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Investigating the benefits of online peer mentoring for student confidence and motivation

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Investigating the benefits of Online Peer Mentoring for Student Confidence and Motivation

Abstract

This paper reports the findings of an online peer-mentoring initiative for language students at the Open University, UK. The Communities of Practice (CoP) model (Wenger, 2010) was used as a theoretical framework within which to explore (i) the nature and extent of mentor and mentee participation and (ii) the impact of the scheme on student confidence and motivation.

Within a qualitative paradigm, multi-data sources were employed to collect and analyse data. Participation was measured from analysis of online interaction, while participant views were captured through interviews, forum posts and surveys.

Findings revealed that mentors were perceived by students who used the scheme to be instrumental in building confidence and motivation. In addition, varying participation patterns indicated that students used the online learning communities to meet their differing needs during their studies. These needs involved passively reading posts as well as actively posting.

Any direct statistical correlation between student confidence and motivation and online peer mentoring was beyond the scope of this study and could be the focus of future research. Additionally, research might also explore the impact of student mentors on student participation in wider CoPs.

Practical recommendations from the study include the importance of mentor training to develop effective communication strategies and to differentiate the role from that of tutor

moderators, whose remit is to respond to academic content-related queries in module-wide

forums. There is little research into the nature and impact of online peer mentoring on student

motivation and confidence. This study aimed to bridge this gap.

*Keywords***:** online peer mentoring, distance learning, online forums, communities of

practice, CoP

Introduction and Context

In this paper, we describe and analyse an online peer-mentoring initiative which aimed to provide moral support and study tips and advice for language learners within the specific context of online distance learning at the Open University, UK. Although the context was language learning, the initiative has been extended to other subject areas at the Open University, and therefore, the findings of our research are relevant to any online distance learning context both within and beyond the Open University.

Confidence and motivation are important aspects of online distance learning, which affect participation and retention (Rienties and Rivers, 2014). We define motivation as "the process whereby goal-directed activity is instigated and sustained" (Schunk *et al.,* 2008, p.4). For the purposes of this study, we see confidence as "perceived ability" in relation to students' chosen course of study (Wu *et al.,* 2011, p.119). Confidence and motivation are of course interrelated, and along with Gregersen and MacIntyre (2013), we see both confidence and motivation as mutable within dynamic social processes.

Comparative studies of online distance courses and their traditional on-campus counterparts have consistently shown that, in the former, the dropout rates are considerably higher than in the latter (Carr, 2000). The studies of Bigatel *et al.,* (2015) and Carr (2000) indicated that in online distance contexts, due to physical distance from both fellow students and instructors and possible feelings of isolation, students have a significantly greater chance of becoming alienated from the learning experience than students in face-to-face contexts. The physical separation of students from each other and from their instructors can impact negatively on the creation of a sense of community, perceived as one of the main contributing factors with respect to student confidence and motivation in traditional settings (Drouin and

Vartanian, 2010). Emotional and practical support may therefore be crucial for online distance students (Delahunty *et al.,* 2013; Kan and McCormick, 2014).

A central part of the support that Level 1 language students receive at the Open University, UK is an online discussion forum for each module, where students communicate asynchronously. This module-wide forum is open to all students on a given module and is the platform on which they communicate with the academic team and their peers via written messages. These messages are organised into thematic threads, instigated either by the students themselves or by one of the academic team who moderates the forum.

Module-wide forums are typically a space where students ask academic-related questions or express concerns about their progress with the module, and where they seek reassurance about their studies from the academic moderator and fellow students. Prior to the introduction of the peer-mentoring initiative described in this paper, student support was ad-hoc, reactive and academic-led.

Following a successful pilot, a peer-mentoring initiative was first introduced in 2014 and embedded in each of these module-wide forums at Level 1. This was one of a broader faculty-wide programme of initiatives aimed at increasing student retention. The peer-mentoring model adopted was online, long-term and asynchronous. It was operationalised through the use of one student mentor per module, who created bespoke mentoring threads within the module-wide forum two weeks prior to each assessment submission date. These were key times when students might be feeling particularly anxious but may have the confidence to contact their tutors.

Selection criteria for mentors included having recently completed the module and having played an active and supportive role towards peers in online forums. Following the

pilot, all mentors were trained at module start by two academics and using a synchronous online platform to present and discuss the role remit.

The role of the mentor was to provide emotional support, study-related tips and advice, and the initiative aimed to play an important role in increasing student confidence and motivation by establishing a community of learners within the mentoring threads.

In the following section, we contextualise our research within the field of peer mentoring before explaining how and why we draw on the communities of practice (CoP) model (Wenger, 2010) as a theoretical framework for the following research questions (RQs):

RQ1. What was the nature and extent of participation within the peer mentor threads of the module forums?

