

The Role of Tutors as an Integral Part of Online Learning Support

Maggie McPherson and Miguel Baptista Nunes
email: m.a.mcpherson@sheffield.ac.uk / j.m.nunes@sheffield.ac.uk
Department of Information Studies, University of Sheffield
Regent Ct, 211 Portobello St, Sheffield, S1 4DP, UK.

This paper was shortlisted for the 'Best paper award' at the
Third EDEN Research Workshop, Oldenburg, Germany, 2004

Abstract

This paper discusses the changing roles of tutors when engaging with e-learning. Understanding the importance of these roles and identifying necessary tutoring skills is paramount for the success of e-learning solutions. Since online tutors play a critical role in e-learning, as the main agents responsible for the delivery of the courses and the support of the learners, they must be equipped with an appropriate set of skills and attributes in addition to subject matter expertise. This paper discusses four main types of roles (pedagogical, social, managerial and technical) and proposes Online Learning Support (OLS) as computer-mediated approaches to support and facilitate learning, using a combination of skills that encompass information and IT expertise, as well as expertise in the educational uses of online learning resources, environments and communication technologies. Therefore, the process of online tutoring is probably the most important critical success factor in learner acceptance of e-learning.

Key Words

e-tutoring, e-facilitating, e-learning, tutoring skills, tutor selection, online learning support

Introduction

Since the Information Society industry is increasingly demanding more flexible and self-confident professionals with skills in communication, problem analysis and problem solving, planning and networking, and long-life learning (Kakabadse and Korac-Kakabadse, 2000), the role of HE is becoming wider and a great deal more complex. Specifically in the case of continuing professional distance education (CPDE) it now encompasses not only the transference of subject specific knowledge, but also the capability of applying these skills in the context of specific fields or industry sectors (Nunes et al., 2000a).

However, most traditional universities have a tendency to subsume open, distance and flexible learning activities within the resources of the broader campus-based remit (Cornford and Pollock, 2002:30). For CPDE e-learning projects, which inherently fall outside this traditional view of education, this poses a major problem. In fact, e-learning for CPDE implies much more than a simple technical exercise in which some materials or processes are simply transferred from the offline world to some ready-made online realm (ibid: 12). Duke (2002) proposes that this approach calls for more in terms of pedagogy than simply "putting professors' lectures onto the web". Furthermore, as many e-learning projects start as small-scale departmental initiatives (Robinson, 2001), often the result of individual or small-team initiatives, the implementation of e-learning faces high level of risk because of its uncertain status and unfamiliarity. Accordingly, the focus is frequently placed on design and developing information and communication technology (ICT) based environments and insufficient attention is given to the delivery process. These efforts have little chance of succeeding without a tutoring team that has appropriate online tutoring skills necessary to explore and maximize the designed environments. Therefore, the tutoring team is at least as important as the design team. Furthermore, both parties need to be aware of appropriate pedagogical approaches in order to maximise the benefits of tutoring and the use of learning environments by students.

This realisation has triggered a resurgence of interest in educational approaches and epistemologies, such as constructivism and problem-based learning (Nunes and McPherson, 2003a). These have been identified as possible ways of maximising these online learning environments. As a consequence, educationalists feel compelled to adopt these new methods of learning provision, without being properly equipped with the basic skills required to successfully support learners in online learning environment (McPherson et al., 2003). In fact, learners are expected to develop high cognitive skills such as negotiation of meaning, life-long learning, reflective analysis and meta-cognition, supported by tutors, who often lack these same skills themselves (Nunes and McPherson, 2003b).

Therefore, designing and delivering e-learning is not simply a matter of selecting a tutoring team with subject matter expertise and/or technical skills, but is also choosing educationalists with pedagogical, information and communication skills that are required to manage and facilitate online learning. Thus, the choice of a suitable tutor team with appropriate skills, or at least the willingness to acquire these, is essential to successful online learning.

