Student and tutor perspectives of on-line moderation

Gary Packham, Paul Jones, Brychan Thomas and
Christopher Miller
*Welsh Enterprise Institute, Business School, University of Glamorgan,
Pontypridd, UK*

Abstract

Purpose – The on-line tutor or e-moderator faces a diversity of new challenges, including instructional design, organisation, direct instruction and facilitating discourse. This study aims to contrast the views of students and tutors regarding what factors constitute effective e-moderation in order to identify key attributes of an on-line tutor.

Design/methodology/approach – A qualitative methodology was adopted. The research utilised a semi-structured interview technique to collect data contrasting and comparing the views of 35 students and 35 tutors on the constituents of effective e-moderation.

Findings – The paper finds that from a student perspective the quality of feedback, student support and module management were key attributes of an effective e-moderator. In contrast tutors argued that motivating students, including the provision of constructive feedback and developing an engaging on-line persona were critical to successful e-moderation. Comparison revealed that students and tutors have a broadly similar view to what constitutes effective on-line moderation and any disparities related to how these groups tended to interact with the learning environment. Students were concerned primarily with how moderation enabled them to engage with the learning environment whereas tutors tended to discuss effective moderation in terms of factors that facilitated the learning process.

Originality/value – The study recognises the key attributes of an effective e-moderator that should inform course design and tutor training.

Keywords E-learning, Higher education, Students, Teachers

Paper type Research paper

On-line learning in context

This study investigates the role of the on-line tutor from student and tutor perspectives within a higher education (HE) context in terms of effective utilisation of a virtual learning environment (VLE). It is recognised that on-line learning experience can take many forms but typically involves an on-line tutor (Salmon, 2000). The increasing popularity of e-learning has led to the re-assessment of the traditional classroom-based tutor. Walhaus (2000) suggests that the most notable difference between e-learning and traditional learning is that physical attendance is not mandatory. Walhaus (2000) maintains that while traditional learning is predetermined by the institution in terms of time, e-learners decide when to study based on their own requirements. Walters-Coppola *et al.* (2002) recognise that the traditional tutor can utilise both verbal and non-verbal forms of communication whereas, e-learning places the emphasis on the "written verbal" form. Williams (2002) submits that the role of the tutor is crucial to the success of any form of computer-mediated communication (CMC). Williams (2002) uses this term to describe systems that allow electronic communication between tutor and student. Generally, CMC supports the mechanisms of synchronous

and asynchronous communication. Synchronous communication takes place in real time (e.g. a virtual classroom) with learners involved in the communication process simultaneously. Asynchronous communication involves delayed communication and takes place between learners and a facilitator within a forum (e.g. discussion board) or via electronic mail (e-mail) over a period of time (Jolliffe *et al.*, 2001). Given its often-cited advantages of cost and flexibility, asynchronous communication has become the most typical method for distance learning (Williams, 2002). Most VLEs, however, still support a combination of asynchronous and synchronous delivery pedagogies. The VLE within this study supports both asynchronous and synchronous learning communication media and provides students with a bank of interactive module materials and other learning resources (Packham *et al.*, 2004a, b). This study focuses on the nature and role of the on-line tutor, their usage of the VLE and the relationship with the student from both perspectives.

The traditional tutor

McVay-Lynch (2002) posits there are five roles undertaken by the traditional tutor, including class discussions, role-playing, case studies, question and answer sessions and assessment. She suggests that these processes can be replicated within a VLE utilising discussion boards, e-mail and virtual classrooms. Therefore the role of the on-line tutor is multifaceted and requires a process of managing the student learning experience in an effective and co-ordinated manner. The Australian Flexible Learning Network (AFLN) (2003) argues that managing the student's learning experience is critical to achieving effective moderation. Coghlan (2001) contends that this facilitation also refers to managing the communications of other on-line participants. Salmon (2000) offers a definition of the on-line tutor as an e-moderator. This term can be easily applied to a number of associated activities such as teaching, training, facilitation and instruction. Within this context the e-moderator is also considered to be a process designer and promoter of learning rather than just a content expert. The e-moderator requires sufficient subject knowledge to encourage on-line interaction and to enable the development process to be undertaken. Within the remit of this study the term e-moderator and e-moderation will be used to describe the role and activities of the on-line tutor.