RQ2. How and to what extent were the peer mentor threads beneficial to the development of student confidence and motivation in an online learning environment?

Literature Review

Peer Mentoring and Learning Communities in Higher Education

The terms "peer support", "peer coaching" and "peer mentoring" tend to be used interchangeably in the literature. However, many researchers have pointed out the confusion in the field "between the terms used to describe peer support and the precise nature of the interventions" (Andreanoff, 2016, p.2). In general, coaching tends to be viewed as goal-focused, short-term, academic content-focused activity concerned with maximising performance (Whitmore, 2002). Mentoring, by contrast, is seen as a long-term intervention whereby the transfer of knowledge amongst peers is not necessarily limited to academic learning (Husband and Jacobs, 2009). In this paper we see "peer support" as a generic term,

encompassing both coaching and mentoring. The form of peer support we describe and analyse here is more akin to mentoring than coaching, given its long-term nature and focus on study tips, advice and moral support.

Peer support is a well-established practice in higher education across the world and includes a range of activities, such as peers acting as facilitators of group study sessions as in PASS (Peer Assisted Study Sessions) (Giles and Ody, 2015) or one-to-one peer support sessions (Andreanoff, 2016) in academic peer-learning schemes. Some of these schemes have learning activities (Chilvers 2016; Leidenfrost *et al.,* 2014), while others focus more on pastoral care and moral support (Motzo, 2016). The benefits of peer support for students are generally documented in terms of improved confidence and motivation, increased social and academic participation and a greater sense of belonging. For mentors, benefits have been described in terms of the development of deeper subject knowledge and enhanced employability skills. For organisations, some research studies have shown increased student retention (Andrews and Clark, 2011; Giles and Ody, 2015; Keenan, 2015).

Tinto (2007) claimed that peer support contributes to the overall learner collegiate experience and therefore plays an important role in the formation of learning communities, which impact on student confidence and motivation and, ultimately, on retention. Similarly, motivation and developing confidence impact on participation and also on community development (Wenger, 2010). However, accounts of peer support in higher education are mostly based on face-to-face learning contexts (Fox and Stevenson, 2005; Hill and Reddy, 2007; Husband and Jacobs, 2009). Although online synchronous and asynchronous models are currently being developed and piloted (Leidenfrost *et al.,* 2014; Watts *et al.,* 2015), there has been little research into the nature and impact of peer support on student motivation and confidence in online contexts. This might be partly explained by the fact that the dominant

view has been that a sense of community, allied to developing confidence and motivation, is

confined to traditional settings. However, communities may also be defined in terms of what

their members do rather than focusing on the setting (Rovai, 2002).

According to Lave and Wenger (1991), community does not imply physical co-

presence but rather "participation in an activity system about which participants share

understandings concerning what they are doing and what that means for their lives and for

their communities" (p.98). Therefore, learning communities may also be fostered and

developed in online distance learning contexts.

Communities of Practice

A useful concept for understanding the development of online communities is that of

a CoP (Lave and Wenger, 1991; Wenger, 1998). According to Darhower (2007), "The CoP is

perhaps the most developed concept of community in psychology and learning theory"

(p.562).

CoPs are formed by groups of people "who share a concern or a passion for

something they do and learn how to do it better as they interact regularly" (Wenger-Trayner

and Wenger-Trayner, 2015, p.2). Wenger (1998) postulated that learning occurs through

shared experience, similar perspectives, goals and interests and within and through

participation. This is a constructivist stance, which highlights the importance of social

participation and identity for learning and reflects what Wenger (1998) referred to as a

"social theory of learning", whereby learning is placed in the context of "our lived experience

in the world" (p.3).

According to Gannon-Leary and Fontainha (2007), a virtual CoP is a network of

individuals who through participation and interaction "share a domain of interest about which

they communicate online" (p.2). While indicating the benefits of, barriers to and critical success factors for virtual CoPs, Gannon-Leary and Fontainha (2007) also recognised the huge potential of online tools, such as forums, for the development of CoPs.

A CoP can be differentiated from other types of learning community, such as the Community of Inquiry (CoI) (Garrison *et al.,* 2010), based on the three main characteristics of a CoP identified by Wenger (2010). These are (a) the domain: a joint enterprise with its own identifying characteristics, (b) the community: members build relationships that enable them to learn from each other and (c) the practice: members develop a shared repertoire of stories, tools and expertise. Conversely, a CoI is established on the basis of three concurrent elements: cognitive presence (interactions based on goals and direction, regulated learning), social presence (engagement with participants) and teaching presence (teaching and learning facilitation).