The Role of the Online Tutor

As discussed by McPherson et al. (2003), online tutoring and leadership has been widely considered as a crucial factor in the success of computer-mediated collaborative learning activities. Different and alternative names have been used in the literature referring to the role of the tutor in on-line interaction, such as coach (Murphy et al., 1998), leader (Hotte and Pierre, 2002), tutor (Gerrard, 2002), moderator (Kerr, 1986; Feenberg, 1986; Salmon, 2000; Berge 1995), facilitator (Collison et al. 2000; Marjanovic, 1999; Berge, 1992), motivator, mentor, mediator and even production coordinator (English & Yazdani, 1999).

Nevertheless, most studies focus on online tutoring as provided by an assigned e-moderator (Salmon, 2000:7-11). These moderators were divided into institutional interveners, appointed interveners and

natural interveners by Hotte and Pierre (2002), that is, tutors, experts, and learners. This paper focuses on the institutional interveners, i.e. the academic tutors that support the students throughout their learning process. In fact, by making the decision to adopt online learning delivery, educationalists will need to re-evaluate their roles as academic tutors, since familiar face-to-face teaching solutions may not work in an online learning environment. This, in essence, means that professional practices are indeed changing.

As McMann (1994) points out, roles that have to be performed as part of e-tutors' tasks are actually not very dissimilar in nature in relation to the traditional face-to-face tasks. Nevertheless there are significant differences that were identified from the very start of e-learning as a delivery mode. Authors such as Mason (1991) discussed the roles of e-tutors as involving responsibilities at both technical and educational level. Mason (1991) focused on the discussion of the educational role of the on-line moderator that involves three categories: the organisational, the social and the intellectual. Berge (1995), based on a thorough literature review, further developed this characterization and identified four main e-tutor roles:

- Pedagogical or intellectual roles are some of the most important for the e-Learning process (Paulsen, 1995). The e-tutor uses questions and probes for student responses that focus discussions on critical concepts, principles and skills (Zafeiriou, 2000:67). These roles may include a number of tasks such as: opening the discussions, focusing on relevant content and issues, intervening in order to promote interest and productive conversation, guiding and maintaining students' involvement in discussions, and summarising debates. Additionally, these roles may encompass directing and focusing discussions on vital points (Davie, 1989), synthesising points made by the participants (Hiltz, 1988) and providing summaries and interpreting on-line discussions (Feenberg, 1989).
- Social roles involve the creation of friendly and comfortable social environments in which students feel that learning is possible. McMann (1994) considered the social role to be one of the key critical success factors in on-line learning. In this context, e-tutors are responsible for: guaranteeing opportunities for participants to introduce themselves; identifying and dealing with lurkers who are reticent and sometimes reluctant to participate; ensuring that appropriate communication takes place; taking into consideration cultural and ethnic backgrounds by minimising humorous, offensive and disruptive behaviour; promoting interactivity between students; and finally, dealing with flaming, should this occur, by reminding participants of the appropriate netiquette.
- Managerial or organisational roles involve setting learning objectives; establishing agendas for the learning activities; timetabling learning activities and tasks; clarifying procedural rules and decision-making norms (Paulsen, 1995; Mason, 1991). These roles also include: encouraging participants to be clear, responding to the participants' contributions, being patient, following the flow of the conversation and encouraging comments, synchronising, handling overload of information, encouraging participation, and ending the sessions (Zafeiriou, 2000:67).
- Technical roles, possibly the most daunting for academics, involve becoming familiar, comfortable and competent with the ICT systems and software that compose the e-learning environment. Additionally, this role includes supporting the students in becoming competent and comfortable themselves (McCreary, 1990) by providing technical guidance such as: offering study guides, directions and feedback on technical problems, ensuring that time to harness the ICT systems is made available and encouraging peer learning.

Basic Online Tutoring Skills

From the characterisation above, it is clear that, although similar in many respects to face-to-face (f2f) delivery, e-tutoring differs in a number of ways as discussed by Gerrard (2002) since it:

- places greater emphasis on written skills;
- produces a more formal tone;
- does not follow a linear conversation but instead promotes multiple conversations;
- does not confine teaching to specific times;
- places greater emphasis on student-student learning;
- requires teachers to develop new ways of encouraging participation;
- requires teachers to assess the worth of online contributions.

