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E-mentoring for e-learning development

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Creating new distance e-learning modules requires considerable staff expertise. To help develop and expand this, mentoring holds promise. However, in lifelong learning provision, potential module creators are often very distant from potential mentors and asynchronously available. E-mentoring might overcome these logistical constraints. This study explored the viability and effectiveness of e-mentoring for an e-learning module development within arts and humanities. Over two phases of implementation, participants were supported by face-to-face (FtF) training meetings, linked with a Web-based chat room facility. Mentors had eight paid hours per year per mentee, for email, telephone and/or FtF contact. Evaluation was based upon e-questionnaire feedback and FtF interviews with mentors and mentees, with assessment of quality of new modules by programme leaders. It was concluded that e-mentoring offers a promising but not straightforward socio-technical solution for developing new distance e-learning modules. Effective e-mentoring for this purpose should involve systematic induction, mapping all support channels, needs assessment, differentiation and blended forms of communication.

Keywords: e-learning; distance learning; mentoring; e-mentoring; university; evaluation

Introduction

E-mentoring (also known as online mentoring, telementoring, virtual mentoring and cybermentoring) has been increasingly discussed as a possible solution to logistical constraints such as limited staff expertise (Bierema & Merriam, 2002; Ensher, Heun, & Blanchard, 2003; Harris & Jones, 1999; O'Neill, 2004; O'Neill & Harris, 2004; Single & Muller, 2001). It can be defined as a relationship that is established between a more senior and/or experienced individual (mentor) and a lesser skilled or experienced individual (mentee or protégé), primarily using electronic communications, and is intended to develop and grow the skills, knowledge, confidence, and cultural understanding of the protégé to help him or her succeed.

Mentoring is increasingly seen as a vehicle for professional development and enhanced service delivery in the commercial, educational and welfare sectors (Clutterbuck & Megginson, 2004; Ensher & Murphy, 2005; Miller, 2002). However, in distributed organisations, such as the university Department of Lifelong Learning in which this study was based, the opportunity for informal mentoring relationships to develop by chance is very limited. Such constraints lead to efforts to develop a

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'computer-supported knowledge-building community' in the sense of Scardamalia and Bereiter (1994).

E-mentoring literature

Electronic communications possess qualities that foster the development of open, supportive relationships. Electronic communication conceals social cues that can otherwise inhibit communication between higher and lower status individuals (Paloff & Pratt, 1999; Sproull & Kiesler, 1992). Also, using email allows for the construction of thoughtful messages without demand for immediate response. E-mentoring also has advantages in flexibility of matching partners and asynchronicity and potential frequency of discourse, but lacks the social and non-verbal richness of face-to-face (FtF) interaction. 'Blended' mentoring involving both online and FtF interaction seems likely to maximise benefits, where possible.

Engagement and persistence can be a problem in e-mentoring, and training for matched partners to establish and clarify their relationship is acknowledged as highly desirable, even if only available online (Kasprisin, Single, Single, & Muller, 2003). Another difficulty can be the loneliness of the singular relationship – those experiencing only a single mentoring relationship might assume that all are as good or bad as their own. One ineffective experience might discourage a participant from e-mentoring permanently. Locating e-mentoring within an e-community of enquiry serviced through a virtual learning environment (VLE) might offer all participants a variety of models of mentoring, engagement and persistence. An effective e-mentor requires skills in e-learning development, skills in communicating in online environments and skills in mentoring (McLuckie & Topping, 2004).

E-mentoring between university academic staff on the development of online learning modules seems a promising application. The project reported here aimed to fill this gap and explore consequent implications for future research and practice.

The project

The present project identified skills in mentoring in terms of three broad categories of behaviour (none of these are unique to the e-environment):

(1) Consulting and counselling: listening; questioning; clarification; exemplification; summarising; informing; challenging; giving feedback – re: aspirations, goals, methods, processes, systems, effects, reality checking, hidden agendas, unforeseen outcomes.
(2) Socio-emotional support: personal interest; empathy; encouragement; support; praise; sustain confidence/morale; model steps to achievement; model coping; socialisation into new culture.
(3) Goal-setting and problem-solving: identification and clarification of opportunities and problems, goals and timescales; brainstorm, consider, select, facilitate onward actions; evaluate problem solution and goal attainment.