In terms of the three defining characteristics of a CoP given above, we argue that mentor–mentee participation in each module-wide forum could be seen as a CoP, since (a) the joint enterprise was to support and be supported through forum interaction in a learning context, (b) mentor–mentee and mentee–mentee interaction aimed to build relationships to facilitate the development of confidence and motivation and enhance learning and (c) the practice of each community involved the sharing of expertise and tools with which to support the academic engagement of individual learners. However, how and to what extent these CoPs functioned to develop student confidence and motivation (RQ2) needed to be evaluated through student perceptions in addition to an analysis of the nature and extent of participation in the mentor threads (RQ1).

Challenge of Measuring Participation in a CoP

The challenge of conceptualising and measuring participation in an online CoP is clearly articulated in Hratinski's (2008) overview of the literature on this theme. He concluded that participation in online learning is "a complex process comprising doing, communicating, thinking, feeling and belonging" (p.1761). It is clearly more than interaction, as interaction alone is not a guarantee that students are cognitively or emotionally engaged in an educationally meaningful manner (Garrison and Cleveland-Innes, 2005). Participation, on the other hand, could involve cognitive and emotional engagement without necessarily interacting with others.

The implications of this are that some forms of participation in an online context will remain hidden to other community members and may only be accessed through participant perceptions. In addition, forms of participation may vary and develop, and a sense of community may also either develop or decrease over time, depending on participant and contextual variables (Darhower, 2007). According to Lave and Wenger (1991), "peripheral participants" (p.37) stay in a peripheral position until they are eventually enabled to move to a position of full participation, with an accompanying change of identity and increased capacity to learn (Lave and Wenger, 1991; Wenger, 2010). However, more recently, researchers have challenged the hierarchical notion of full versus peripheral participation by validating the latter as a desired and useful activity for some participants in a CoP (Handley *et al.,* 2006). For the purpose of this study, we were interested in all forms of participation, no matter how "peripheral", in what we considered to be evolving CoPs.

Methodology

In 2014, the peer-mentoring initiative was first piloted during an English for Academic Purposes (EAP) module and then extended to four intermediate language modules.

Results indicated that students valued the student mentors and benefitted from the practical

advice, study tips and moral support they offered. As a result of the pilot study, the mentoring

intervention was extended to all Level 1 languages modules, and the current study was

undertaken to explore, in more detail, how and in what ways students benefitted from their

mentors and, in particular, how the initiative impacted upon student confidence and

motivation.

An overarching qualitative methodological approach was adopted as we were

primarily interested in the views and experiences of subjects. Within this qualitative

paradigm, we collected and analysed data from multi-sources. Descriptive statistics were

employed to provide an initial insight into our research questions, which were then explored

more fully using qualitative analysis techniques.

This was appropriate for research into complex online communities where

participation could be measured using descriptive analysis of online interaction and closed

survey questions, while the views of participants were captured through thematic analysis of

interviews, the content of forum posts and open survey questions (Braun and Clarke, 2006;

Bryman, 2016).

Participants

Participants were Open University students in distance mode, studying a beginners'

language in Chinese, beginners and intermediate languages in French, German, Italian and

Spanish, and EAP, all 10 Level 1 language modules where a student mentor was in place.

The language of instruction was mainly English, and the study context was blended learning

by which language learners study primarily through the use of self-study materials and are

supported by tutors via a mix of synchronous online group tutorials, asynchronous forums,

telephone and email. Attendance at group tutorials is voluntary and sporadic according to

students' work and family commitments. Participation in forums is therefore a valuable

additional means of student support. At the time of this study, students were required to

submit four or five tutor-marked assignments (TMAs) and one end-of-module assessment

(EMA) to pass a given module.

Data Collection and Analysis

Table 1 shows the three different data collection instruments used, how the data were

analysed and which research question each instrument addressed. Since it involved students,

the project was submitted for approval to the Open University Student Research Project

Panel. Ethics approval was granted prior to the commencement of the research.

[Insert Table 1]

Below we explain, in more detail, how each data set in Table 1 was collected and

analysed.

(a) For the quantitative data from the peer mentor threads, the focus was on participation in

each CoP (i.e. the peer-mentoring threads on each module). Six representative language

modules out of 10 were selected for data collection and analysis; that is, beginner,

intermediate and EAP modules. Using both the Moodle reporting tool and manual counting,

we were able to establish (1) the number of posts by mentors in each thread, which were then

combined to give a total for each module, (2) the number of posts by students in each thread

and the total for each module and (3) the number of individual students who read the posts

(including those who both read and posted, and those who just read the posts) in each

module. While Moodle can capture all the participants on a forum thread, it cannot

distinguish between those who read and post and those who read only. This was therefore

achieved by manually counting the students who posted and deleting this number from the overall total number of participants.

With respect to the qualitative data obtained from the forum posts (the nature of participation), the focus was on the content of the posts in the mentor threads of each module in order to identify the benefits and shortcomings of the peer-mentoring scheme perceived by the mentees. We also identified the types of queries asked and advice provided. All posts on the student mentor threads were in English.