The role of the e-moderator

E-learning requires e-moderators to possess a range of practical technical skills such as the use of e-mail, discussion forums, chat facilities, video conferencing tools and a general awareness of web site development tools such as HTML. E-mail was identified as a vital component of the on-line learning process and is utilised for a variety of tasks including communicating on either a one-to-one or one-to-many basis with students. E-mail can also be utilised to answer queries, posing questions and submitting assessments. Discussion forums are often cited as a core component of an effective on-line course (Packham *et al.*, 2004a, b). Within this study, the role of the on-line tutor will encompass both asynchronous and synchronous activities. Asynchronous mechanisms allow students to respond to tasks and interact with fellow students whereas synchronous chat facilities allow real time communication. Synchronous mechanisms require the e-moderator to manage the student learning environment and on-line conversation in "real time" and this can prove time consuming and demanding.

Previous research has identified that the e-moderator undertakes three roles within the VLE. These are technical adviser, facilitator and manager (Paulsen, 1995; Berge, 1995; Collins and Berge, 1996).

Facilitation skills are the methods used by the e-moderator to enhance interpersonal communication within the on-line learning environment (Kemshal-Bell, 2001). Anderson *et al.* (2001) state that facilitation is critical to the success of an e-learning course as it fosters and maintains the interest and motivation of students. The facilitator role includes engaging the learner in the learning process, questioning and listening skills, providing direction and support, managing on-line discussions, building on-line groups and developing on-line relationships. Students also require some socialisation so that they can communicate effectively with their peers and tutors. These processes are often undertaken during a face-to-face induction but it is imperative that e-moderators also develop and encourage these student facilitation skills within the on-line learning environment (Anderson *et al.*, 2001; Kemshal-Bell, 2001). Facilitation also involves the provision of insightful, timely and objective feedback that enables students to develop their learning skills (Shepherd, 2000). The lack of feedback can lead to disillusionment with the learning programme and eventually withdrawal (Packham *et al.*, 2004a, b). Similarly, the e-moderator must demonstrate competence in providing this feedback (Kemshal-Bell, 2001). Thus, it is important that discussions are effectively managed in order to encourage knowledge sharing and interactivity. This process in turn assists the development of teamwork, a shared sense of purpose and community (Rovai, 2002).

Research has also contended that establishing and maintaining course guidelines and planning, monitoring and reviewing content delivery are key facets of e-learning success (Kemshal-Bell, 2001). Salmon (2000) also recognises that e-moderators have to be effective managers. These management skills include time management, a capacity to monitor the learning process, an ability to evaluate the teaching and learning undertaken and the capability to adapt and change teaching and courses to accommodate the specific needs of e-learners.

Evidence suggests that there are differences between the role of the e-moderator and that of the traditional classroom tutor. Roles such as technical knowledge, facilitation and management skills have a pivotal role to play in the effectiveness of the VLE which can engage, encourage and motivate the diverse needs of on-line learners. Collins and Berge (1996) suggest that the role of the e-moderator has changed from that associated with the traditional lecturer to that of a learning guide. In this sense, it is argued that the e-moderator has to enable and guide the learning experience by managing the learning environment. This role requires a high degree of interaction and appreciation of individual student needs. The question however, remains as to whether the perceptions of e-moderators and students are consistent in how effective moderation can be achieved.

Effective e-moderation
In terms of effective e-moderation the literature provides some useful insight into appropriate on-line behaviour. Keller and Burkman (1993) identify interest, relevance, expectancy and satisfaction as four essential components of an effective e-learning strategy. Interest involves raising awareness and facilitating debate. It also focuses on promoting a challenging and interactive relationship between tutor and student.