The project sought to expand distance lifelong learning provision through staff e-mentoring. The subject focus was within arts and humanities (e.g., archaeology, Egyptology, history, literature, theology and visual arts). Five part-time university staff with successful track records in developing online distance learning modules

each served as e-mentor for up to five other part time tutors inexperienced in such development and seeking to adapt an existing traditional module for online delivery or create a completely new online module. The project operated in two year-long phases, involving eight mentees in the first phase and 16 in the second. Mentoring relationships generally crossed subject specialisms, to focus upon transferable skills and issues and avoid a narrow focus on debating curriculum. A mentoring needs analysis framework was offered to scaffold initial interactions. The mentor's role was to advise on design and delivery of new modules, including regarding staff–student and student–student interaction. Over two academic years, two FtF training days for mentors and three FtF group plus pair-wise training/meeting days for mentors and mentees were linked with a Web-based chat room facility. This was paralleled by email, telephone and some FtF mentoring contact between pairs, for which mentors had eight paid hours per year per mentee.

Implementing the project – phase 1

The first training meeting for mentors involved a general talk about mentoring, leading to more specific detail and tools, including the project plan, a needs assessment framework to scaffold initial interaction with mentees and an e-mentoring contract proforma (specifying ways the pair intended to communicate, joint availability and likely frequency of contact). Mentors then worked together on a SWOT analysis of current strengths, weaknesses, opportunities and threats in the delivery of e-learning in the department. Mentor–mentee pairings were subsequently made on the basis of alphabetical matching of names, while rejecting pairings within subject areas.

The mentor/mentee training day included introduction to distant online learning, with hands-on experience of the university VLE, WebCT (http://webct.ex.ac.uk/LWR), and review and discussion of experienced mentor and student experiences. Mentees received and discussed the needs assessment proforma and contract proforma. Meetings between mentor and mentee pairs began to build a relationship, explore individual needs and consider what a mentoring contract might look like. Mentors and mentees would have their own discussion forum on the VLE.

Towards the end of phase 1 it became clear that the online discussion forum was under-used. Additionally, contact between mentors and mentees had been very variable in terms of nature and intensity. Some mentors had struggled with the monitoring aspect of their role and not all had asked to see the module materials produced by their mentee, perhaps for fear of seeming too inspectorial. For phase 2, it was agreed that programme leaders (PLs) should be the focus for assessing the curricular content and pedagogical adequacy of the modular materials produced, although mentors would of course support with pedagogical design.

Implementing the project – phase 2

Greater structural clarity and more systematic evaluation were built into phase 2: the roles of mentors and PLs were more clearly defined and more emphasis was placed on use of the VLE. Now some of the mentors had experience of the project methods and tasks. Two of the phase 2 mentors had been mentees in phase 1. Mentors were typically allocated three mentees each (although one mentor with phase 1 experience was allocated five mentees in phase 2). The online discussion forum was still not extensively used, communications tending to be one-to-one.

Methodology

The methodology was to gather feedback using a questionnaire delivered and returned by email, similar FtF semi-structured interviews with mentors and a sub-sample of mentees all on one day, and FtF interviews with all relevant PLs over a short period. Five mentors and 16 mentees were involved. All mentors returned questionnaires and were interviewed. Of the 16 original mentees, three had dropped out of the scheme (although one still returned a questionnaire), yielding 14 mentee questionnaires. Five mentees selected randomly were interviewed FtF. External consultants devised the mentor/mentee measures, conducted the mentor and mentee interviews and analysed all data. Project staff conducted the interviews with the relevant seven of the nine PLs. Analysis of the open-ended part of the questionnaire and of the interviews involved identification of themes and multiple passes through the material to categorise passages to themes.