Therefore, even for the more experienced f2f tutor, there is much knowledge to be acquired about the skills required for e-learning. Consequently, the e-tutor must in addition to the subject matter expertise and traditional pedagogical training, be able to demonstrate additional skills, such as an ability to:

- plan and organise delivery by clearly specifying learning objectives and outcomes;
- set learning agendas and providing leadership and scaffolding in learning activities;
- welcome and embrace diversity of learning outcomes, attitudes and styles;
- adapt supporting styles to the needs of individual participants;
- provide advice on different levels of access to learning materials according to the needs of individual participants;
- create an atmosphere of collaborative learning of which the e-tutor him/herself is often an integral part;
- be able to cope with and resolve on-line conferencing conflicts and difficult behaviours;
- encourage active construction of knowledge by being actively involved in discussions, activities and debates;
- develop and implement methods for learner feedback and reinforcement;
- present advance organisers into the content materials and advice on learning pace so as to avoid cognitive overload and information anxiety.

This new set of skills poses particularly difficult challenges in the selection of online tutors. In fact, subject matter expertise is usually certified by either academic institutions or professional bodies, thus making it easy for selectors to identify suitable candidates. Similarly, traditional educational qualifications are easily recognised. However, e-tutors require the additional and crucial set of skills described above, which makes it very difficult for selectors to choose appropriately qualified candidates to fill this role. This is not to say that there are no appropriate candidates, but that it is problematic for them to provide evidence that they possess these skills. To compound this situation, there are now a myriad of short courses of varying quality that purport to certify e-tutors, but fail to adequately prepare them. On the other hand, there are a few well-established post-graduate courses in online learning that are very effectively preparing e-tutors. However, there are insufficient graduates from these courses to fill the current demand for e-tutors.

Online Learning Skills

However, it not enough that tutors are prepared for online learning, the learners also need preparation. Due to the hype associated with online learning, learners often feel compelled to engage with these new environments, without being properly equipped with the basic skills required to be successful (Nunes et al., 2000a). In fact, student are expected to developed high cognitive skills such as negotiation of meaning, long-life learning, reflective analysis and meta-cognition without being properly trained in low-level skills such as the basic use of computer mediated technology, online social skills, online etiquette, web navigation, and web searching. These skills were identified by Nunes et al. (2000b) as Networked Information and Communication Literacy Skills (NICLS). These skills are not only required to succeed in the online learning environment to which learners are exposed, but are also an essential part of all aspects of daily networked activity.

In the future, these basic NICLS will be addressed and acquired at lower levels of the educational system, namely at primary school levels. However, most students enrolling in HE courses are young adults, having only acquired the traditional basic educational skills: reading, writing, spelling, handwriting and numeracy (Bramley, 1991). Unfortunately, these are insufficient skills to learn effectively in a REAL.

NICLS complement the traditional basic skills with a new set of information and communication literacy skills. Information literacy includes recognising information needs, distinguishing ways of addressing gaps, constructing strategies of locating information, locating and accessing information, comparing and evaluating information, as well as organising, applying and synthesising information (Webber and Johnson, 2000). Additionally, the limitations and affordances of conferencing technologies require adaptations and changes in human behaviour for successful communication to take place (Musselbrook et al., 2000). The skills required to undertake such a change when communicating online form what can be considered communication literacy as suggested by Pincas (2000). The conjunction of these two new types of literacy form what Nunes et al (2000b) identified as NICLS.

Learners must acquire NICLS before actually engaging with any online learning activity. Failure to address this issue in online learning, leads to much frustration for the learners, and eventually to lower levels of success for the online learning courses (Hara and Kling, 1999). In sum, NICLS can clearly be divided into two main categories: CMC and information skills. CMC skills are related to the interaction of the student with the learning community and information skills are related with problems of information anxiety and overload as well as access to the learning resources.

