

Active Learning in Higher Education

<http://alh.sagepub.com/>

Choices of approaches in e-moderation: Conclusions from a grounded theory study

Panos Vlachopoulos and John Cowan
Active Learning in Higher Education 2010 11: 213
DOI: 10.1177/1469787410379684

The online version of this article can be found at:
<http://alh.sagepub.com/content/11/3/213>

Published by:



<http://www.sagepublications.com>

Additional services and information for *Active Learning in Higher Education* can be found at:

Email Alerts: <http://alh.sagepub.com/cgi/alerts>

Subscriptions: <http://alh.sagepub.com/subscriptions>

Reprints: <http://www.sagepub.com/journalsReprints.nav>

Permissions: <http://www.sagepub.com/journalsPermissions.nav>

Citations: <http://alh.sagepub.com/content/11/3/213.refs.html>

>> [Version of Record](#) - Oct 26, 2010

[What is This?](#)

Choices of approaches in e-moderation: Conclusions from a grounded theory study

Active Learning in Higher Education

11(3) 213–224

© The Author(s) 2010

Reprints and permission: sagepub.

co.uk/journalsPermissions.nav

DOI: 10.1177/1469787410379684

alh.sagepub.com



Panos Vlachopoulos

Educational Development Centre, Hong Kong Polytechnic University, Hong Kong

John Cowan

The Open University, UK

Abstract

Much has been published in recent years about the desirable nature of facilitated interactions in online discussions for educational purposes. However, little has been reported about the roles that tutors actually adopt in real-life learning contexts, how these range between 'tutoring', 'managing' and 'facilitating', and what the distinctions between these three roles may be. In this article choices of priorities in e-moderation, which were made in three naturalistic (real-life) case studies by three higher education practitioners, are identified and discussed. These contrasting approaches were captured and analysed using grounded theory principles. The article also discusses the occasions when the facilitation was less effective than might have been desired. It finally summarizes the potential of various approaches within e-moderation – and some of the attendant risks. The finding is that principles and practices developed for face-to-face support of student-directed learning were found equally applicable in e-moderated online group work, despite several significant differences between the two types of setting.

Keywords

asynchronous discussions, e-learning, e-moderation, grounded theory, higher education, learning outcomes

What is e-moderation?

Universities are increasingly looking towards technology as an enabler in meeting the challenges of widening access, an increasingly diverse student population and their need of flexible provision, and the development of lifelong learning skills. To this end, significant investment has been committed in most institutions to creating Virtual Learning Environments (VLEs), and to the training of staff and students, to support their involvement in what is now widely called 'e-learning' or 'online learning'. Within this emerging higher education (HE) context, online discussions moderated by members of teaching staff, generally called e-moderators, have been seen as a useful strategy in supporting asynchronous online learning.

Corresponding author:

Panos Vlachopoulos, 3C Project, Educational Development Centre, Room – DE310, The Hong Kong Polytechnic University, Hong Kong

Email: pvlachopoulos@hotmail.com

Mason (1991), Paulsen (1992) and Berge (1995) offered early descriptions of the roles that teachers should adopt online to assist their students to progress towards learning and development; these included such often undefined titles as ‘social’, ‘cognitive’ and ‘pedagogical’ facilitators. Later, Salmon (2000) suggested a rather modest facilitative role for an e-moderator, that of the manager of online discussions, who does not exercise any tutorial responsibility and does not necessarily have a subject expertise in the moderated activity. Similarly, Collison et al. (2000) described the e-moderator as the ‘guide on the side’. However, Garrison and Anderson (2003) pointed out that the ‘teaching presence’ in online discussions involves such responsibilities as being a tutor, a facilitator and a subject expert, and that this notion of teaching presence is a significant factor in promoting engagement and interaction. Facilitation is taken here to be an activity in which someone (usually a tutor) makes interventions to encourage students to engage with, and achieve, their overall learning outcomes. E-moderation is taken as a particular form of facilitation in the virtual environment, featuring asynchronous discussion and student activity online. The general title ‘tutor’ is used to describe someone who may undertake various roles promoting learning.

Does e-moderation matter?