Results

Mentor questionnaires

Email alone or email coupled with telephone and occasional FtF were the most used forms of contact. Contact frequency was reported by almost all as monthly. Most mentors thought more contact would have been useful, especially earlier in the process. Overall, advice had been given on a wide range of topics: 'writing courses' being the most common and marking specifically mentioned three times. Some mentees had received advice on many topics, others advice on only a few or one. Most mentors felt more input was needed early in course development, and some thought this could be facilitated by making an early FtF meeting essential and offering an online tutorial and manual. Mentors overwhelmingly said they would 'do it again' and would recommend the e-mentoring project to others. Many positive socio-emotional comments were made about the mentees.

However, there were questions about whether mentoring was actually necessary in all cases, and the assessment of mentee needs was important. This depended not only on mentee previous experience, but also on the availability of other sources of support, perhaps at induction. Establishing a mentor–mentee relationship early was essential. Many mentors felt mentees should be committed to responding to communications – for example: 'I don't know whether to keep bombarding them with emails' or 'I felt I was badgering'. A mid-semester evaluation could be linked to interim student feedback and end of year evaluation to lead to a decision to continue to the next year or not, but roles and feedback loops in this needed clarifying.

Mentor interviews

The mentors outlined many functional areas in which novice staff developing new modules might need support:

(1) Subject content issues (PL responsibility)
(2) Practical administrative/organisational/student management issues (departmental office could help)
(3) Support with pedagogical process issues (other academic staff could also help)
(4) Socio-emotional support, anxiety reduction, isolation reduction

(5) Alternative perspective-taking – avoiding egocentricity/over-embeddedness
(6) Rapid response to the unexpected, especially if other help unavailable
(7) Career track and employment issues (other academic staff could also help)

Generally, areas 4–6 were key for adding value by e-mentoring. Mentors might be approached about relatively minor issues which would not be raised with hierarchical staff for fear that they revealed incompetence. Areas 1–3 and 7 could be important for some mentees who were not otherwise well networked or resistant to other help. PLs also had a support role, and clearer role differentiation was needed. In the case of area 7, mentors were 'employment status peers'.

With regard to area 4, the expected lower threshold of disclosure of problems with a mentor was needed less if other support networks were working well and other staff (e.g., PL, head of distance learning, head of department) were seen as approachable, which seemed to be the case for many mentees. Where this was the case, the mentoring system risked being seen as superfluous or duplicatory (and, therefore, not an effective use of time for mentees). This could then place mentors in a difficult position, almost nagging or hounding mentees into contact which might not be needed (worsened by the ethical and contractual pressures of knowing they were being paid to deliver a service). Lack of response from mentees certainly did not necessarily indicate they were having problems (whether the mentee was aware of them or not), and in some cases quite the opposite. The difficulty for the mentor was in knowing which was which.

Other important variables influencing mentee demand characteristics were whether the mentee was a novice in teaching and learning or merely a novice in online distance learning, and whether they were taking over and adapting a course already developed by another person or whether they were developing one from scratch. This connected to the issue of mentee caseload, which varied from two to five. It was felt that five was excessive, and two to three probably optimal. It would then be important that the mentees in any caseload were balanced in terms of likely demand characteristics, as some mentees took far more than their fair share of resource, while others took less.

Mentor engagement at an appropriately early point of mentee development was important. Engaging after the mentee had already started developing modules heightened the risk of the support being seen as irrelevant. The initial contact also needed to explore individual mentee needs (which were very diverse, and could change rapidly over time) and develop social rapport and trust. A FtF meeting of reasonable length was important for this to occur, possibly including some deliberate ice-breaking activity. Where a mentor and mentee had had previous FtF contact for other reasons, this might be less essential. One mentor had found the FtF contracting process, and the written record thereof, a useful tool in the individual needs assessment and mentoring customisation process. The contract could subsequently be useful as a reminder and lever for movement. Some mentors might be very familiar with email and over-rely on it, while some mentees might respond better to some telephone contact, even if not asking for it. FtF contact could occur serendipitously, but this should not be relied upon.