A total of 1,189 posts in the dedicated peer mentor threads from the six modules were exported into six text files and then manually categorised into common themes. We then identified salient themes, using thematic analysis techniques (Braun and Clarke, 2006). For example, a post saying, "*I notice that if I use the 'Audio Recording Tool' it will produce a .wav file. Is this the best way to do it?*" was classified as a post about technical issues. We then investigated if such posts occurred in other modules and if they were common across the board. We also explored responses in the survey data (see below) to establish if both data sets supported each other.

(b) The online survey investigated student perceptions of the benefits and shortcomings of the peer-mentoring scheme. It was distributed electronically to 1,970 students from all 10 Level 1 modules, yielding 234 completed responses. All questions and responses were in English. The survey contained a mix of open and closed questions. Types of closed questions were yes/no and scaled. Open questions were used as a follow-on to closed questions in order to probe further and collect qualitative data related to views, perceptions and feelings. The responses to closed questions were collated numerically by totalling the number of responses for each question before entering them into a spreadsheet. Responses to open questions were extracted and thematically analysed as for (a) above.

ONLINE PEER MENTORING 13

(c) Since the aim of the study was to reach a broad understanding of how online peer

mentoring impacted on student motivation and confidence, five cross-sectional in-depth

interviews were also conducted. The sample was selected from the pool of students who, in

the survey, volunteered to be interviewed.

Selection was based on two factors: a) To assure the validity of our findings, we

wanted to represent the views of students across beginner and intermediate modules and

across different languages, including EAP, and b) interviewees were also selected on the

basis of having fully engaged with the survey questions so that their responses to these

questions could be used as a springboard for further exploration through semi-structured

interviews. For example, an interviewee had indicated that the mentor was useful for "not

feeling alone". The interview question was therefore, *"In what ways do you think the student*

mentor thread was useful in helping you to not feel alone?" The focus of the interviews was

on student experiences of the mentor scheme. Each interview lasted approximately thirty

minutes on Skype and was recorded, transcribed and then analysed thematically (see [a],

above).

The findings reported in the next section were derived from all three of the above data

sources.

Key Findings

Data collected using the above instruments addressed the two research questions,

relating to the extent and nature of participation in the mentor threads (RQ1) and the possible

benefits of the threads for student confidence and motivation (RQ2). These RQs are

interlinked, given that the findings of RQ1 also inform RQ2 and vice versa.

Extent of Participation (RQ1)

Key findings from forum posts

An analysis of the forum posts allowed us to measure participation in mentor–mentee threads by counting the total number of postings exchanged between mentors and mentees on each of the six modules, designated by the letters A–F in Tables 2, 3 and 4. Whereas a high number of posts may indicate a high level of student interaction, such interaction did not necessarily equate to student participation on a module, in general, given that the number of postings could, at times, reflect participation by the same students. In addition, participation was not restricted to posting but could also be measured by the number of students reading posts.

[Insert Table 2]

Table 2 shows the total number of mentor and student posts on each student mentor thread per module, prior to each assessment point (columns 2–6). It also compares the total mentor posts with the total student posts (columns 8–9) and shows each as a percentage of the total per module. The number of posts varied between the six modules, reflecting, in part, the considerable variation in student enrolment from one module to another.

The data suggests that there were varying levels of active participation across each of the six modules. On Modules A, D and E, the number of posts was highest prior to the first assignment, after which it fell. On Modules C, D and E, there was an increase in posts just before the EMA. For modules B and F, no clear pattern emerged, with some TMA threads having more posts than others.

With respect to the ratio of student and mentor posts to the total number of posts, this also varied. On Modules A, B and E, active student posts exceeded those of mentors, whereas

on Modules C and D, this is reversed. On Module F, interaction was more balanced between

mentor and students.

[Insert Table 3]

Table 3 shows the total number of individual students participating in each student

mentor thread, including both "active" participants who posted or replied to posts and

"passive" participants who only read posts. Participation was also calculated as a percentage

of all students who visited the module-wide forum in Week 1 and was found to vary both

between modules and between assessment points. Week 1 had the highest number of visitors

to the module-wide forum, within which the mentor threads were embedded, ranging from

40% to 49% of all students enrolled. For all modules, participation in module-wide forums

was voluntary, which may account for the fact that less than half of all registered students

participated.

[Insert Table 4]

Table 4 compares the number of individual students who posted messages on each

mentor thread with those who read messages only. The data are shown as a percentage of the

total number of students visiting the module-wide forum in Week 1. From the data, both

active and passive participation varied throughout the course of a given module and between

modules. As with most forums and other social networks, the number of students who read

posts was much higher than the number of students posting messages.