Oliver and Shaw (2003) compared the use of asynchronous discussions with and without the presence of tutors and reported that the only contextual element which appeared to influence engagement with online discussions in any significant way was the tutor. Similarly Pawan et al. (2003) and Aviv et al. (2003) found that students, without the explicit guidance of their instructors, engaged primarily in ‘serial monologues’ (cited in Kanuka et al., 2007: 269). Gerber et al. (2005) analysed online messages by 25 students, and found that, although students responded to one another in online discussions, the majority of their postings came in response to the tutor. They also reported that, when the tutor was only supportive or informative but not challenging, very little reasoned discourse by the students was generated. They argued, therefore, for a challenging tutor stance. Similarly Pata et al. (2005) investigated the contributions of tutors who were supporting online problem-solving. They concluded that active and planned interventions by tutors may result in a more active role on the part of their students.

Schellens and Valcke (2006) conducted a large study with over 300 students, working in a blended module using asynchronous online discussions. They found low frequencies of quality postings by students. They claimed that a pre-determined low-level involvement by the e-moderators in the discussions may have influenced the limited follow-up elaborations by the students. They suggested that the design and facilitation of online discussions should recognize that interaction does not just happen, but must be intentionally designed into the task and its facilitation. Guldberg and Pilkington (2007) found, from a study of blended learning, that tutors’ facilitating techniques are not necessarily effective in promoting student-centred learning. They suggested that even students in higher education still attribute some roles to their tutor, and are reluctant to undertake them themselves. These roles include making sure that the focus or direction of a discussion is maintained within a timeframe, or directly questions other students’ points of view. They advocated further research to determine how the role of the e-moderator influences the effectiveness of discussion for learning.

Despite these and other studies, which clearly support the need for an e-moderator, little is known about how e-moderators decide on their facilitative interventions, why they choose one approach over another and what impact these interventions have on learning and development. The literature offers some generalizations about what is held to constitute desirable approaches to e-moderation. These comprise conceptual frameworks and models (Garrison and Anderson, 2003;

Salmon, 2000), and guides offering advice to tutors about their online teaching (Bender, 2003; Collison et al., 2000; Ko and Rossen, 2004; MacDonald, 2006). They use general terms such as 'online tutoring' and 'e-moderation' in different ways and with different meanings; their only common feature is that they involve someone (usually a tutor) interacting online with students (Vlachopoulos, 2009). The establishment of a pedagogical rationale for e-moderation and its implications for the form of that activity is thus a priority for attention.

What makes e-moderation effective for learning?

The belief that e-moderation is a desirable strategy to promote online learning does not necessarily mean that it can be effectively implemented to promote learning and development on the part of the students. A strategy is only effective when it embodies the ability to create and select executable tactics and activities which promote specific and measurable outcomes (De Certeau, 1984). In order to be specific in choosing strategies for online discussion, and to be able to set, manage and meet learning outcomes in the VLE, one needs to understand and exploit the strengths of the nature of the asynchronous online interactions. While it is possible to regard e-moderation as merely another form of facilitative tuition of student-centred learning, this over-simplification disregards many potentially significant characteristics of e-moderated interactions:

- In discussion board work, and even in chat rooms, contributor and respondent can both profit from thinking time before making a further posting.
- The engagement of an e-moderator with the ongoing student activity is generally distributed throughout that activity (however sparsely), and does not occur in concentrated periods of contact as in face-to-face tutorials and seminars.
- All participants have ready and complete access to a record of what has been 'said' so far.
- The words used in direct communication per unit of interactive time together are far fewer.
- Postings do not benefit from the advantages of perceived body language, and differences in pace and tone, which are significant in face-to-face contact.

So an important research question is to ask if the principles which have been established for face-to-face interactions also apply to e-moderated interactions online. There is no consistency in the literature, however. Garrison and Anderson (2003) argue that it makes little sense to replicate or simulate traditional face-to-face approaches to online learning. Yet Siemens and Yurkiw (2003) maintain that skills and knowledge for tutors online are similar to those needed in a classroom. Evidence for both assertions is lacking – and needed.