There was general agreement that some systematic front-end training for all mentees in developing modules that was continuously available should be part of a clearer framework for role, function and engagement – not a one-size-fits-all framework, but one clearly mapping the options. This could perhaps be most effective as

part of a systematic induction programme for staff new to online distance learning (which was forming an increasing proportion of course delivery). Such induction would need to make clear what issues and questions were likely to be dealt with at subject content specialist level, at departmental level (concerning administration, organisation and the chain of command), and which concerned pedagogical issues relating to delivery in general (which the distance learning department could address, but which the mentoring scheme also addressed). There could be role confusion about who could expect what information from what source, and this could lead to inappropriate expectations, frustration and time-wasting. A calendar of actions and appropriate points of contact within the department was provided to all new tutors to overcome some of this potential confusion.

Such a framework needs to make clear channels of responsibility for quality assurance of the final product created by the mentee. While this was notionally the case, the PLs were not always able to evaluate every product in detail. If it were assumed that mentors were doing this, nobody might do it. Especially with novice mentees, mentors often saw their first draft of their first module, but not necessarily later drafts or later modules. The distinction between formative and summative assessment of products needed to be clearer. This should help to avoid demarcation disputes or faulty assumptions, and the possibility of unhelpfully conflicting advice. The role of student feedback, peer appraisal, and central appraisal of teaching quality in module evaluation should also be clarified.

The issue of support for the mentors also needed to be clearly addressed. If mentors were uncomfortable with their mentoring or the mentee response to it, some clear review process involving a member of staff with management responsibility was needed. In any event, some mentees might need support over two years, but graduated so that less or different support was available in the second year, benchmarked to different parameters of expectation (and perhaps with a lower level of recompense for the mentor). Other mentees might need no second-year support. Others might need no first-year support. The current assumption was that all traditional staff moving into online distance learning for the first time should be at least offered support. Whether such engagement should be *required* was a more difficult issue. Thus, a more thorough needs assessment was required at the front end, coupled with annual reviews, and with the possibility of additional reviews if things were going unusually well or badly. Clear case-closure and/or exit procedures were needed.

Relatedly, a clearer job description for mentors was needed, coupled with a more transparent and explicit recruitment process. More selective and strategic targeting of support (rather than delivering it blanket-fashion) might ameliorate the shortage of mentors, and make the role more attractive. The availability of more mentors might enable more strategic matching of pairings (although going so far as to incorporate an element of mentee preference was thought unlikely to be practical).

Mentee questionnaires

Email alone or email coupled with telephone and occasional FtF were the most used forms of contact (corroborating mentor reports). Contact frequency was equally divided between monthly and termly (per trimester) (less frequent than reported by mentors). Numbers who thought more contact would have been useful were slightly less than those who thought contact was sufficient (in contrast to mentors). Mentees had been advised on a wide range of topics, ‘teaching online’ being the most common

(although mentors reported otherwise). While some mentees had received advice on many topics, others had received advice on only a few or one. Some expressed a need for more advice; mainly about creating course content and teaching online, an equal number reported no such need. (There was not a good match between mentor and mentee perceptions of the mentee having additional needs. Mentors emphasised needs regarding course content rather than teaching online.) Many felt more guidance was needed early in course development, and some thought this could be facilitated by a more thorough induction experience and manual (concurring with the mentors). However, others were quite satisfied, and particularly valued the 'just-in-time' aspect of e-mentoring. A large majority said they would 'do it again' and recommend the project to others. Many positive comments were made about friendliness of mentors, humorous exchanges, socio-emotional support and swiftness of feedback (as with the mentors).

Mentee interviews

Opinions were quite diverse among the mentees, suggesting that a one-size-fits-all model of support was unlikely to be effective. Nonetheless, many of the points made by mentors were confirmed by the mentees, especially regarding the utility of other networks and the risk of redundant duplication by the peer mentor scheme. Relatedly, there was confusion about whether the peer mentor scheme was compulsory, and if it was, why it was, given the pressures on mentee time. If it was compulsory, there was an issue regarding how long it should be compulsory for (units of one year were insufficiently flexible).

Confusion about how much feedback on modular materials could/should be expected from the peer mentor was still widespread. Some mentees had not been clear about support available when developing modules, and/or had not been linked with their mentor early enough in their development. Some had simply examined existing models of practice in the department, educed a notional template, and injected their subject content into that (those that had done this seemed generally satisfied with the result and consequently saw less urgency in providing front-end development training).