If Table 4 is compared with Table 2, it can be seen that the same students posted more

than once, given that for Module A, for example, 81 students posted in total, whereas there

were 198 student postings. This provides evidence of ongoing active engagement by some

students.

ONLINE PEER MENTORING   16

Key findings from survey data

Analysis of the closed survey questions yielded data with respect to factors impacting on the extent of participation in the mentor threads. In total, 53% of survey respondents engaged with the mentor threads.

The three main reasons for non-engagement were as follows:

- **Lack of awareness** of the existence of mentor threads: 28% of respondents claimed that they were not aware of the existence of the mentor threads but 85% of these respondents answered "Yes" to the question *"In general, do you think it is a good idea to have a student buddy on the module-wide forum?"* This indicates that greater participation in the scheme (with possible benefits for a larger number of students) could be fostered by its increased visibility.

- **Lack of time:** 28% of respondents claimed that it was time-consuming to read lengthy posts.

- **Lack of need:** 36.5% of respondents felt they did not need the moral and practical support that the mentors offered.

With respect to active versus passive participation, the data in Table 4 provide an overall comparison of these forms of participation for individual students per mentor thread. However, from the open survey comments, the following themes were identified for *only* reading and *not* actively posting throughout the entire course of a given module.

- **Lack of confidence:** *"I don't feel confident enough to comment"*.

- **Lack of time:** *"I felt I just didn't have enough time to make comments"*.

-        **Lack of need:** *"All my question were covered by other students".*

The open comments also revealed the value attributed by students to passive participation (reading only), as demonstrated in the following examples:

Had no need to ask questions – but still useful to see others' comments.

To see who else is going through the same struggle, and most of my questions had already been answered.

I was interested to hear how other people were getting on but didn't myself have any comments to make.

I always got info by reading people's comments.

Nature of Participation (RQ1)

Key findings from forum posts

A thematic analysis of the mentor threads revealed that the queries posted by students and the advice offered by mentors closely reflected the remit of the mentors (i.e. to provide moral support, study tips and advice). However, "community building", arguably allied to the provision of moral support, emerged as a key theme in the analysis of forum posts and has been categorised separately from moral support.

a) Posts about technical issues: On all six modules, the posts analysed included queries and advice offered on technical issues, such as navigating the website, accessing online group tutorials, using the recording tool, naming and zipping files and submitting assignments. Examples include:

How can I prepare myself to this session where I will have to talk online with tutor

and other students? (Student, Module E)

I notice that if I use the "Audio Recording Tool" it will produce a .wav file. Is this the

best way to do it? (Student, Module C)

b) *Study-related posts:* The nature of study-related queries and advice varied

according to the module. For example, students on language modules asked about

memorisation techniques, useful supplementary resources and pronunciation issues, whereas

students on the EAP module needed advice on issues such as paraphrasing, referencing, note-

making and paragraphing. In all modules analysed, there were practical questions on module

structure and assessment. Requests tended to be phrased informally:

Do you have any advice about pronunciation? I have been doing some speaking

practice on the website and I can't tell you how bad I sound. (Student, Module B)

In addition to answering queries, mentors frequently offered advice based on their past and

current studies.

I keep a folder for the course and when a TMA is due I keep a folder for that TMA.

But when I have the final version I save it into a new folder called TMA01 (or 02

etc) ready to go. That way, when I am browsing for the file I always know the right

version to upload! (Mentor, Module A).

For anyone interested in talking or exchanging emails in [the target language] I have

joined a great website www.conversationexchange.com. There are so many [speakers

of the target language] out there desperate to improve their English. (Mentor, Module

B)

There was also some evidence from student postings that study-related posts had a direct

impact on student confidence:

Having read your suggestions I may be worrying unduly. (Student, Module A)

Really appreciate all her tips and advice, it saved me from several moments of loss of

confidence. (Student, Module C)

c) Posts related to moral support: There were examples of direct requests for moral

support and help with motivation, alongside messages where students shared their anxieties

with an implied desire for reassurance:

I have not studied for about 10 years and this is my first OU module! Please tell me

this will all make sense once I get started. (Student, Module F)

There were also requests for tips on how the mentors themselves overcame challenges and a

desire to find out more about them:

Like, how did it feel, how did it feel doing your oral exam? (Student, Module D)

In their proactive postings, mentors generally attempted to build confidence and motivation

through their offers of moral support, as these examples show:

I hope you are all on target. I wish you all the best for a great result. Any last minute

queries, anything at all, don't hesitate to contact me here. I'm always around.