The research context and enquiry methods used

The setting for this research was a School of Education at a long-established English university. One tutor and seventeen students from different countries participated over a period of one academic semester in a blended Master's course in 'Communications, Education and Technology'. This followed a mixed-mode (or blended) approach combining face-to-face tutorials and sessions in a VLE, in which some of the previous face-to-face tutorials had been replaced by online sessions.

In the weeks they were meeting online, the students and the tutor did not attend a face-to-face session. In the part of this programme which was studied, the students worked during three separate weeks on separate tasks – first with their tutor (M1), then with both their tutor (M1) and a guest-expert (M2), and finally with another e-moderator (M3). Students and moderators used a

threaded discussion model, where users could respond to one another directly. Although there was a different general discussion topic every week, subtopics emerged as students responded to specific postings. Their participation in the online sessions was mandatory and assessed. Non-participation was treated as 'absence' from the sessions.

The research design featured three one-week-long case studies. The theoretical orientation which was used in the collection and analysis of the data followed grounded theory principles (Glaser and Strauss, 1967). The research concentrated from the outset on interactions, responses, reasons for postings, and influences on student learning and development, where these could be identified. Data were collected from the transcripts of the online discussion board postings, a series of individual interviews with each e-moderator before and after their moderating activity, and interviews with groups of students on conclusion of their online experience.

The general e-moderation strategies to which the tutors subscribed, and the details of the postings which they used in practice, were identified and compared. Verbal protocols (Ericsson and Simon, 1984) were selected as an additional source of data, to help in relating e-moderators' principles to their practice. All e-moderators involved in the case studies agreed to record their thoughts and feelings while they were making 'e-moderating' decisions. Two of them (M1, M3) kept tape-recorded protocols, whereas one (the guest expert, M2) made notes on the printout of discussion postings even as it was prompting his responses. The researcher gave both written and oral instructions to the e-moderators regarding this task, and provided digital recorders whereby the verbal protocols were recorded. All complete and incomplete protocols were collected and transcribed, and used in the analysis.

The analysis process began from an open coding of the online discussion messages, using NVivo, proprietary software for this purpose (Richards, 2005). The data were split into discrete parts using the 'meaningful unit' approach (Chi, 1997). During the coding process, theory memos (written records of the researcher's thoughts) were compiled by the researcher to record development of concepts and categories. Those memos included information obtained both from the verbal protocols and from the interviews, providing elements of the e-moderators' attitudes, feelings and intentions in their e-moderation. The coding process ended when all segments of the transcripts had been allocated a code. Any hypotheses and theory only emerged after the subsequent objective analyses of the coded interactions from within the discussion boards, which were triangulated with the other forms of data.

Two coding schemes were developed through this process. One conceptualized the practice of 'e-moderation' in two categories, according to whether the moderator's concentration was on 'process development' or 'content mastery'. The second scheme identified patterns of interactions between e-moderators and students. It conceptualized two overlapping subsets of interventions: those of 'proactive' and 'reactive' e-moderation, and those of 'group' and 'individual' e-moderation. All the main themes and the hypotheses which emerged from this analytical process featured as the basis of critical event interview sessions (Memon and Bull, 1991) with the e-moderators, held to confirm their intervention strategies individually.

Findings and interpretation

To inform discussion of possible categorizing of choices of e-moderation approaches, and of any observed or potential efficacy (or risks) for student learning, the relevant findings from the coding process are summarised here. These are triangulated with the words of the e-moderators, as these were captured in the recorded protocols and transcripts of discussions, and later checked for reliability by the e-moderators themselves in the critical event interview sessions. From this analysis of the data it became clear that:

- The three (highly individual) cases provided markedly varied data, and so were usefully thought-provoking.
- Each e-moderator had departed from generally accepted ‘best practice’ and even from adherence to their personal rationale, as declared in their preparatory interview.
- These e-moderators also fulfilled some of the functions of course planners, managers and assessors, with unfortunate consequences.
- Some negative effects for learners emerged as a consequence of the e-moderators’ confusion of their priorities and roles during the online discussions.
- All e-moderators, despite prior experience, were iteratively modifying their approaches as they proceeded.