Online Learning Resources and Facilities

In addition to well-prepared tutors and students, successful e-learning requires pedagogically sound, well-designed online learning resources. As proposed by Kommers (1996), learning resources are those information resources the learner might need at a particular moment in learning, thinking or designing new ideas, while engaging with a particular learning activity. Modern approaches to teaching and learning, such as constructivism, problem-based learning and experiential learning, assume that knowledge is acquired through social negotiation, experience and reflection, i.e., resulting from the construction of meaning from interaction with specific contexts. This construction results from two different types of interactivity in the learning process (Bates, 1991).

The first is an individual, private activity between the learner and the learning materials, which may range from the traditional textbook to computer-based simulations. The second is a social activity, between the learner and the tutor, the facilitator or other learners.

Private interaction with the learning and conceptual materials is expected to promote learning by provoking cognitive restructuring (Shulman and Ringstaff, 1986). Cognitive restructuring occurs as learners revise their ways of thinking to provide a better fit to reality when faced with discrepancies between their own ways of viewing the world and new information (Rogoff, 1990). Social interaction with tutors and facilitators is expected to promote development through the guidance provided by interaction with people who have are skilled in solving the problems emerging from the learning activities (Rogoff, 1990). Social interaction with the learner's peers is expected to promote learning by joint problem solving and meaning negotiation between partners working with independence and equality on each other's ideas (Rogoff, 1990).

Both private and social interactivity are required in the process of social negotiation and have to be supported by the learning environment. If learning is a process of socially constructing a communal understanding and a collective constructive social process (Zuchermaglio, 1993), then the learner must be surrounded by a rich learning environment that provides resources to support the communication and negotiation processes between members of the learning community.

Conclusions

This paper discusses the importance of online tutors in the success of e-learning solutions. Since, as the main people responsible for the delivery of the courses and the support of the learners, online tutors play a critical role in e-learning, they must therefore be equipped with an appropriate set of skills and attributes in addition to subject matter expertise. Thus, the process of selecting the online learning team is probably one of the most important critical success factors in learner acceptance of e-learning. This process of selection is particularly important when changing the mode of delivery in HE from a traditional approach to an e-learning mode of delivery. However, due the current difficulties in acquiring appropriately qualified and certified tutors, the team must at least include individuals with the willingness to acquire the necessary skills outlined in this paper. This means that appropriate tutor support mechanisms must be put in place in order to provide tutor training prior to the actual delivery and just-in-time training during the delivery phase.

Furthermore, learning in online learning environments has to be supported by appropriate resources and requires a number of specific skills from the learners. This need for learner support clearly requires a different approach from conventional theory. Consequently, Online Learning Support (OLS) could be defined as computer-mediated approaches to support and facilitate learning, using a combination of skills that encompass information and IT expertise, as well as expertise in the educational uses of online learning resources, environments and communication technologies (McPherson and Nunes, 2004:79). In the light of this, it is possible to distinguish three different critical success factors for OLS that need to be addressed: online tutor skills, online learning skills and specifically designed online learning facilities.