*(*Mentor, Module B)

Please take full advantage, we aren't tutors or moderators: we're just students (still

are students) who have done the module and come out the other end, so can maybe

help with a bit of sharing and moral support. (Mentor, Module F)

d) Posts related to community building: There was evidence from the mentor threads of the

creation of online learning communities, through the sharing of personal information by

mentors, such as their own background and experience of studying, for example:

> *I really enjoyed the module, but did find getting back into studying and at the level*
>
> *required a bit of a challenge as it was my first experience of higher education after*
>
> *nearly 17 years and I had never done an assignment in my life. (*Mentor, Module F)

Mentors also invited students to reflect and to engage with each other, as in this example:

> *Not studying in a brick uni, we need these forums to connect with other like-minded*
>
> *people.* (Mentor, Module E)

Students posting to the threads responded positively to these types of messages, many

expressing appreciation, for example:

> *Your story is really inspirational and just the kind that I love to read about!* (Student,
>
> Module A)

> *Thanks so much for all your posts, I think you are quite right when you say it helps to*
>
> *know we're not alone.* (Student, Module D)

Impact of Mentor Threads for Developing Student Confidence and Motivation: (RQ2)

Key findings from survey and interview data

With regard to the survey responses, 81.5% of students who engaged with the student

mentor threads said that they found them useful. The usefulness of the mentors was primarily

identified in terms of providing practical information (83%), moral support and reassurance

(74%) and for not feeling alone (71%). However, although survey respondents rated practical

advice more highly than emotional support and "not feeling alone", one of the four main

themes derived from student interviews and open survey comments was the impact of the

combination of practical information and emotional support on student confidence and

motivation.

Two other principle themes related to the benefits of the peer-mentoring scheme were

the mentor as role model to students and the importance to students of feeling part of a

community. Implicit in the comments related to these themes is the motivational impact on

students.

A weakness of the mentor initiative was also identified from the open survey

comments and interviews; namely, some students felt that there was sometimes confusion

(and lack of clear differentiation) between the role of the mentor and that of the tutor. The

main themes derived from five interviews and open survey comments from 10 modules are

presented in Table 5. All examples of survey comments were taken from different students.

[Insert Table 5]

Discussion

The findings from analysis of forum postings, student surveys and interviews

indicated that the presence of student mentors was received, overall, as beneficial to those

who used the scheme.

Data relating to the extent of participation within the peer mentor threads (RQ1)

revealed varying participation patterns across modules with respect to both mentor and

student postings. As argued in the literature review, each student mentor thread can be

viewed as a CoP in terms of its defining characteristics. These are (a) domain (b) community

and (c) practice. However, when focusing upon participation in CoPs, Probst and Borzillo

(2008) identified a high level of active interaction between members as a determining factor of success. Although our focus was on the benefits of the CoPs for student confidence and motivation and not on the success of the CoPs per se, fluctuating participation patterns could be seen as a negative indicator of the efficacy of the peer-mentoring threads in developing these aspects. Nevertheless, the data relating to the overall student postings revealed that the same students posted several times, indicating engagement with the threads. In addition, participants clearly used the community according to need, for example, prior to any one of the TMAs and/or prior to the EMA.

With respect to the relatively low active versus passive participation, this might also be deemed a negative indicator of the potential of the peer-mentoring threads to positively impact on student confidence and motivation. If passive participation is viewed as peripheral and the development of a successful CoP is understood in terms of the transition from peripheral to full participation (Wenger, 2010), there was no evidence in our data that active participation increased over the course of the modules. However, in the literature review, we argued against any hierarchical distinction between active and passive participation and stated our interest in finding out about the impact on confidence and motivation of all forms of participation. From the student perspective, reading without posting was deemed to be a beneficial activity. In this respect, our research echoes that of Handley *et al.* (2006) by revealing the value of passive participation for students.

Qualitative analysis of the forum posts demonstrated the nature of participation in the mentor threads (RQ1 and RQ2). There are examples of the direct impact on student confidence of the advice and practical information provided by mentors. Motivation is fostered by proactive mentor posts and evidenced in the questions asked by students of mentors and sustained by the practical advice and encouraging responses offered by mentors.

Student requests for moral support indicate their readiness to use the mentor threads to boost their confidence. The importance of the mentor threads for student confidence and motivation is also revealed by student survey and interview comments, for example, *"Really appreciate all her tips and advice, it saved me from several moments of loss of confidence"* (Student, Module C forum). Although the provision of practical advice was ranked more highly by survey respondents than emotional support, the interdependent nature of these aspects was identified from the findings.

Linked to emotional support was a felt sense of community, evidenced from all three data sets, which was both experienced by students in the mentor threads and proactively fostered by mentors through their communication strategies. The findings also reflect research discussed in the literature review, which suggests that a sense of community is important for mitigating against the feeling of being alone in distance environments (Bigatel *et al.,* 2015). Although a sense of community was not explicitly related to confidence and motivation by the students in this study, there is evidence to support Tinto's (2007) notion that when peer support develops a sense of community in students, there is a concomitant impact on confidence and motivation, for example, *"It boosts morale when you know you are not alone*" (Survey comment).