Opinions were divided on whether mentors should be from the same subject area or discipline or not (the project having so far followed the latter course). It was agreed that for complete novices early in module development, subject area support was needed (but the PL was presumably best placed to provide this, if available). More general pedagogical process support (such as a mentor might provide) might be a slightly later developmental stage. It was noted that subject area support was more difficult to sustain as more courses became inter-disciplinary.

The value of the mentor as a source of informal and non-threatening support was valued by some, but not by others, who found staff in management positions very approachable and non-threatening (although this might have contrasted with the mentee's experiences in previous places of work).

Means for proofing drafts of modular materials were discussed as a support need (connected with issues of role and function of mentors). One mentee reported proofing her own materials herself six times over, while another felt this was too arduous (and that perhaps students could be paid to do this). Peer proofing was suggested as an alternative (which might also serve a development function for the mentees), but this would presumably need promotion and possibly arrangement by management staff.

Interviews with PLs

All PLs were largely clear as to the rationale for mentoring, however, only one saw it as essential. Most acknowledged the usefulness of generic support, rather than subject-based mentoring. All PLs had hoped and expected that the scheme would relieve them of some of the burdens of their job, although some argued that the scheme would complement their own role rather than replace any of it. A minority were explicit in viewing their role as overseeing distance learning units prior to them being distributed.

However, most PLs agreed that their initial expectations were not always fulfilled, either owing to problems associated with a mentor not fulfilling their role, or problems with the individual time management of some mentees. A closer involvement at the early stages of the programme was envisaged, and additional staff development activities were to be arranged, for example, on learning outcomes.

Asked how many materials/units they had seen which mentees had designed, PLs' responses were varied, depending on whether the units were new, or merely being 'tweaked'. All new units were scrutinised. Most PLs were very positive about the quality of the new modules which they had seen; for example: 'very impressed with fantastic ideas and interactive modern thinking'. General criticisms were related to: (1) lack of accompanying reading; (2) slipshod copy editing; or (3) copyright issues.

Asked if they saw the finished product prior to its circulation to the distance learning team, responses ranged from 'in most instances' to 'not generally'. Most PLs had not been able to proof read the final versions, or see units prior to their going to the team, since mentees tended to send material to leaders and the team at the same time. Although most leaders had a very clear and informed idea as to the penultimate version of a unit, the final product was very much in the hands of the distance learning team. Asked if modular material was of an acceptable standard, it appeared that while units were of a generally acceptable standard, more needed to be done to improve and update existing modules.

Most PLs felt that a clearer, more formalised framework could be used to select mentors and mentees, and more could be done in terms of identifying those whose performance caused problems. Regarding the future development of the scheme, the overwhelming opinion was that it required further co-ordination by an appointed member of academic staff. Equally, leaders were firmly of the opinion that the scheme should not devolve back to them, for reasons not necessarily to do with saving their time – 'distance helps'. Most leaders would appreciate more clarity for where responsibility lay between themselves, the distance learning team and mentors, particularly with regard to proof reading. In general, the scheme was felt to be 'valuable', 'useful' and 'generally successful'.

Discussion

Although the triangulation of both questionnaires and interviews with both mentors and mentees had merits, the present study was action research and had many imperfections. The measures were created for this project and of unknown sensitivity, reliability and validity, although piloted in phase 1. However, sample attrition was small. Response rates were adequate overall at a macro-level. Many confounding variables that were not measured undoubtedly created background 'noise'.

As the literature suggested, engagement and persistence were an issue in some mentoring relationships, although the reasons for this differed. The project chat room

was under-used, and attempts to develop a knowledge-building e-community of enquiry were not successful. Despite the advantages of e-mentoring noted in the literature, which were capitalised upon in this project, it was found that early FtF contact was very important, i.e., that a staged blended approach was necessary.