Overall, e-moderators’ basic decisions to approach their e-moderation generally from the standpoint of either ‘process development’ or ‘content mastery’ were not always easily made – or fulfilled. General priorities arose to some extent from the e-moderator’s teaching principles combined with the desired learning outcomes for that week’s task. However, strategic individual decisions at points in the discussions were tempered by the direction, depth, rigour and relevance of the current postings. In the case study summaries which follow, bold type is used to highlight categories of approaches to moderating, which are identified and discussed more fully later.

Case study one (Moderator M1)

M1 had had five years face-to-face experience with this module, as module leader and tutor, and one year of experience as an e-moderator. She was a strong supporter of collaborative learning and saw her e-moderator’s role as facilitating the students in building an online learning community. She reported that:

The students are all adults, they come with a whole load of experiences of life and work and you want them to be able to share those ideas, so there’s a lot of confidence building towards the creation of a community of learners. (M1, Interview 1)

She intended to intervene primarily to assist the development of a community of students. This priority was confirmed by the initial coding process. The majority of her interventions (76%) were coded under the ‘process development’ category, and approximately half of her messages were addressed to the students as a group, and not to individuals.

M1 began with a vague outcome in mind (that of establishing the feeling of belonging to a community). Her facilitation prompted progress towards that outcome by simply asking the students to contribute, without her paying attention to individual student messages, and by disregarding at the early stages any content-related postings, leaving some space for other students to contribute. She justified this approach by saying that:

... there will be at least one person in the group who has understood something about the topic and [will be] able to help some of the other students towards analysis of the content. (M1, reflective protocol)

The generation of deep discussion as a response to this approach was limited; postings mostly took the form of a series of individual monologues. It became clear that this ‘**one track mind**’ option (discussed in a later section) was a risky one. At this early stage, students were obviously not able to appreciate what was expected of them, in terms of achieving the overall outcome.

During her e-moderation activity, M1 realized that, in order to achieve her overall aim, she should focus sometimes on a lesser or different immediate outcome, to assist the learners to progress towards the main aim. She thus moved on from following the ‘**one track mind**’ approach, to a ‘**top of the list**’ approach. She started making individual proactive interventions, looking for a response from a specific contributor, and even asking for it. The following extracts from her reflective protocols give reasons for this change:

I was pretty pleased with what most people were doing, but I thought they needed a bit of a jolt to think deeper as individuals. (M1, reflective protocols)

I think it’s really nice that on the VLE you can actually respond more individually to students and treat them more as individuals, I suppose, and respond to them at a level that is appropriate to them. (M1, reflective protocols)

This approach seemed successful, as students who had been addressed in person, and with a clear question, appeared more willing to respond, and did so. This left M1 saddled with their clear expectation that she would respond in turn; but she was not prepared for this extra workload, and did not fulfil that expectation effectively.

It took M1 some time to work out how she would engage with her students online, to assist them to complete their task in the face of expediencies such as fixed deadlines, strict workloads, slow student responding times, non-participation of some members, and her own limited availability. She eventually decided to intervene in a directive way – moving on from concentrating on process development to urging the students to meet the important practical outcome, which was the completion of the set task. In other words, M1 almost shifted to a ‘**rescuing**’ approach, but instead began to manage, asking for anyone in the group to summarize anything relevant that had been said so far, in order to meet the deadline and requirements for this activity.

Case study two (Moderators M1 and M2)

M2 was introduced as a guest expert, with content expertise relevant to the given topic. He was to be supported by M1. He mostly responded directly to questions or statements about the content. He based most of his interventions on how, and how rigorously, the students were engaging with the content, which as an approach thus embodied a process development emphasis. Consequently his coded interventions were balanced between ‘process development’ and ‘content mastery’ (41%, and 59% respectively).

He nevertheless adopted a different approach to e-moderation from that of M1 in case study one. Instead of going down the ‘**one track mind**’ route, with an ultimate learning aim in mind, he adopted a ‘**critical friend**’ approach. In this he left students to select topics for discussion. He then set out, according to his reflective protocols, to ‘nudge, in Brunerian terms, the students towards learning and development’. He concentrated mainly on posting interactions where he saw potential for at least one learner to go beyond the outcome associated with the task. He often engaged with individual students.

