Preparing learners and workplaces in the effective use of flexible delivery for workforce training

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ABSTRACT

This paper reports on several research projects that indicate that for flexible delivery techniques to be successfully used for training directed at workforce productivity improvement, several preparations need to be made. The research indicates that workforce learners may not be prepared for effective engagement with flexible delivery techniques, and that enterprises have not typically developed the training support mechanisms required to support effective workforce learning through flexible delivery.

Drawing on research completed both in Australia and in Indonesia, the paper proposes a model for developing preparedness. The model is then used as a framework for the development of strategies that will prepare both learners and enterprises for effective use of flexible delivery techniques for workforce training.

INTRODUCTION

It is commonly observed (Moore, 1977; Kember, 1995; Boote, 1998) that successful open learning or resource-based flexible delivery provision requires learners to be self-directed. Boote has pointed to writers such as Candy (1991) and Crombie (1995) who have questioned whether learners are prepared for flexible delivery, and adequately supported through it. Additionally, Warner, Christie and Choy (1998) have shown that the majority of VET learners are not self-directed. In an empirical factor analytic study, Smith (2000a) has shown that technology students in VET have little preference for self-directed learning, prefer learning in a collaborative environment with their peers and instructors, and have a low preference for learning programs that are presented through text. These students displayed higher preferences for structured and instructor-led learning environments where learning activities were through direct practical experience. Working with apprentices in another factor analytic study, Smith (2000b) has shown a similar distaste among those learners for self-directed learning and a similar preference for learning in a collaborative environment. While the same preference for learning through direct hands-on experience was also shown for the apprentices, their preference for well-structured learning and instructor-led, learning environments appeared to be even stronger than for the technology students.

In her study of adult vocational learners and their teachers, Boote (1998) has concluded that the skills of metacognition required for effective self-directed learning are not well developed in vocational education and training (VET) learners. She has suggested that 'A presumed level of self-directedness is apparently being relied upon to allow the educational initiatives and flexibility in VET to be implemented...' (Boote, 1998, 80). Evans (1999) has asserted that for flexible delivery to be effective, it is important to research learners in a systematic way to accommodate their needs in a way that enables those learners to engage with, and gain value from, a flexibly delivered program of instruction. Research focussed on the learning characteristics of students has been identified by Jegede (1999) as a high priority among distance educators in the Commonwealth.

Kember's (1995) two-dimensional model of open learning argues that success is dependent upon learners moving to a more independent, self-directed style of learning, and providers moving to greater openness in access and delivery. Similarly, Brockett and Hiemstra (1991) have proposed that development of successful self-direction in learning requires learner-centred strategies as well as appropriate instructional strategies. The current set of projects, which are still in progress, have used Kember's (1995) two-dimensional model as the theoretical framework. That model is attractive since it provides, along one dimension, for the development of learners towards self-direction. Along the second dimension, the model has been extended to provide for the development of workplace preparedness for the support of flexible learning. The opportunities to develop self-direction have been established through research. Several writers (eg Curry, 1983; Sternberg & Grigorenko, 1997; Riding & Sadler-Smith, 1997; Weinstein & Mayer, 1986; Vermunt, 1996) have suggested that learning preferences and learning strategies are amenable to change and development among learners, but that action needs to be taken to achieve those changes. Sadler-Smith & Riding (1997) have

suggested instructional materials and methods can be structured to assist learners to adopt new strategies, or to modify existing ones, and Boote (1998) has suggested that programs directed at learning to learn will be useful. At the same time, research on workplace learning contexts (Unwin & Wellington, 1995; Fuller, 1996; Brooker & Butler, 1997; Calder & McCollum, 1998; Harris et al., 1998) suggests strongly that workplace attention to training policies, culture, processes and structures can provide considerably enhanced support for enterprise-based learning.

This paper draws on four of our research focuses to develop enterprise-based strategies for effective use of flexible delivery techniques for workforce training.

RESEARCH FOCUS ONE - AUSTRALIAN VOCATIONAL LEARNER PREFERENCES

In research with large samples of VET learners, Smith (1999, 2000a, 2000b) demonstrated that learners exhibit:

- a low preference for self-directed learning,
- a high preference for learning in contexts that are instructor-led, where the program of instruction is well-organised, and where expectations of learners are made very clear by the instructor,
- a strong preference for learning in social environments, where there were warm and friendly relationships established between the learner and the instructor, and with other learners.

