accredited and/or validated.

In one HEI almost all the individually-tailored programmes were accredited by a local university. WBLA courses in one university were accredited and validated internally and by an external body: the Health Professions Council. There was a similar arrangement in another HEI where courses were accredited and validated by the university with input into the validation of particular higher-level courses from the UK Nursing & Midwifery Council. Finally, one institution's modules were accredited and validated by the Open University Validating Services.

Discussion

The findings of this scoping exercise reflect some of the issues in the current debate concerning the use of this method of learning for the education and training of multidisciplinary health care workers. By far, the biggest advantage of work-based learning cited was its ability

to link theory and practice in a clinical environment conducive to learning. The educational value of practice is presently one of the central debates in nursing (Flanagan et al., 2000; Swallow et al, 2004) and it is has been argued that the only realistic place for nurses to undertake the integration of theory and practice is the workplace (Birchenall, 1999). Although it is also recognised that shifting the focus will require radical changes in health care organisations (Spouse, 2001) WBLA was also viewed as a means of providing flexible and relevant learning. In addition, more flexible learning strategies are seen as a means of addressing some of the current pressures on the higher education sector (Boud et al, 2001b; Laycock, 2003). Relevance and flexibility are qualities which are recognised as a major advantage of this type of learning (Boud et al, 2001b; Swallow et al, 2004; Nixon et al., 2006).

The potential difficulties in the assessment of work-based learning were regarded as a challenge by our participants. The main issues identified included: subjectivity, standardisation and quality assurance. Their concerns reflect those identified by other practitioners engaged in the delivery of WBLA (Brennan, 2005; Nixon et al., 2006). It has been suggested that the problem of quality assurance of work-based learning should not be regarded as discrete but examined as part of a more open discussion on quality assurance procedures within the whole of higher education (Winter, 2001). Focusing on issues such as the obscurity of higher education assessment procedures and the involvement of students and employers in negotiations concerning course arrangements may be more beneficial for quality assurance in the long run (Winter, 2001). Practical attempts by some higher education institutions to address issues of quality have involved the development of negotiated learning contracts (Lyons et al, 2001), the construction of a framework for a new work-based learning programme, which included the incorporation of conventional university standards (Chalmers et al., 2001). The debate on quality is on-going, and new and innovative assessment methods are emerging all the time (Brennan, 2005). At present, there are no signs of the emergence of a national credit-based award framework, not least because of the need to account for the breadth of approaches to this type of learning (Nixon et al., 2006).

Preparing students for this type of learning was regarded as very important by a number of our participants. This is also recognised in the wider literature on WBLA (Flanagan et al., 2000; Glasgow Caledonian University, 2000). Students new to this type of learning can find it

difficult to fully understand what is expected of them. Identification of students' learning needs will help with the preparation of learners (Glasgow Caledonian University, 2000, Chalmers et al., 2001) and assist in tailoring these needs to those of the course or module, although it is recognised that their needs may be at variance to those of their employers.

Throughout the scoping exercise, it was clear that to adopt WBLA requires a considerable shift in paradigms of education and learning for employers, potential students and the work based facilitator and assessor. To adopt this approach to learning and assessment requires considerable facilitation of change management for all individuals concerned (Boud et al, 2001b, Symes et al, 2000). Change management has been identified as one of the most challenging aspects in a similar report (NHS Education Scotland, 2006).

Conclusion

Individuals currently involved in the delivery of WBLA in Scottish HEIs clearly articulate issues pertinent to the current debates about this type of learning. WBLA is regarded as beneficial for the education of multi-professional health care workers and for changing clinical practice. Individuals also displayed an awareness of the main difficulties inherent in this type of approach. The extent and range of WBLA provision is difficult to accurately assess, given the wide variety of definitions in use. Research into work-based learning is still fairly limited, unsystematic and fails to adequately demonstrate the many claims being made for the approach. Healthcare is multi-professional in its delivery and there is a need to explore WBLA from a multi-professional context. This study was undertaken as a scoping exercise and limited to six months in duration, therefore employers of work-based learners and students using this means of learning could not be interviewed. Any future research in this area would benefit from the views and experiences of these groups.

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