References

- Bates, A. (1991) "Third Generation Distance Education: The Challenge of New Technology". *Research in Distance Education*, 3(2), 10-15.
- Berge, Z.L. (1992), *The Role of the Moderator in a Scholarly Discussion Group (SDG)*, Available online at <http://www.emoderators.com/moderators/zlbmod.html>. Last accessed 10/03/2003.
- Berge, Z.L. (1995), "Facilitating Computer Conferencing: Recommendations From the Field", *Educational Technology*, vol 35, no 1, pps. 22-30.
- Bramley, G (1991) *Adult Literacy: Basic Skills and Libraries*. London: Library Association Publishing Limited.
- Cornford J. and Pollock N. (2002) *Putting the University Online: Information, Technology and Organisational Change*. Buckingham, UK: SRHE and Open University Press.
- Collison, G., Elbaum, B., Haavind, S., & Tinker, R. (2000) *Facilitating Online Learning: Effective Strategies for Moderators*. Madison, WI, USA: Atwood Publishing.
- Davie, L. (1989). "Facilitation Techniques for the On-line Tutor". In Mason, R. and Kaye, A. (editors) *Mindweave: Communication, Computers and Distance Education*. Elmsford, New York: Pergamon Press.
- Duke, C. (2002) *Managing the Learning University*, SRHE and Open University Press, Buckingham, UK.
- Fielding, R. (2002) "IT Education is Still Failing the Industry", *Computing*, 10th of October 2002, 3.
- English, S. and Yazdani, M. (1999) "Computer Supported Cooperative Learning in a Virtual University", *Journal of Computer Assisted Learning*, vol 15, no 1, pps.2-13.
- Feenberg, A. (1986) "Network Design: An Operational Manual for Computer Conferencing", *IEEE Transactions on Professional Communications*, vol 29, no 1, pps.2-7.
- Gerrard C (2002) 'Promoting Best Practice for E-tutoring through Staff Development', *In Proceedings of Networked Learning 2002: Third International Conference, Lancaster University and University of Sheffield* 26th March - 28th March 2002. Also available online at <http://www.shef.ac.uk/nlc2002/proceedings/papers/15.htm>. Last accessed 10/03/2003.
- Hara, N. & Kling, R. (1999) "Students' Frustrations with a Web-Based Distance Education Course". *First Monday*, 4(12) Available online at: http://firstmonday.org/issues/issue4_12/hara/index.html (Last accessed 14/03/03).
- Hiltz, S. R. (1988). "Productivity enhancement from computer-mediated communication: a systems contingency approach", *Communications of the ACM*, 31(12), 1438-1454.
- Hotte, R. and Pierre, S. (2002) "Leadership and conflict management support in a cooperative tele-learning environment", *International Journal on e-Learning*, vol.1, no.2, April-June 2002, pps.46-59. Also available online at: <http://www-icdl.open.ac.uk/>. Last accessed on 10/03/2003.
- Kakabadse, A, and Korac-Kakabadse N. (2000) "Leading the Pack: Future Role of IS/IT Professionals" *In Journal of Management Development*; 19(2), 97-155.
- Kerr, E.B. (1986) "Electronic Leadership: A Guide to Moderating On-line Conferences", *IEEE Transactions on Professional Communication*, vol. 29, no 1, pps. 12-18.
- Kommers, P. (1996) "Multimedia Environments". In Kommers, P; Grabinger, S. & Dunlap, J. (editors) *Hypermedia Learning Environments: Instructional Design and Integration*. New Jersey: Lawrence Erlbaum Associates, 13-32.
- Marjanovic, O. (1999) "Learning and teaching in a synchronous collaborative environment" *Journal of Computer Assisted Learning*, vol. 15, pps. 129-38. Also available online at: <http://www-icdl.open.ac.uk/>. Last accessed on 10/03/2003.
- Mason, R. (1991) "Moderating Educational Computer Conferencing", *DEOSNEWS*, Vol.1, No.19. Also available online at <http://www.emoderators.com/papers/mason.html>. Last accessed on 10/03/2003.
- McCreary, E. (1990) "Three Behavioral Models for Computer Mediated Communications" In Harasim, L. (editor) *Online Education — Perspectives on a New Environment*, New York, NY: Praeger Publishing.
- McMann, G. W. (1994) "The Changing Role of Moderation in Computer Mediated Conferencing", *In Proceedings of the Distance Learning Research Conference*, San Antonio, TX, April 27-29, pps.159-166.
- McPherson, M.A. and Nunes, J.M. (2004) *Developing Innovation in Online Learning: An Action Research Framework*. London: RoutledgeFalmer.
- McPherson, M.A.; Nunes, J.M. and Zafeiriou, G. (2003) "New Tutoring Skills for Online Learning: Are e-Tutors adequately prepared for e-learning delivery?" *In Proceedings of EDEN 2003 The Quality Dialogue; Integrating Quality Cultures in Flexible, Distance and e-learning*, 15-18 June 2003, Rodos Palace Hotel, Rhodes, Greece, 347-350
- Murphy, K.L, Drabier, R., and Epps, M.L. (1998), "A Constructivist Look at Interaction and Collaboration via Computer Conferencing", *International Journal of Educational Telecommunications* vol 4, no 2/3, pps.237-261.
- Musselbrook, K.; McAteer, E.; Crook, C; McCloud, H. and Tholmy, A. (2000) "Learning Networks and Communication Skills". *Association for Learning Technology Journal*, 8(1), 71-80.
- Nunes, J.M. and McPherson, M.A. (2003a) "New Tutoring Skills for Online Learning: A Constructivist View". *In Proceedings of Computers and Advanced Technology in Education (CATE 2003): An IASTED International Conference*, 30 June - 2 July 2003, Rhodes Palace Hotel, Rhodes, Greece, 571-576.
- Nunes, J.M. and McPherson M.A. (2003b) "Learning Support in Constructivist e-learning Environments", *In McPherson M.A., Henderson, L. and Kinshuk (editors) (2003) Proceedings of the Workshop on The Changing Face of HE in the 21st Century: Critical Success Factors for Implementing e-learning*. New