Although little other research is available on the learning preferences of VET learners, Beckett (1997) has observed that collegial contexts for learning have been a hallmark of VET instruction, and calls into question whether flexible delivery without considerable human instructor support can be successful. Smith (1999, 2000a, 2000b) concluded that VET learners were characterised by a field-dependent style (Witkin et al., 1977) with a need for structure in learning and a preference for social contexts rather than independence. He drew attention to the need to develop strategies to assist these learners to achieve an independent and self-directed approach (Kember, 1995) in a flexible learning context. Similarly to Boote (1998), Smith observed that the skills of metacognition were necessary among VET learners if effective engagement with flexible delivery in the workplace was to occur. The capability to successfully learn from others through social mediation has been observed by Brookfield (1985), though, as a legitimate and well-used strategy among successful self-directed learners.

RESEARCH FOCUS TWO - ASIAN VOCATIONAL LEARNERS

Working in an Indonesian context, Smith, Polgar and Suwarna (1996) showed that training and management personnel in Indonesian private sector enterprises did not feel that their workforces were ready for any form of independent learning. To the contrary, the majority view expressed was that instructor-led training was necessary. Also working with Chinese vocational learners in higher education, Smith and Smith (1999) have shown among these students a preference for learning programs to be structured by the teacher, rather than structured through self-direction. More recently, Smith (2000) has shown, at university level, that Chinese vocational learners of different nationalities (i.e. Malaysian, Hong Kong, Singapore) have varying degrees of these characteristics but, nevertheless, are still typified by a preference for instructor-led, well structured programs. Working with a more heterogeneous group of Asian learners, Andrews, Dekkers and Solas (1998) have established the same characteristics.

RESEARCH FOCUS THREE - THE WORKPLACE CONTEXT

This research (Smith, 2000b) investigated the support structures in place within Australian small and medium sized enterprises to support workplace learning. Our findings indicated that little support was provided in terms of:

- Clear and supportive training policies.
- Identifiable training structures and training personnel.
- Development of training personnel to support:
  - → Development of self-directed learning
  - → Acquisition of skills and concepts necessary for workplace productivity, and
  - → Development of a community of practice with shared learning experiences, work experience, and development of common work values.

Recent work by Brooker & Butler (1997) has also shown that there is room to doubt the effectiveness of support for apprentice learners in the workplace. Through interviewing apprentices and their trainers in Australian workplaces, Brooker & Butler (1997) have shown that apprentices rated highly those pathways to learning that involved structured learning and assistance from another more expert worker. Feedback on their work from more expert workers was highly valued. Brooker & Butler showed that learning or practising alone were not favoured pathways. These findings are consistent with Smith's (1999, 2000a, 2000b) findings that VET learners prefer structure and a social context for learning, but assign a low preference to independent learning.

Brooker & Butler's work also involved a detailed analysis of the learning structures put into place by six varied workplaces that employed apprentices. The findings of that part of their analysis indicated that only one of the six enterprises was able to outline a complete structure of training for their apprentices. Although all of the other five enterprises had incorporated some support structures for apprentice learners, there was considerable diversity in a context that none had well-developed structures. A summary of the interviews with trainers identified that workplaces were characterised by unstructured training, an expectation that the initiative to learn would come from the apprentice, apprentices work alone, that production imperatives often overtake learning objectives, and that feedback is only given on a completed job. These findings have been confirmed in other workplace research by Harris *et al*. (1998) and Smith (2000b). In the United Kingdom, Calder & McCollum (1998) have made similar remarks, particularly in the case of smaller enterprises. A study in Australia by the Victorian Office of Training and Further Education (1997) has shown a strong preference among small business operators for on-the-job training, but little commitment by those businesses towards learner support or the development of structures to support learning.

Evidence from these three research focuses, and from the broader research literature suggests then, that a combination of forces are in place that are likely to reduce the effectiveness of flexible delivery for the development of skills in the workplace. These forces are:

- A low preference among VET learners and Asian learners for independent learning, and a high preference for structured training in a social context (Smith, 1999, 2000a, 2000b; Smith & Smith, 1999);
- A need for the development of skills for self-directed and independent learners among VET learners (Boote, 1998);
- Poorly developed training and training support structures in the workplace (Brooker & Butler, 1997; Harris et al., 1998: Calder & McCollum, 1998; Smith, 2000b).

The current paper reports now on the development of a model to identify and provide the strategies required to prepare both learners and workplaces for training programs provided through flexible delivery.

