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Enhancing flexible business training through computer-mediated communication

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Abstract

A previous article in this journal, by the same author, reported on research that indicated that flexible training for business learners in the workplace needed to take account of their need for instructor guidance and direction, and of their preference for learning in affiliative environments with fellow learners and trainers. In this article the use of computer-mediated communication (CMC) is explored as one training method that can assist with flexible training of this clientele. Some specific strategies for the successful use of CMC are suggested.

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The challenge of flexible training

In a previous paper in this journal Smith (2001) identified a fundamental challenge to the successful flexible training of business learners at an operational, or vocational, level. That challenge lies in the identification through research that these learners are typically dependent learners, and not well disposed to learning through textual or verbal presentation of learning material (Smith, 2000).

Dependent learners in that context were characterised by a need for instructor guidance and support, and a preference for instructor-led training delivery. They were not well-equipped for self-directed learning activities associated with setting their own learning
goals, pursuing their learning independently, nor monitoring and evaluating their own learning progress.

The research also indicated that these learners preferred to learn through hands-on experience, practice, demonstrations, and that they were affiliative learners who liked to learn also through discussion with others.

These findings represent a considerable challenge to the success of flexible training delivery methods that require a degree of independent learning from training packages provided in print or on-screen, and that involve the learner in identifying and pursuing learning goals to enhance their workplace performance. A further set of challenges was indicated in that workplaces were not typically well prepared for flexible training in that the learner support and development policies, processes, and attitudes have not been put in place.

A number of broad strategies were developed in the earlier paper, aimed at enhancing learner and workplace preparedness for flexible training. The challenge for flexible training is to implement strategies and processes in the workplace that will assist learners to engage more successfully in the self-directed learning required by flexible training, and that will enable workplaces to provide the support necessary for successful training outcomes.

Some broad design strategies for flexible training

Clearly, for flexible training to be successful, the design of training programs must recognise the needs of these learners and provide for them. At the same time, this is not just a matter of “matching” training design with learner styles or preferences. To match to individual needs is likely to be expensive, difficult, and only partially successful given current levels of knowledge about matching. We need to develop a number of broad design strategies that will yield training design that is client focussed. At the same time, it will serve learners best if we also provide opportunity for them to develop and grow in their learning preferences and learning strategies, such that we are assisting in the formation of skills for self-directed learning and the acquisition of knowledge from text. By pursuing those sorts of developmental practices we will place learners in a better position to achieve success in flexible training.

Broad design strategies of flexible training that represent good practice are those that pursue the development of self-directed learning, develop workplace skills and knowledge through the use of a broad range of learning strategies and materials, and develop a proficiency to intelligently use the community of practice that is the workplace (Smith, 2001). In workplaces we have at our disposal a rich variety of resources in people and their skills and knowledge, equipment, software, technical manuals and journals, as well as learning materials either purchased or developed for the enterprise. As Sadler-Smith et al. (2000) have observed, it is the use of a mosaic of methods and resources that will best serve learner needs in the workplace, but we need to ensure that learners know how to access them.

Computer-mediated communication (CMC) provides an emerging opportunity to implement these broad strategies in workplace-based flexible training.
CMC

CMC allows opportunity for the development of networks to support learning in social contexts, and a capacity to address the isolation that occurs where learning materials are provided and learners are expected to construct meaning on their own. Trentin (1999) has argued that the power of new communication systems lies in the potential to support collaborative education, defined as the linking together and merging of the various participants in an education activity, such as teachers, students, or external parties such as consultants or other experts. The recent W.R. Hambrecht & Co. (2000) report on corporate e-learning takes a similar view of the need for interactivity, and the opportunities that new technology can provide for that.

The definition of CMC used in this paper is that characterised by groupware systems (e.g. FirstClass) that enable learners to interact with other learners, with their instructors, and with other experts who may be external to the teaching-learning environment. Although flexible delivery provides some challenges for vocational business learners, at the same time their preference for social contexts for learning provides an opportunity for innovative approaches that will use that preference effectively.