M2 was conscious of how the students would see his role and his interventions. He wrote reflectively that ‘I feel free to volunteer information, ideas and even sources – provided I do that collegially, and not as a tutor. I treat this part of it as if I were a member of the group.’ This approach worked well, and resulted in a large number of student replies, with the majority of them being well-articulated postings.

Despite this positive atmosphere, which M2 achieved through his personal tone and collegial involvement with the group, he soon found himself moving on from being a **'critical friend'** to dealing with **'balancing priorities'**. He explained this by the absence of support from M1, other than for her occasional attention to process deadlines. Operating as a guest e-moderator with a remit to support the content mastery aspect of the students' development, M2 had needed and expected the parallel support of their tutor in her role of module leader. He expected her to facilitate attention to task, assessment and declared criteria. This proved especially important when students began to look to M2 for support in relation to the submission of the summary of their online discussion. Consequently, when M2 volunteered advice on the procedures of task submissions, this resulted in confusion about his role and his responsibilities.

M2 wrote in his reflections, before posting a message to the students:

I think I always need to remind myself that I am partly moderator, partly 'guest expert' or whatever it is called. (M2, reflective comment)

He then took the opportunity to clarify with the students that he was not the group facilitator:

I'd say the job of a facilitator, which I am not in this instance, is to help groups or individuals to focus on the task and criteria. (M2, discussion message)

Nevertheless, the students in their interview reported confusion:

. . . there was something to be done but then, like when he said this was not his role to assist us with the activity . . . we had no idea whose role it was. (Student focus group interview)

The need for balanced coping with several priorities is common for teachers in higher education situations. Often a facilitator must assist with both process mastery and content development, since students must attend to both. But an e-moderator should surely always be seen by the learners to work with them on their learning, separately from administrative functions. Joint activity in pursuit of learning should not be confused by messages about role definitions, course requirements and assessments.

Case study three (Moderator M3)

M3 intervened using a variety of content-oriented postings, but was also instructive in his facilitation of the students regarding particular processes. His online interventions were coded 45% in the 'process development' category and 55% in the 'content mastery' category. He felt that he should facilitate the students' discussions, hoping that they would discuss and hence understand the principles of the allocated topic (which was instructional design, and was supported by a massive list of web-based resources). But he also facilitated the process through which students were to show themselves capable of creating an example of an activity based on the instructional design principles which they had been discussing. To do so he decided to **'go the second mile'**, after having first worked to the declared learning outcomes, which were set at a minimum level in this particular activity. He then pointed out possibilities for stretching out some students' development (in relation to either the process or the content of instructional design), gradually adding depth to topics and hoping to build on that. He justified his decision in his reflective protocols:

the amount of resource available is massive; and they have no way/strategy to guide them into it . . . nothing is included in the task description apart from general instructions. I feel that if this week is to be a successful activity I will have to put more effort on both the process and the content. (M3, reflective protocols)

My responses seem fine for people who have an idea of the principles of the method they should be following. For those who don't have that grasp, or don't even know to search for a method, I doubt if my comments take them further forward. I will post a message to each individual with a suggested model to follow . . . I know that it is a direct intervention but hope it will help them move forward. (M3, reflective protocols)

This approach generated varied student postings, and the e-moderator engaged with practically any question raised. Eventually, however, both e-moderator and students failed to remain concentrated upon the declared task and criteria, and the majority of the students did not submit the expected work. This may have been due to the fact that, in contrast with M2 in the second study, M3 did not adopt the 'rescuing' approach soon enough.

What types of intervention did the e-moderators adopt?

The research found that the e-moderators in the three cases studied each claimed to have a general approach, based upon the principles with regard to learning and teaching to which they subscribed and were committed in their curricula. In a given situation, they embodied their general teaching principles in accordance with the aims and learning outcomes, chosen by the programme team or negotiated with the students, and with the needs of the developing situation, as they perceived it. Consequently their 'nudging' (Bruner, 1986) of the students towards learning and development led to different types of intervention. These oscillated in their priorities between content and process, and between lower (but fundamental) level demands and the higher level outcomes which featured in the task in hand. They even at times provided general tutorial assistance or collegial input. The more noteworthy approaches are summarized here.