DEVELOPMENT OF SPECIFIC STRATEGIES

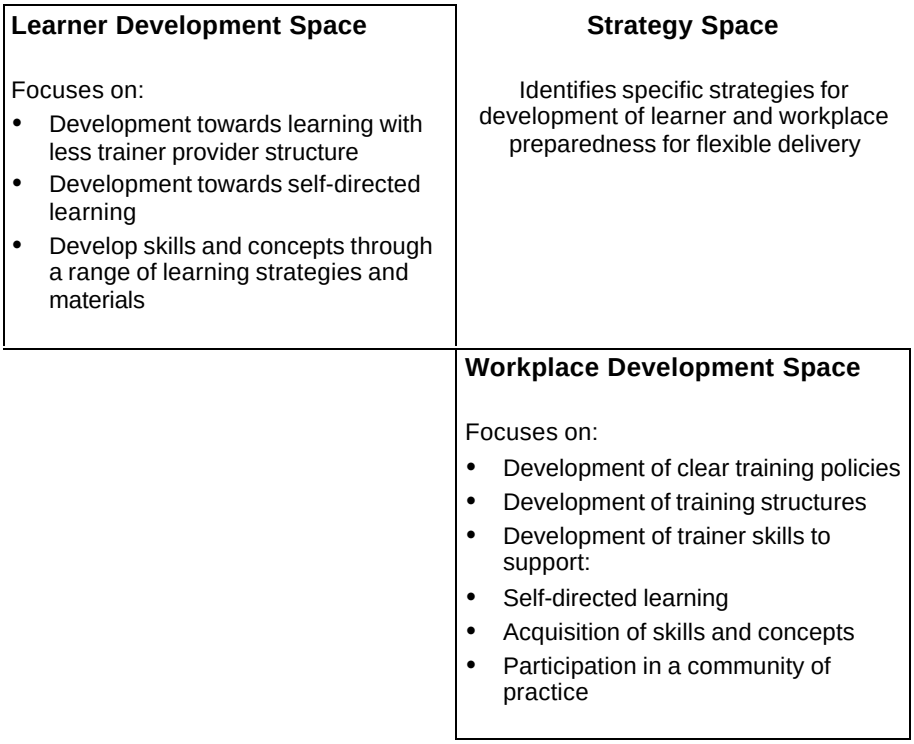
The model developed to identify and prepare strategies for effective use of flexible delivery and flexible learning in the workplace is shown in its barest form, at Figure 1 below.

The simple version of the model is shown as Figure 1, and provides for two dimensions of preparedness, each of which is associated in the model with a Development Space. The Development Space for learner preparation draws on our factor analytic studies (Smith, 1999, 2000a, 2000b) to prescribe three focuses for the development of preparedness. The first focus suggests that learner development be concentrated on assisting learners to be effective in a learning environment where the instructor provides less structure to the learner in terms of program detail, sequencing, tasks and learning outcomes. The second focus relates to the development of self-directed learning where the learner is able to set learning goals, and take responsibility for monitoring and adjusting that learning. The third focus provides for the learner to develop a stronger engagement with and liking for a wider range of learning presentation modes, such that learning is pursued and appropriated from a wider range of sources and types of material.

Within that framework of the three focuses for preparedness, specific characteristics for development are shown within the learner development space in the proposed model. These specific characteristics are adapted from the Kember (1995) model, but developed further through an analysis of the available literature. Continuing with the Kember (1995) and Brockett and Hiemstra (1991) two-dimensional models, the second dimension is one of workplace preparedness for effective flexible

learning, and is portrayed at right angles to the first dimension. Associated with that dimension is the Workplace Development Space. Three focuses have been identified from the literature as describing the major components of workplace preparation. The first focus is the development of clear workplace training policies, while a second focus provides for the development of training structures within the workplace. The third focus relates to the trainer development needed to support the learner development processes identified as self-directed learning, acquisition of skills and concepts, and participation in a community of practice.

Figure 1: A model for the development of effective flexible delivery in the workplace



The relationship between these identified focuses and those described in the Kember (1995) model is not as strong as with the learner preparation dimension. Kember's model was developed to describe the characteristics of higher education institutions, and was concerned with entry requirements, timetabling, access and program start and finish rigidity. These components do not readily translate to the workplace learning and production context. However, the Brockett and Hiemstra (1991) model provides for learning contexts broader than higher education. The focuses shown in the model and the specific items to be addressed within the workplace development space have been drawn from the present research and the literature. The supporting strategies are discussed later in this paper.

Our research and practice in the workplace has focussed on the development of very specific strategies to ensure effective flexible delivery for enterprise training. These strategies are brought together within the Strategy Space of the model.

DEVELOPMENT OF SPECIFIC STRATEGIES

Within the Strategy Space of the model, the specific strategies are developed to provide for learner and for workplace development that will enable preparedness for flexible delivery to be effective. We have developed a total of seventy-nine strategies, categorised into those designed to develop learner preparedness for effective flexible delivery in the workplace; and a separate set of strategies designed to enhance workplace preparedness for flexible delivery.

Within the strategies for learner preparation, the strategies are further categorised into those designed to develop self-directed learning; those to develop skills; and those to develop a community of practice. The strategies for workplace preparedness are also further separated into those relating to development of training policies; specific strategies to develop training structures; and a set of trainer development strategies.

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