A useful framework for the development of learner preparedness and training delivery is provided by Salmon (2000) in her model of teaching and learning online through CMC. She has proposed a five-stage model whereby participants gradually increase their involvement in, and commitment to, CMC as they become more comfortable and proficient with the environment. As the stages progress, so does the sophistication of the interaction and the learning outcomes. These five stages are as follows:

1. (1) Access and motivation – during which participants set up and gain access, and instructors (or e-moderators) encourage participant use of the CMC facility.
2. (2) Online socialisation – during which stage participants start to communicate with each other, both individually and in groups, with the majority of interchange being social chit-chat.
3. (3) Information exchange – during which participants begin to develop an appreciation of what is available to them online, both in terms of information and interaction with others who can assist them in learning.
4. (4) Knowledge construction – a stage during which participants interact in “more exposed and participative ways” (Salmon, 2000, p. 32) to formulate and express their ideas, and receive feedback on those ideas.
5. (5) Development – during which participants become more responsible for their own learning and make use of computer mediated opportunities to learn with little assistance required from instructors, other than when identified by the learner. As Salmon observes, at this stage the pursuits of learners become more individualised.

The application of this staged model to the broad strategies identified by Smith (2001), and the network-based collaborative model proposed by Trentin (1999) provides for some clear direction and support in the use of CMC to support flexible delivery to business learners in the workplace. Additionally, the preference among vocational learners for non-verbal presentation of learning is a clear challenge for CMC, which is heavily text based (Trentin,
The Salmon staged model provides opportunity here for learners to develop greater comfort with this form of communication by initially using it for non-challenging forms and content in communication, and for leveraging off the learners’ typical interest in socially mediated environments. The development of new strategies for learning can be powerfully leveraged off existing strategies with which learners are already comfortable.

Salmon’s notion of the “e-moderator” also provides an opportunity to develop these skills through a very skilled moderator who may not just be assisting learners to communicate well in CMC, but may also assist instructors. It is to be expected that a number of instructors will be new to this form of communication and teaching, and a number will not be strong in verbal skills either.

**The strategic use of CMC**

A number of specific strategies to enhance learner success with flexible delivery are amenable to implementation through CMC. In supporting each of these strategies there will be need for instructors to be flexible in terms of the stage in Salmon’s model that each participant is engaged with at any one time, and to support the learner in effectively using that stage, and moving on to further stages. Once the first stage of access and motivation is achieved, each of the strategies listed below is supported at each level of Salmon’s model, through interaction with instructors, other learners, or other expert participants (Trentin, 1999). In developing learners and instructors to participate in the higher stages of Salmon’s model, it is useful to take note of the common experience that, unless instructors are vigilant and well organised, participants can trivialise the interactions on CMC such that they engage in only the most surface of ways.

The broad strategies developed in the earlier Smith (2001) paper are amenable to CMC and are discussed below in detail, together with suggested specific strategies.

**Development of self-directed learning**

In the context of learning in the workplace, self-directed learning can be developed within an authentic, real-world environment where there is access to authentic tasks and expert guidance. Additionally, these features can be developed through careful integration of off-the-job and on-the-job learning. Strategies suggested here for the development of these identified features of self-directed learning can be implemented and enhanced by CMC, and may comprise:

- assistance in grounding new learning goals in a context of experience, existing knowledge, and an appreciation of the place of learning in becoming an expert worker;
- assistance to learners to understand their learning within the broader context of the workplace;
- assistance to learners in the development and negotiation of learning goals;
- assistance to learners in developing and negotiating a learning plan and learning contract, starting with limited contracts prior to developing towards more comprehensive contracts;
assistance in the identification of authentic tasks and learning resources through which the learning contract is to be pursued;
assistance in the identification and accessing of other experts who can provide demonstration, discussion and guided practice;
working with learners to develop a structured approach to completing the learning contract negotiated between the learner and trainer;
working with learners to develop monitoring of learning as it proceeds, and the self-evaluation of learning outcomes;
provision of regular discussion with learners on their learning contract;
discussing achievements as learning proceeds, and assistance to modify learning contracts on the basis of that feedback; and
encouragement of cognitive and metacognitive skills such as anticipation and question-asking; strategy planning and analysis; wider use of learning resources; monitoring of learning processes; articulation of knowledge.

Development of skills and conceptual knowledge through a range of learning media and methods

Strategies for skills and concept development will necessarily involve instructors in providing learning support, and the fading of that support as learning progresses. Also needing inclusion is the opportunity for the learner to appreciate the place that the new skills hold in the workplace and in the development of personal expertise. Opportunities to discuss the learning with other learners, to reflect on and articulate the knowledge gained from learning will also provide opportunity to appropriate meaning in the learning. Discussion and observation assist with the identification of heuristics used by the more expert worker in carrying out the task.