1 One track mind

Immediate approach: Concentrating on encouraging participants to have their ultimate learning destination firmly in mind, from an early stage.

Detail: Prompt participants to concentrate on the declared and assessed learning outcomes, whether they feature process (how a task should be done) or content (what should be learnt). This is often worthwhile when participants might otherwise spend too much time unproductively.

Consequences and risks: When effective, this form of moderation can nudge participants away from unhelpful digressions and remind them of the task which they should be addressing. This is straightforward when there is clearly one main intended learning outcome, but may lead to a blinkered approach if there are other, albeit lesser, assessed outcomes to consider. There is also a danger that valuable achievement of useful but unintended learning outcomes may be discouraged.

2 Top of the list

Immediate approach: Encouraging participants to note and concentrate on what should be the priority for them *at the moment*.

Detail: Concentrate on attending to agenda items, whether relating to process or content, which should receive attention and then be disposed of. These can range from differences of opinion which must be resolved for the task to proceed (usually process issues), to matters of content which should by now have received adequate attention by the group.

Consequences and risks: It can be useful to facilitate participants to prioritize, resolve outstanding items, and then progress successfully beyond the item which is ‘top of the list’ to the next item on the list. However, participants may dwell overlong on an item which has been given prominence by such moderation, rather than dealing with it expeditiously.

3 Going the second mile

Immediate approach: Encouraging at least one participant in learning beyond the demands of the task.

Detail: Facilitate movement into their Zone of Proximal Development (Vygotsky, 1978) by participants who have shown ability to engage more deeply with certain topics, understanding or activity – including the ability to engage perceptively in metacognition. Facilitative interventions may value the position already reached, and suggest how it might be taken beyond the current level.

Consequences and risks: Participants are prompted to be the best that they can be and are usually pleased to have done so. However, less able participants may be discouraged if they feel themselves unable to cope with a further expectation. Furthermore, with inflexible schemes of assessment, effort in response to such moderation may not be acknowledged and rewarded institutionally.

4 Critical friend

Immediate approach: Moving creatively and discursively to being a ‘critical friend’, taking ‘going the second mile’ one step forward. This is seldom appropriate until a collegial relationship has developed between moderator and at least some of the group.

Detail: Offer advice and share experience, without acting as a tutor or managing the group’s activity. Such interventions may be addressed to the group, or may be a (public) response to an individual posting, clearly seen as open dialogue with that individual.

Consequences and risks: The moderator should be careful to open up individual dialogue to group participation, urging other participants to look over the shoulders of any who are breaking new ground, and to learn from, and with, them as they proceed. Otherwise there may be an unfortunate impression that the moderator has a favourite student.

5 Balancing priorities

Immediate approach: Assisting participants when the task and assessment call for multi-tasking.

Detail: Prompt shift of concentration from a current emphasis which is receiving attention at the expense of other priorities. This may not be popular with the students.

Consequences and risks: Many assessed activities feature content coverage and achievement (what was done), together with process (how or how well it was done). A group which is left to its own devices in dealing with two-pronged tasks may concentrate with interest on one aspect of the demand – process or content – and neglect the other. Moderation which

urges eventual balancing of priorities can be effective, though perhaps unpopular. The attendant risk is forceful rejection of any nudging which is seen as interfering with the participants' autonomy, and hence of other moderating interventions.

6 Rescuing

Immediate approach: Avoiding disaster for a group which is obviously floundering, without directly managing what should be student-directed learning, or engaging with the specific task, or teaching towards needed outcomes.

Detail: Encourage reconsideration of any aspect of a group's work in which a suspected weakness may become apparent, and receive effective attention. If the group appears unable to engage effectively with the entire task, resort to nudging members to establish an agenda with priorities, pinpoint consequent difficulties, and think about where and how they can obtain assistance.