Likewise, the motivational impact of perceptions of the mentor as a positive role model was implicit in the data. Students were able to identify with the peer mentor as someone who had already achieved success on the module. The function of the mentor as role model is well documented in the mentoring literature (Andrews and Clark, 2011; Husband and Jacobs, 2009). In the e-learning context of this study, students particularly valued the experience of a peer mentor who they felt *"was there on the journey with you, actually*" (Survey comment). Communication with this peer role model tended to be informal, as

demonstrated in the example forum posts in the Key Findings section, thereby minimising the power differential between students and mentor.

There were also some weaknesses in the peer-mentoring scheme, identified from this research study, which impacted negatively on (i) student participation (lack of awareness of the existence of peer mentor threads) and (ii) perceptions of the value of the scheme (confusion between the tutor and mentor roles). These findings have led to changes in Open University practice and have suggested some key recommendations for online mentoring in other distance contexts.

Changes to Our Scheme

Awareness of mentor presence

Improvements have been made in communication to all students at module start to increase awareness of the existence and purpose of mentor-led forum threads. More students are now familiar with the presence of mentors and use the threads naturally than was the case at the outset of this project.

Mentor training

Mentor training now includes strategies for the establishment of clear boundaries between the mentor role and that of a tutor. It also supports mentors in the development of (a) effective communication strategies to deal with student questions which go beyond their remit and (b) a friendly but concise communication style to avoid overload in students, who may struggle to manage time (see Key findings from survey data: reasons for non-engagement).

Recommendations for Online Mentoring in Distance Contexts

The following three recommendations may be derived from this research study.

(a) Peer mentoring can be successfully employed in online forums as a strategy to develop student confidence and motivation in distance learning.

(b) Course providers need to be aware that passive participation is valuable to students who may derive benefit from reading the posts of others, without actively participating in online mentor threads.

(c) Mentors require a clear remit, distinct from that of academic tutors and geared to the pedagogical needs and, perhaps, cultural identity[1] of a given student cohort. Related to this, they also require training in the adoption of effective communication strategies.

It is our suggestion that if these recommendations are implemented in similar distance learning forum contexts worldwide, there could be clear improvements in pedagogical uptake on the part of students, as well as potential benefits in retention.

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[1] It was beyond the scope of this study to research the impact of cultural issues.

Limitations of the Study

It should be noted that the interviewees, and possibly also the survey respondents, were Open University students who may have perceived the mentors (fellow students) in a favourable light. In addition, given a response rate of 12.2 % to the student surveys, the statistical findings of this study should be viewed with some caution, although in view of total numbers, 12.2% yields an acceptable number of complete responses for analysis (234/1,950). Such a response rate is typical within the Open University context, as the survey invitation is sent out to large numbers of students.

This study explored the overall benefits of the peer-mentoring initiative for student confidence and motivation but did not explore the differences between mentor participation and communication style and the impact on the CoPs. Finally, we were unable to explore any direct statistical correlation between improved confidence and motivation and the peer mentor intervention.

Future Research

Further research might fruitfully explore any correlation between peer mentor schemes and retention. In addition, research might be undertaken into how student participation becomes "normalised" (Bax, 2011, p. 2) in the peer mentor threads and the impact of this on participation in wider CoPs, such as module-wide forums, with possible positive effects on student satisfaction, retention and performance. We also recommend additional research into the different communication strategies used by mentors and how these might optimally support all students on a given module.

Conclusion

This research contributes to the field of peer mentoring by exploring the connection between

peer mentoring in a one-to-many asynchronous online forum with student confidence and

motivation. The CoP model provides a theoretical framework within which we were able to

explore our findings. However, these findings have also extended our understanding of CoP

within the context of our study.

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ONLINE PEER MENTORING										29

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Table 1: Research Methods

Instruments (Data Sets)	Data Analysis	RQ
(a) Forum posts in peer mentor threads	Quantitative analysis of forum posts of six out of ten Level 1 languages modules	RQ1
	Qualitative thematic analysis of content of posts	RQ1 & RQ2
(b) Surveys	Quantitative analysis of ten Level 1 modules: descriptive analysis of raw data	RQ 1
	Qualitative analysis of open comments	RQ1 & RQ2
(c) Semi-structured interviews	Qualitative thematic analysis of five student interviews	RQ2

Table 2: Total Number of Posts Prior to Each Assessment Submission Point and the Ratio between Mentor and Student Posts

Module	TMA 1	TMA 2	TMA 3	TMA 4	EMA	Total No. of Posts	Mentor Posts	Student Posts
A	107	51	52	34	35	279	81 (29%)	198 (71%)
B	42	77	27	91	59	296	112 (38%)	184 (62%)
C	32	42	13	6	17	110	80 (72%)	30 (28%)
D	69	32	50	22	66	239	155 (65%)	84 (35%)
E	31	11	17	6	15	80	35 (44%)	45 (56%)
F	44	37	69	8	n/a*	158	79 (50%)	79 (50%)

* On Module F, the student mentor was not present in the run-up to the EMA but only prior to the four TMAs.