Future research should secure larger samples to avoid any potential bias in sub-samples. Measures of known reliability and validity should be used to supplement bespoke measures tuned to the project. Finer-grained analysis of mentor/mentee interactions should help resolve the differences of opinion between mentors and mentees found in this project, and address questions of implementation integrity, but collecting electronic discourse through a VLE is only possible if the participants use it, rather than individual email. The nature and extent of training/induction and early FtF social contact seem to be important variables, and a future quasi-experimental study might seek to manipulate these. The tools for structuring interaction offered in this project seemed to be relatively little used, so research on their effects, if actually used, is desirable. A number of pieces of software are now available for managing e-mentoring, and these may present research opportunities.

The diversity of participants, engagement and outcomes in this project raise questions for practice. Should involvement be compulsory for all, perhaps as part of the induction process, or just available for some? If the latter, should it be opt-in, or management-selected? If the latter, what should be the basis for selection? Beyond this, it seems important that e-mentoring is not a bolt-on programme, but is well integrated with other relevant systems. A cycle of operations should be considered for future projects: FtF induction training – online tutorial – online manual – list of sources of advice of defined types with clear role definitions (mentor, PL, distance learning team, department) – first mentor/mentee meeting early and FtF – needs assessment and contact planning conducted and recorded – e-mentoring tailored to individual need – support available for mentors – product assessment in draft iteratively by PLs – product assessment feedback to mentees and mentors – student feedback to mentees and mentors – review with updated needs assessment and contact planning conducted and recorded – clear exit procedure.

Conclusions

This study has begun to address the gap in the literature regarding e-mentoring between university academic staff focused on the development of online learning modules. Triangulating the reflections of the mentors, mentees and PLs involved, e-mentoring appears to be successful – PLs were highly satisfied with the quality of new modules produced by mentees, and a large majority of both mentors and mentees said they would ‘do it again’ and would recommend the e-mentoring project to others. This suggests that e-mentoring is a promising socio-technical solution to the logistical constraints.

A more penetrating analysis revealed greater diversity – especially in mentees, their needs, and different perceptions of those needs. A more structured mentoring process, preceded by a systematic induction into relevant aims and objectives, procedures, stakeholders, resources, and timescales should help to refine the effectiveness of such schemes. Mentoring needs to be located in the context of other support channels, for parallel or similar purposes, with clear role and function definitions. A thorough negotiated assessment of mentee needs at an early point is essential, so that the mentoring process can be differentiated and adaptive. Early FtF meetings between

mentor and mentee are widely seen as essential – purely electronic contact appears ineffective. Thus, effective e-mentoring for this purpose should involve systematic induction, mapping all support channels, needs assessment, differentiation and blended forms of communication.

Notes on contributors

Lynne Thompson has worked for the Department of Lifelong Learning at the University of Exeter for 12 years and was directly involved in the development and provision of adult education in a Web-based format in the late 1990s. Lynne currently works for the Open University and the University of Exeter largely through the medium of distance learning. She is a historian specialising in the history of the British countryside, and social and political movements related to its preservation and regeneration, with particular reference to the period 1880–1950. She has published several articles and a recent book on the English countryside and is currently researching aspects of agricultural education in the early twentieth century.

Mike Jeffries has worked for the University of Exeter for the past 12 years, developing online synchronous and asynchronous learning materials for the Department of Lifelong Learning and the Graduate School of Education. He has implemented a range of new technologies within online learning environments and worked closely with academics in many disciplines to develop effective pedagogical models for online teaching and learning. The Department of Lifelong Learning offers a wide range of subjects and draws students (and tutors) from all over the world.

Keith Topping is professor of educational and social research in the School of Education at the University of Dundee. His main research interest is peer learning, in many contexts and subject areas. Other interests include parents as educators, problematic behaviour and social competence, and computer assisted learning and assessment. He has published 142 peer-reviewed journal papers, 44 chapters and 20 books, including *Peer-assisted Learning* (1998), *Thinking Reading Writing* (2001), *Inclusive Education* (2005) and *Cultural and Educational Adaptation of Chinese Students in the UK* (2009). He has consulted with national government and large organisations in several countries and his work has been translated into 11 languages. Further details are available at: http://www.dundee.ac.uk/eswce/people/kjtopping.htm

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