Relevance is concerned with the appropriateness of the learning to real life scenarios whilst expectancy manages the formal relationship between the instructor and student in terms of participation and quality of work. Finally, satisfaction reinforces the learning experience through the provision of constructive feedback and rewarding achievement. Prior research has identified that the on-line learning experience is improved by developing and nurturing a communicative and supportive culture between e-moderators and other students (Weller and Mason, 2000; Hara and Kling, 1999). Alexander (2001) argues that students also value prompt and informative feedback from tutors, clearly communicated course expectations and high levels of on-line activity.

Williams (2002) submits that e-moderators should participate equally within the CMC medium, responding to comments whilst encouraging and stimulating debate. Furthermore, e-moderators should initiate discussions with predetermined queries and summative discussions at regular intervals (Stratfold, 1999). Prior research has also identified that induction into e-learning programmes which involve training, socialisation and a clear reiteration of course objectives and expectations are essential in ensuring students, are conversant with VLEs (Nixon and Salmon, 1996; Masterson, 1999). Thus student's proficiency with information communications technology (ICT) has a notable impact on levels of on-line activity (Hara and Kling, 1999; Packham *et al.*, 2004a, b).

Research methodology

The study examines effective e-moderation from the perspectives of an e-moderator and an e-learner within an on-line course delivered through the University of Glamorgan's e-College Wales (ECW) (asynchronous/synchronous?) programme. To date, this programme has seen over 1,000 students enrol onto business and enterprise courses from across Objective 1 areas of Wales. The courses are supported by "Blackboard" software which utilises synchronous and asynchronous communication mechanisms including discussion boards, e-mail and virtual classrooms. This environment is supplemented by a bespoke VLE which contains interactive text-based learning material as well as graphical and audio case studies. This study focuses on the e-learning undergraduate Enterprise programme offered by ECW since 2001. The course is an on-line undergraduate programme with no face-to-face contact with the exception of an initial induction to provide familiarisation in the use of the VLE.

The research utilised a semi-structured interview technique to collect data. During the development of the research instruments efforts were made to ensure that the study did not preconceive e-moderators' and students' own perceptions of their role. It was decided that semi-structured interviews would help remove this element of bias and provide the best mechanism of capturing data (King, 1994). Two interview guides were created utilising a common template: one for e-moderators and one for students, to assist comparison. Face-to-face personal interviews were also preferred over other data collection methods as they enabled the interviewer to probe and clarify answers (King, 1994). The research instruments were designed to elicit responses from both parties on what factors constituted effective e-learning and e-moderation. The semi-structured interviews asked the respondents to identify examples of effective e-moderation practice and provide examples of good practice.

During the 2004-2005 academic year approximately 150 students were enrolled on a range of enterprise courses. A decision was made to only select students from level 2 and 3 of these Enterprise programmes for interview due to previous experience of on-line learning and levels of on-line participation. Similarly, tutors were selected based on having at least two years' experience of e-moderating. In total, 35 e-moderators (representing 88 per cent of all on-line tutors) and 35 students (23 per cent of total student group) were interviewed with each interview lasting approximately one-and-a-half hours. E-moderators and students were interviewed by a team of researchers from the University of Glamorgan who were not directly involved in the delivery of the programme to avoid influencing the respondents in any way. A total of 35 respondents were identified as the maximum realistic target for tutor interviews and it was decided to target a similar number of students to attain a representative proportion of the student population.

To improve the validity of the research, all parties were provided with a full transcript of their interview and asked to confirm content. In addition, emphasis was placed on the hermeneutic understanding of the participants – in particular, in clarifying their own conceptualisations of the teaching process and their learning experience (MacLellan, 2001). The content of these interviews were then contrasted and compared to identify key themes associated with effective e-moderation.

Effective e-moderation from the student perspective
Students indicated that there were three prime factors which constituted effective e-moderation. These were the quality of feedback, moderator support and encouragement and module management.

Quality of feedback
A total of 27 students (77 per cent) identified regular tutor feedback in discussion forums as an essential element of effective e-moderation:

> The better e-moderators respond regularly and quickly to my needs.

Four respondents even suggested that an e-moderator should reply to student communications within 48 hours:

> I would like to see any e-mail or discussion board thread responded to in 48 hours or less. I don't think this is unrealistic and at the beginning of the course it should be less.