Consequences and risks: An effective intervention will kick-start progress, and generate motivation consequent on emerging through self-management from a hiatus. The risk, of course, is that the group may then look to the moderator to engage with their next challenges, and again point out the way ahead for them.

Discussion and conclusion

It will be apparent from the earlier descriptions that the interventions which were adopted by the e-moderators, effectively and ineffectively, are notably similar in principle to the approaches which could well have been encountered during case studies of face-to-face facilitative tutoring of student-directed group work. They also had similar consequences. This similarity is a useful finding, given that the e-moderators were operating within markedly different circumstances to those which pertain in face-to-face facilitation of group work. Useful accounts of such facilitation are given by Savin-Baden and Willkie (2004) and by Moesby (2006, 2007). These notably lack the key features of online working, where there is potentially influential temporal distortion caused by the asynchronous nature of the medium. Of equal significance, the e-moderators had and used access to all of the interactions within the student group. In contrast, they and their students lacked the additional communications occasioned by body language as well as change of tone and pace in spoken speech. It has nevertheless been found in this research that, despite the significant differences between facilitating student-centred work in face-to-face situations and online, familiar principles, potential and risks applied in the assortment of e-moderated circumstances and styles which have been studied.

The present study does not provide an example of effective e-moderation practice which could confirm any similarities between face-to-face and online contexts not merely being brought out by imperfections. Further, the tendency of the e-moderators to change policy and practice on the hoof, even during one week, limited the opportunity of this research to draw comparable conclusions from two or more cases with similar e-moderation principles and priorities. Continued investigation could usefully seek to establish the key similarities and distinctions of the principles of facilitation of student-centred learning, in both traditional and technology enhanced settings. The aim in such research should be to identify, understand and then exploit common principles and possibilities in any given setting for effective student learning and development, before exploring the impact of differences arising in varying contexts. For the literature review and the findings of this study clearly showed that, despite the noteworthy 'differences' between tutoring in a classroom

and e-moderating in the VLE, the ability to reflect on the commonality of teaching and learning practice and to learn from any mistakes in both types of setting is vital. This is an important issue to be explored in a period when in most institutions significant investment has gone into training of staff to support them with their first ventures as online tutors and e-moderators. Yet, on the other hand, reflective practice and personal development planning in association with online learning are also receiving some considerable attention. Research to understand how tutors are developing as e-moderators and what further support they require, possibly in action researching the impact of their developing practice, is therefore important.

Three markedly different styles of e-moderation were studied and analysed in accordance with grounded theory. The moderators were found to follow principles and practices which shared their main features and outcomes for learning and mistakes with those practices and principles found in facilitation of face-to-face student-centred learning activity. The potential and attendant risks of the various features of the researched approaches were thus found to parallel those which have accumulated in the literature from studies of face-to-face interactions. This finding is useful, since the literature places so much emphasis on the novel features of e-moderated learning, and has not reported, through studies of practice, how similar the new situation is to that which has preceded it.