Zealand, Massey University, 30-35

Nunes, J.M.; McPherson, M. & Rico, M., (2000a) "Instructional Design of a Networked Learning Skills Module for Web-based Collaborative Distance Learning", In *Proceedings of the European Conference on Web-Based Learning Environments (WBLE 2000)*, 2000, Faculty of Engineering, University of Porto, Porto, Portugal, 5-6 of June 2000, 95-103.

Nunes, J.M.; McPherson, M. & Rico, M. (2000b) "Design and Development of a Networked Learning Skills Module for Web-based Collaborative Distance Learning", In *Proceedings of 1st ODL International Workshop*, 2000, Universidad Politécnica de Valencia, Centro de Formación de Postgrado, Valencia, Spain, 19-21 July 2000, 117-131.

Paulsen, M.F. (1995), "Moderating Educational Computer Conferences" in Berge, Z. L. and Collins, M. P. (editors), *Computer Mediated Communication and the On-line Classroom in Distance Education*, Cresskill, NJ: Hampton Press pps.81-90.

Pincas, A. (2000) "New Literacies and Future Educational Culture", *Association for Learning Technology Journal*, 8(2), 69-79.

Robinson, B. (2001) "Innovation in Open and Distance Learning: Some Lessons from Experience and Research" In Lockwood, F. and Gooley, A. (editors) *Innovation in Open and Distance Learning: Successful Development of Online and Web-based Learning*. London, UK: Kogan Page.

Rogoff, B. (1990) *Apprenticeship in Thinking: Cognitive Development in Social Context*. Oxford: Oxford University Press.

Salmon G (2000) *E-Moderating, The Key to Teaching and Learning Online*. London, UK: Kogan Page.

Shulman, L. & Ringstaff, C. (1986) "Current Research in the Psychology of Learning and Teaching". In Weinstock, H. & Bork, A. (editors) *Designing Computer-Based Learning Materials*. Heidelberg: Springer Verlag, 1-31.

Webber, S & Johnston, B. (2000) "Conceptions of Information Literacy: New Perspectives and Implications". *Journal of Information Science*, 26(6), 381-397.

Zafeiriou, G. (2000) *Students' Perceptions of Issues Arising from and Factors Influencing Group Interaction in Computer Conferencing: A Grounded Theory Approach*, PhD Thesis. Sheffield, UK: Department of Information Studies, University of Sheffield.

Zucchermaglio, C. (1993) "Toward a Cognitive Ergonomics of Educational Theory". In Duffy, T., Lowyck, J. & Jonassen, D. (editors) *Designing Environments for Constructive Learning*. Heidelberg: Springer Verlag, 249-260.