A total of 13 students (38 per cent) identified the importance of constructive and positive feedback in discussion forums and e-mail from e-moderators:

> My time is constrained. So what I need is regular feedback on my work and an indication on how well I'm doing.

In many instances students felt that constructive feedback in discussion forums and e-mail provided them with additional motivation to contribute on-line. They welcomed critical comments that enabled them to develop and enhance their contribution to the learning activity:

> This type of learning means that you need to plan your study time . . . feedback, good or bad helps me to keep on track and gives me some idea on how well I'm actually doing.

The majority of students also discussed the importance of feedback in discussion forums and e-mail in terms of how regular communication was important in overcoming feelings of isolation and apprehension. Moreover, many students surveyed indicated that regular discussion forum and e-mail feedback helped to build confidence in their ability to understand key concepts and their practical applications to enterprise.

Support and encouragement

Of the students 15 (42 per cent) identified the importance of e-moderator enthusiasm. This factor was often linked with the support and encouragement that students felt they received from tutors. In some cases, students alluded to the importance of receiving positive encouragement and its role in facilitating a student's engagement in a subject area:

> The way in which a tutor responds to threads and gets excited about the subject matter also has an impact upon how I feel about studying the course material and undertaking tasks. If a tutor is enthusiastic I seem to respond positively and get a real confidence boost from joining in.

A number of students also suggested that forums in which tutors had failed to inject enthusiasm and generate interest in a subject area did not assist their learning experience. This was also evident when one student argued that:

> If a discussion can't help me with an assignment or does not interest me I will not join in.

Therefore it can be surmised that the benefits of participation in general discussion forums which either do not stimulate debate or do not undertake a specific task are of limited value in e-learning.

Module management

Students made reference to the facilitation of the learning process and the effectiveness of this process. A total of 31 percent (11) of students interviewed commented on the significance of sign posting and building a learning community. A number of students preferred e-moderators who not only demonstrated this expertise, but also an ability to create, facilitate and manage on-line debates:

> It's important for a tutor to stimulate and manage discussion. Participating on-line is not always easy as you may not really understand the subject being discussed.

Moreover, it was evident that many students appreciated the efforts moderators would make to help pace their learning experience appropriately:

> Sometimes I fall behind because I lack the confidence to join in and ask questions. One moderator would e-mail me to tell me what I should be doing and what I needed to study on a weekly basis. This signposting along with regular summaries of discussion on key issues helps me to get back on track and reminds me that I need to manage my time better.

The interviews also revealed that the majority of students depended on this additional guidance from moderators and that in some cases students were finding it difficult to plan an effective study strategy. In fact, some students suggested that these activities also helped to overcome feelings of isolation and often enhanced the learning experience.

Effective e-moderation from a tutor perspective

From interviews conducted with e-moderators, four qualities of an effective
e-moderator were identified. These were motivation, time management skills,
building an on-line personality and organisational skills.

Motivation

The ability to motivate students was identified by 30 (86 per cent) respondents. This
involved the e-moderator being able to encourage students to participate regularly in
the course:

> Students need to be motivated to participate regularly. The e-moderator must provide
> constant and individual words of encouragement and support.

> Students need to be motivated, re-motivated and motivated again. In this way we can
> encourage them to develop open and ongoing dialogue with the e-moderator and fellow
> students.

> Motivation of students on-line can be a lonely experience and the e-moderator has a critical
> role to play in the motivation of students.

Strongly related to the above point is the provision of regular feedback for discussion
forums and e-mail. The majority of tutors argued that providing rapid, detailed and
positive feedback on any course-related communication helped to build an interactive
learning environment. Tutors also submitted that students reacted well to positive
feedback especially in cases where good work was identified and praised and this often
enabled an on-line community to develop.

Time management skills

Of the tutors 22 (63 per cent) indicated that effective time management was critical to
effective e-moderation. Further exploration during interviews found that this included
the ability to communicate with students on a regular basis. Thus, tutors were
convinced that their effectiveness was being given sufficient time to read and respond
to on-line discussions and student e-mails:

> Regularity of feedback is important. Student time is precious and they become despondent if
> they are made to wait for a long time.