Specific strategies suggested here for the effective development of skills and conceptual knowledge, and amenable to implementation through CMC, are:

assistance in the development and negotiation of learning contracts that clearly specify the skills and concepts to be learned;
provision of regular meetings to discuss and receive feedback on progression towards completion of learning contracts;
provision of assistance to recognise current skills and knowledge as a basis for the acquisition of new learning;
assistance in the identification of authentic tasks for learning;
provision of opportunity for deliberation, reflection, and articulation of knowledge;
provision of learning scaffolding and its planned withdrawal;
exposure to a diversity of experiences and problem-solving situations;
assistance in the integration of on- and off-the-job learning experiences; and
encouragement and facilitation to use a broad range of learning strategies, and a wide use of learning resources, including resources that are verbally or textually presented.

Preparedness to structure own learning within a community of practice
A community of practice provides the context for learners to understand the values and ethos of the organisation, and enables the appropriation of knowledge through authentic and situated tasks. The community of practice provides opportunity for the development of knowledge through socio-cultural and authentic learning experiences guided by expert mentors and accepts that learning and thinking are typically social activities.

Specific strategies to develop preparedness for flexible learning, within a community of practice, and amenable to CMC might comprise:

- developing an understanding among learners of their work and training within the context of the workplace, and others within the workplace;
- development among learners of a clear understanding of the workplace ethos, values, and policies;
- development among learners of their dual role as learners and as workers;
- encouragement and facilitation to learners to form relationships with trainers, supervisors, peers, and other experts to enable discussion of developing skills and knowledge;
- assistance with identification of learning objectives to be pursued through interaction with others, through discussion, demonstration, articulation etc.; and
- assistance with skills of structured observation and question-asking.

Implementing CMC in the workplace

The implementation of CMC in workplaces as part of a flexible training system is not without its problems. Apart from acquiring and setting up the hardware and software, which do not form part of the considerations of this article, there are matters of encouraging and monitoring use. The formation of learner groups is an important component, where these groups will consist of workers who are learning a set of skills that are fairly common to each of them, a facilitator (or e-moderator), a trainer (who may also be the facilitator), and other more expert workers. Once the group is set up there needs to be a program of activity that engages learners, and the advice here would be to structure the CMC experience using the sort of sequence suggested by Salmon (2000). The CMC interactions are normally asynchronous, such that participants need not be on-line at the same time, but there does need to be established a regularity of participation by each person involved, and an expectation of such participation.

The group may be set up among participants who are all located at the same workplace, or may be set up among people who work for an enterprise that has a number of geographically distributed workplaces.

It is also possible to develop participation among groups who work for different enterprises, but who have common learning needs.

In the case of business learners, this is particularly attractive since the learning of common software packages, accounting standards and principles etc. are common requirements across a wide range of enterprises.
In the development of CMC within the enterprise there are a number of general practices that can be incorporated into the experience of each group, and which assist in the implementation of both the broad and the more specific strategies suggested in this paper. It is important to realise with the following suggestions, that each of them may be used by a facilitator (or trainer) for the whole group or, on occasion, can be used with a sub-group or even an individual learner. Suggested practices are as follows.

- Ground new learning in existing knowledge and skills. New learning needs to be incorporated into existing knowledge structures such that it is contextualised and meaningful. As well as providing those cognitive advantages, the familiarity with existing knowledge obviously considerably enhances the learner’s confidence with the new knowledge.
- Design into the CMC discussion connections between textually presented material in learning packages with hands-on practice and demonstrations such that the material being read has a meaning and understanding in practice. The encouragement of a sharing of these connections among participants is useful.
- Harness the skills of others as either mentors to learners for specific skills and knowledge, or as more general mentors to assist learners in the connection between the learning materials and practice in the enterprise. This “buddy” system has a long and successful history in workplace learning, and can work well in CMC. There are also possibilities to introduce experts and mentors from outside the enterprise.
- Provide opportunity for regular discussion between learners and trainers or supervisors so that they can collectively identify and agree on learning goals to be pursued in the next learning period, and record these learning goals. Also within those regular discussions, ensure that there is opportunity for the review of progress towards previously determined learning goals, and identify any barriers to learning that may be present. Those discussions also represent an opportunity to identify the resources to be used in constructing the next sequence of knowledge, and to organise the accessibility of those resources, whether they be human or physical.
- Provide opportunity for learners to discuss what they are learning with other more expert workers in the enterprise, who may be invited in as guests, and with other learners on a one-to-one basis.

References