References

- Aviv R, Erlich Z, Ravid G and Geva A (2003) Network analysis of knowledge construction in asynchronous learning networks, *Journal of Asynchronous Learning Networks* 7(3): 1–20.
- Bender T (2003) *Discussion Based Online Teaching to Enhance Student Learning: Theory, Practice and Assessment*. Sterling, VA: Stylus Publishing.
- Berge ZL (1995) The role of the online instructor/facilitator in facilitating computer conferencing: Recommendations from the field, *Educational Technology* 35(1): 22–30.
- Bruner J (1986) *Actual Minds, Possible Worlds*. Cambridge, MA: Harvard University Press.
- Chi M (1997) Quantifying qualitative analyses of verbal data: A practical guide, *Journal of the Learning Sciences* 6: 271–313.
- Collison G, Elbaum B, Haavind S and Tinker R (2000) *Facilitating Online Learning – Effective Strategies for Moderators*. Madison, WI: Atwood Publishing.
- De Certeau M (1984) *The Practice of Everyday Life*. Berkeley, CA: University of California Press.
- Ericsson KA and Simon HA (1984) *Protocol Analysis: Verbal Reports as Data*. Cambridge, MA: MIT Press.
- Garrison DR and Anderson T (2003) *E-learning in the 21st Century: A Framework for Research and Practice*. New York: Routledge Falmer.
- Gerber S, Scott L, Clements DH and Sarama J (2005) Instructor influence on reasoned argument in discussion boards, *Educational Technology Research and Development* 53(2): 25–39.
- Glaser B and Strauss A (1967) *The Discovery of Grounded Theory*. Chicago, IL: Aldine.
- Guldberg K and Pilkington R (2007) Tutor roles in facilitating reflection on practice through online discussion, *Education Technology and Society* 10(1): 61–72.
- Kanuka H, Rourke L and Laflamme E (2007) The influence of instructional methods on the quality of online discussion, *British Journal of Educational Technology* 38(2): 260–71.
- Ko S and Rossen S (2004) *Teaching Online: A Practical Guide*. Boston, MA: Houghton Mifflin.
- MacDonald J (2006) *Blended Learning and Online Tutoring: A Good Practice Guide*. Burlington, VT: Gower Publishing Company.
- Mason R (1991) Moderating educational computer conferencing, *DEOSNEWS* 1(19): <http://www.emoderators.com/papers/mason.html> [accessed 10 July 2007].
- Memon A and Bull R (1991) The cognitive interview: Its origins, empirical support, evaluation and practical implications, *Journal of Community and Applied Social Psychology* 1: 291–307.

- Moesby E (2006) Implementing project oriented and problem-based learning – POPBL – in institutions or sub-institutions, *World Transactions on Engineering and Technology Education* 5(1): 45–52.
- Moesby E (2007) What is an effective approach to introducing PBL/POPBL in an institution? PhD Thesis, Aalborg University, Denmark.
- Oliver M and Shaw GP (2003) Asynchronous discussion in support of medical education, *Journal of Asynchronous Learning Networks* 7(1): 56–67.
- Pata K, Sarapuu T and Lehtinen E (2005) Tutor scaffolding styles of dilemma solving in network-based role-play, *Learning and Instruction* 15: 571–87.
- Paulsen MF (1992) Innovative uses of computer conferencing, *Telecommunications in Education News* 3(3): 4–5.
- Pawan F, Paulus TM, Yalcin S and Chang C (2003) Online learning: Patterns of engagement and interaction among in-service teachers, *Language Learning and Technology* 7(3): 119–40.
- Richards L (2005) *Handling Qualitative Data: A Practical Guide*. London: SAGE.
- Salmon G (2000) *E-moderating: The Key to Teaching and Learning Online*. London: Kogan Page.
- Savin-Baden M and Wilkie K (2004) *Challenging Research in Problem-Based Learning*. London: Society for Research into Higher Education and Open University Press.
- Schellens T and Valcke M (2006) Fostering knowledge construction in university students through asynchronous discussion groups, *Computer and Education* 46: 349–70.
- Vlachopoulos P (2008) Reconceptualising e-moderation in asynchronous online discussions. PhD Thesis, University of Aberdeen.
- Vlachopoulos P (2009) The nature of e-moderation in online learning environments, in A Comrie, T Mayes, N Mayes and K Smyth (eds), *Learners in the Co-creation of Knowledge: Proceedings of the LICK 2008 Symposium*, pp. 48–57. Edinburgh: Napier University in association with TESEP.
- Vygotsky LS (1978) *Mind in Society*. Cambridge, MA: Harvard University Press.

Biographical notes

Panos Vlachopoulos is a Senior Project Fellow in the Educational Development Centre at the Hong Kong Polytechnic University. His research interests include e-moderation, and the facilitation of student-centred learning in virtual and immersive learning environments. *Address*: 3C Project, Educational Development Centre, Room – DE310, The Hong Kong Polytechnic University, Hong Kong. [Email: pvlachopoulos@hotmail.com]

John Cowan is Emeritus Professor of Learning Development of the Open University. He has taught and researched in higher education for over 40 years, and still counts it a poor year when he is not innovating educationally, with students. *Address*: 34 Caiystane Avenue, Edinburgh EH10 6SH, UK. [Email: j.cowan@napier.ac.uk]