Many e-moderators suggested that time had to also be allowed for reading course
materials in situations where they were not module content authors. In fact, a number
of tutors suggested that their effectiveness was often determined by other work
commitments such as administration and face-to-face teaching. Some tutors even felt
that the demands of e-moderation were not being recognised by senior management:

> Students feel more appreciated when replies are quick and are therefore more likely to
> maintain a high level of participation, this is not something that management always
> acknowledge though.

Despite tutors' comments regarding sufficient time allocation a number of tutors
interviewed also suggested that some colleagues did not possess good time
management skills. Consequently, although most felt that more time should be made
available, good moderation was also dependent on the tutor's ability to manage their
own time effectively

On-line personality

The ability to create and sustain an on-line personality was identified by 19 (54 per cent) respondents as an important trait of an e-moderator. This included the ability to be empathic and understand student learning needs and personal circumstances:

> I find to be successful you must create an on-line persona which students want to engage in dialogue with. You need to create a rapport. I try to be open, honest and friendly without becoming over familiar.

> In the beginning I would go as far as to describe it as mothering. The students are totally reliant on you so it is essential that they respond to you in a positive way.

The majority of tutors also suggested that approachability was important as students tended to participate in discussions that were more informal and where they were given time to build their own on-line personality. In many cases, tutors implied that the appropriate use of humour helped to break down communication barriers and facilitate an effective learning environment.

Organisational skills

This facet was identified by tutors as the organisation of the student learning experience. This involved both facilitation and management of the learning process but was described as organisational by the tutor respondents. A total of 19 respondents (54 per cent) identified the need for excellent organisational skills. These included demonstrating the appropriate awareness, authority and control when directing student learning within a course or module context. Moreover, activities such as monitoring participation, summarising discussions and controlling the rate of progression through learning activities were seen as prerequisites of effective on-line moderation. One tutor contended that:

> Unlike traditional learning we have almost total control over a student's interaction and discussion of a topic matter with their cohort. Unless we organise their time to complete individual activities … we run the danger of students not engaging with all learning materials … after all they tend to concentrate on things that interest them and many avoid concepts that are difficult to understand and require additional work.

A number of tutors also commented that e-learning could not be as flexible as many thought it should be within a HE context. In particular, tutors were quick to point out that existing processes related to student progression and the conferment of awards were often built on traditional patterns of participation in HE. Consequently, these established and rigid systems could not easily be adapted to the flexible modes of delivery and assessment. Nevertheless, while many tutors indicated that processes needed to become more flexible to meet the challenges of e-learning, it was still important to provide students with a structured learning environment. In fact, many tutors suggested that too much flexibility and student freedom could be detrimental to the success of an e-learning programme.

Conclusions

The interviews revealed a number of areas of consensus and diversity between the two groups (see Table I). The three main elements of effective e-moderation from a student perspective were the quality of feedback, student support and module management. These findings seem to relate to what students require from an effective learning environment. On-line learners often feel isolated and cannot easily evaluate how well

they have engaged with the learning materials. The provision of feedback through discussion boards and e-mail and regular support helps students overcome these barriers and encourages participation (Shepherd, 2000; Kemshal-Bell, 2001). Guidance on the management of study time was also highly rated by students and this could be related to the chosen learning medium as students who opt for e-learning are often unable to enter traditional HE due to personal time constraints (Walhaus, 2000).

When some of these factors are contrasted and compared against each other it is evident that the key difference is the perception of the experience and the process. The student group places more emphasis on the nature of the everyday e-learning experience. Tutors tended to identify factors that facilitated and supported the learning process and issues regarding the ability to perform this role (Anderson *et al.*, 2001; Kemshal-Bell, 2001; Packham *et al.*, 2004a, b). Thus more significance is given to the quality of regular feedback by students. In contrast, the tutor group placed more emphasis on motivating students to participate within an on-line community. The importance attached by students to support and encouragement, however, can be linked to the significance attached to motivating students by tutors who participated in this study. This link is also apparent between organisation skills identified by tutors and module management skills alluded to by students.