Table 3: Number of Individual Students Participating on Each Student Mentor Thread (Both Reading Plus Posting and Reading Only) Prior to Each Assessment Point

Module	Number of Students Participating on Module-wide Forum in Week 1 & as % of All Students Enrolled on the Module	TMA1	TMA2	TMA3	TMA4	EMA
A	278 (44% of all students enrolled)	110 (40%)*	93 (33%)	105 (38%)	102 (37%)	102 (37%)
B	94 (40%)	82 (87%)	49 (52%)	49 (52%)	40 (43%)	38 (40%)
C	82 (47%)	69 (84%)	44 (54%)	39 (48%)	33 (40%)	35 (43%)
D	41(42%)	31 (76%)	27 (69%)	26 (63%)	16 (39%)	33 (80%)
E	181 (49%)	95 (52%)	76 (42%)	74 (41%)	80 (44%)	98 (54%)
F	491 (36%)	404 (82%)	213 (43%)	267 (54%)	194 (39%)	n/a

* Percentage of students participating on module-wide forum in Week 1.

Table 4 Comparison of Number of Individual Students Posting Messages with those

Reading Messages Only on Each Mentor Thread

Module (Module-wide Student Forum Participation Week 1)	TMA1		TMA2		TMA3		TMA4		EMA	
	Posting	Reading	Posting	Reading	Posting	Reading	Posting	Reading	Posting	Reading
A (278)	23 (8%)	87 (31%)	11 (4%)	82 (29%)	7 (3%)	98 (35%)	13 (5%)	89 (32%)	27 (10%)	75 (27%)
B (94)	9 (10%)	73 (78%)	14 (15%)	35 (37%)	5 (5%)	44 (54%)	13 (14%)	27 (29%)	12 (13%)	26 (28%)
C (82)	5 (6%)	64 (78%)	10 (12%)	34 (41%)	1 (1%)	38 (46%)	0 (0%)	33 (40%)	5 (6%)	30 (37%)
D (41)	9 (22%)	22 (54%)	4 (10%)	23 (56%)	5 (12%)	21 (51%)	2 (5%)	14 (34%)	7 (17%)	26 (63%)
E (181)	11 (6%)	84 (46%)	3 (2%)	73 (40%)	8 (4%)	66 (36%)	2 (1%)	78 (43%)	5 (3%)	93 (51%)
F (492)	14 (3%)	390 (79%)	8 (2%)	205 (42%)	15 (3%)	252 (51%)	2 (1%)	19 (39%)	n/a	n/a

Table 5: Themes Derived from Student Interviews and Survey Open Comments

Theme	Examples
1. The impact of practical and emotional support on confidence and motivation	"Well I think it boosted my confidence definitely". (Interview, Module D) "Well there's hope, she's done it, there's hope for me". (Interview, Module B) "The student buddy can help motivate people and share useful tips". (Interview Module C) "Keep motivation going and iron out any problems you might encounter". (Survey comment) "Builds confidence". (Survey comment) "It was a confidence boost to know she was there if I needed advice or support". (Interview, Module A) "It keeps you motivated". (Survey comment)
2. The mentor as role model to students	"People have a lot of respect for someone who has been through it and knows exactly what it feels like". (Interview, Module B) "For me was just general encouragement and her enthusiasm which was infectious. Even for us oldies she's like a big sister". (Interview, Module F) "Having the feedback and input of someone who has 'been there before' is very helpful and uplifting". (Survey comment)
3. The importance of feeling part of a community	"I think that's what she does, that's what happens, she creates something that you want to be part of and you feel part of". (Interview, Module A) "It definitely inspires community". (Interview, Module D) "It boosts moral when you know you are not alone". (Survey comment) "Gave feeling of solidarity, good to know we were all in the same boat". (Survey comment) "It has prevented me from giving up on the course". (Survey comment) "I think it's that little way of feeling less isolated … I suppose it just made me feel part of things a bit more … I felt I was part of the course, part of a group". (Interview, Module D)
4. Confusion between the role of the mentor and that of the tutor	"There were students posting language questions I think on the module-wide forum, which I think would have been better directed to the tutors". (Interview, Module C) "I found that many questions raised were to do with rules and regulations of TMAs". (Survey comment) "I think the student buddy should be the tutor". (Survey comment) "I think the buddy scheme needed to be explained more". (Survey comment) "There is a grey area between the role of the tutor and the student buddy". (Survey comment)