In particular, tutors argue that motivating students, including the provision of constructive regular feedback via discussion forums and e-mail and developing an engaging on-line persona are critical to successful e-moderation. In addition, tutors also contended that e-moderators need to possess management and organisational skills to build an on-line community that facilitates learning and provides structure to the learning process.

When the course was initially piloted, the five-stage Salmon (2000) framework was utilised as the model of teaching and learning on-line. Whilst the framework proved effective in mapping the knowledge development process it did not identify the key attributes required for effective e-moderation which resulted in a diversity of good and bad tutor practice. This study enabled the programme to generate a code of practice for e-moderators. The research posits that the role of the on-line tutor is multi-faceted requiring organisation and management skills, as well as an ability to motivate and encourage student interaction. In fact, it is argued that these skills are key components of effective e-moderation and should form the basis of key institutional guidelines for e-moderators. The study also suggests that whilst attributes differed between students and tutors, these disparities when contrasted with each other are simply caused by differences in perception. Students tended to examine the role of the e-moderator from an individual perspective whereas tutors were more concerned with ensuring that effective moderation resulted in a valuable, participative and equitable learning experience. As a result, it is argued that students examine effective moderation from

Key attributes (literature)	Student perspective	E-moderator perspective
Efficient and effective feedback	Quality of feedback	Motivation
Organisation skills management skills	Module management	Organisational skills time management
On-line persona socialisation skills	Support and encouragement	On-line personality

Table I.
Student and tutor
perceptions of effective
e-moderation

the perspective of assisting their interaction with the learning environment. In contrast tutors considered factors that facilitated and empowered the learning process.

These findings therefore should help inform e-learning providers when considering how students and tutors will interact with on-line course material. Consequently, on-line course design must take into consideration student and tutor perceptions of the learning environment and the way they will prefer to interact with it. Guidance and training should be provided by programme administrators into what behaviour constitutes effective e-moderation. Notwithstanding this fact, it is evident that effective moderation plays a critical role in the success of on-line pedagogy.

The research has tentatively established a link between tutor and student perceptions of e-moderation. The study also offers HE with the foundations of a basic framework for effective e-moderation training. It should be acknowledged however, that there is a need for additional research in this area. Key variables such as the nature of the student population, pedagogy and VLE design vary considerably among on-line programmes providers and require further investigation. Despite these limitations, the role of the e-moderator will continue to evolve as e-learning environments are developed and enhanced by improvements in communication media. As HE starts to comprehend fully the potential of borderless learning it will become increasingly important for future research to examine this link more closely and clearly establish the core skills and attributes of effective e-moderation.

References

Alexander, S. (2001), "E-learning developments and experiences", *Education + Training*, Vol. 43 Nos 4/5, pp. 240-8.

Anderson, T., Rourke, L., Garrison, D.R. and Archer, W. (2001), "Assessing teaching presence in a computer conferencing context", *Journal of Asynchronous Learning Networks*, Vol. 5 No. 2, pp. 1-17.

Australian Flexible Learning Network (AFLN) (2003), "Effective on-line facilitation", Australian Flexible Learning Quick Guide Series, available at: http://flexiblelearning.net.au

Berge, Z. (1995), "Facilitating computer conferencing: recommendations from the field", *Educational Technology*, Vol. 35 No. 1, pp. 22-30.

Coghlan, M. (2001), "E-moderation – managing a new language?", paper presented at Net*Working 2001 Conference, available at: <http://users.chariot.net.au/~michaelc/nw2001/emod_newlang.htm>

Collins, M. and Berge, Z. (1996), "Facilitating interaction in computer mediated on-line courses", *FSU/AECT Distance Education Conference: Proceedings, Talahassee, June*.

Hara, N. and Kling, R. (1999), "Student frustrations with a web based distance education course", *First Monday*, December, available at: www.firstmonday.org/issues/issue4_12/hara/index.html

Jolliffe, A., Ritter, J. and Stevens, D. (2001), *The On-line Learning Handbook – Developing and Learning Web Based Learning*, Kogan Page, London.

Keller, J. and Burkman, E. (1993), "Motivational principles", in Fleming, M. and Levie, W.H. (Eds), *Instructional Message Design: Principles from the Behavioural and Cognitive Sciences*, 2nd ed., Educational Technology Publications, Englewood Cliffs, NJ.

Kemshal-Bell, G. (2001), "The on-line teacher, Final report prepared for the Project Steering Committee of the VET Teacher and On-line Learning Project, ITAM, ESD, TAFENSW", available at: http://cyberteacher.onestop.net/final per cent20report.pdf

King, S. (1994), "Analysis of electronic support groups for recovering addicts", *Interpersonal Computing and Technology Journal*, Vol. 2 No. 3, pp. 48-56.

MacLellan, E. (2001), "Assessment for learning: the differing perceptions of tutors and students", *Assessment & Evaluation in Higher Education*, Vol. 26 No. 4, pp. 307-18.

McVay-Lynch, M. (2002), *The On-line Educator – A Guide to Creating the Virtual Classroom*, Routledge, London.

Masterson, S. (1999), "The virtual participant: a tutor's assistant for electronic conferencing", in Eisenstadt, M. and Vincent, T. (Eds), *The Knowledge Web: Learning and Collaborating on the Net*, Routledge, London.

Nixon, T.T. and Salmon, G. (1996), "Computer mediated learning and its potential, supporting open learners", in Mills, A.R. and Tait, A.W. (Eds), *Supporting the Learner in Open and Distance Learning*, Pitman Publishing, London.

Packham, G., Jones, P., Miller, C. and Thomas, B. (2004a), *Perceptions of Effective E-moderation: A Tutors' Viewpoint, Networked Learning 4th International Conference, Lancaster University, 5-7 April*, pp. 504-11.

Packham, G., Jones, P., Miller, C. and Thomas, B. (2004b), "E-learning and retention: key factors influencing student withdrawal", *Education + Training*, Vol. 46 Nos 6/7, pp. 335-42.

Paulsen, M. (1995), "Moderating educational computer conferences", in Berge, Z. and Collins, M. (Eds), *Computer Mediated Communication and the On-line Classroom*, Hampton Press, Cresskill, NJ.

Rovai, A. (2002), "Building sense of community at a distance", *International Review of Research in Open and Distance Learning*, Vol. 3 No. 1, available at: www.irrodl.org/content/v3.1/rovai.html

Salmon, G.E. (2000), *E-moderating: The Key to Teaching and Learning On-line*, Kogan Page, London.

Shepherd, C. (2000), *Competence Frameworks – On-line Tutors*, Institute of IT Training, London, available at: www.illt.org.ukc-onltutor.htm

Stratfold, M. (1999), "Promoting learner dialogues on the web", in Eisenstadt, M. and Vincent, T. (Eds), *The Knowledge Web: Learning and Collaborating on the Net*, Kogan Page, London.

Wallhaus, R. (2000), "E-learning – from institutions to providers, from students to learners", in Katz, R. and Oblinger, D. (Eds), *The "E" is for Everything – E-commerce, E-business and E-learning in Higher Education*, Vol. 2, Jossey-Bass, San Francisco, CA.

Walters-Coppola, N., Roxanne-Hiltz, S. and Rotter, N. (2002), "Becoming a virtual professor: pedagogical roles and asynchronous learning networks", *Journal of Management Information Systems*, Vol. 18 No. 4, Spring, pp. 169-89.

Weller, M. and Mason, R. (2000), "Evaluating an Open University web course: issues and innovations", in Asensio, M., Foster, J., Hodgson, V. and McConnell, D. (Eds), *Proceedings of the Networked Learning Conference 2000, Lancaster, April*.

Williams, C. (2002), "Learning on-line: a review of recent literature in a rapidly expanding field", *Journal of Further and Higher Education*, Vol. 26 No. 3, pp. 263-72.

Corresponding author
Gary Packham is the corresponding author and can be contacted at: gpackham@glam.ac.uk