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**INVESTIGACIONES**

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**PEER ELECTRONIC MENTORING FOR TRANSITION INTO  
UNIVERSITY: A THEORETICAL REVIEW****LA MENTORÍA ELECTRÓNICA ENTRE PARES PARA LA TRANSICIÓN A LA  
UNIVERSIDAD: UNA REVISIÓN TEÓRICA**

Angélica Risquez  
University of Limerick

**ABSTRACT**

The European Space for Higher Education and the calls for lifelong learning highlight the responsibility universities have to facilitate their students' access and success, and places career guidance (especially in the early transition phase) as a central element of institutional quality. While doing this, it is important to promote community development as part of the integration of each student in the higher education system, so peer mentoring initiatives have become widely adopted across European universities. In this context, information and communication technologies can help to reduce isolation and distance between students, facilitating student collaboration, creating community feelings among students and making it possible to European universities. In this context, information and communication technologies can help to reduce isolation and distance between students, facilitating student collaboration, creating community feelings among students and making it possible to create new guidance programmes that improve access, support and guidance to students. In the confluence of three main areas of research and practice (transition to university, student guidance through peer mentoring, and computer mediated communication (CMC), this paper proposes peer electronic mentoring (e-mentoring) as a new guidance alternative to facilitate student transition to university. Therefore, we review the scarce literature existing in the area, gathering theoretical reviews, anecdotal experiences and programme results, and finally we propose questions for future research.

**Key words:** transition, adjustment, guidance, student, university, mentoring, e-mentoring, electronic mentoring, computer mediated communication, peer support.

\* Investigadora y profesora en el Centre for Teaching and Learning, Universidad de Limerick, Irlanda. Áreas de especialización incluyen innovación y calidad docente, tecnología educativa, y mentoría electrónica.

## RESUMEN

El Espacio Europeo de Enseñanza superior y las demandas del aprendizaje permanente ha puesto de relieve la responsabilidad de las universidades de facilitar el acceso y éxito de su alumnado. La orientación al estudiante (especialmente en su fase de transición temprana) constituye un elemento central de calidad institucional y el fomento del desarrollo comunitario y la integración del estudiante. En este contexto, las iniciativas de mentoría electrónica entre pares son cada vez más comunes en las universidades europeas como estrategia para reducir el aislamiento y la distancia entre estudiantes, facilitando la colaboración entre pares, creando sentido de comunidad entre estudiantes y posibilitando la creación de nuevos programas orientados a mejorar el acceso, apoyo y orientación. Situándonos en la confluencia de tres áreas principales de investigación y práctica (la transición a la universidad, la orientación al estudiante a través de la mentoría entre pares, y la comunicación mediada por ordenador o CMO), este artículo propone la mentoría electrónica (e-mentoring) entre pares como una nueva alternativa orientadora para facilitar la transición de los estudiantes a la universidad. Para ello, revisamos la escasa literatura existente en el tema, recogiendo revisiones teóricas, informes anecdóticos y resultados programáticos, y por último proponemos líneas de investigación en el tema.

**Palabras clave:** transición, adaptación, orientación, estudiante, universidad, mentoría, e-mentoría, mentoría electrónica, comunicación mediada por ordenador, apoyo entre pares.

## Introduction

Transition to university is defined as a process that takes place during the first months of a student entering third level education and is characterised by the new academic, social and personal challenges the student experiences. In this moment of early transition, early guidance helps the reflection process that academic, professional and personal transitions imply. Guidance is at the core of European educational policy promoting life long learning (EC, 2004), and is central to institutional quality.

Mentoring is a form of guidance which has increasing acceptance in the European context, to the point that the European Council includes mentoring in the definition of guidance (EC, 2004). Of special interest is electronic mentoring, given the potential of information and communication technologies to reduce isolation and distance between students, facilitate student collaboration, create community feelings and make it possible to create new guidance programmes that improve access and support. In this paper we present a literature review of e-mentoring in higher education, gathering theoretical reviews and programme results, in order to propose programme implications and questions for future research. We have collected and analysed an extensive bibliography of over 400 publications, canvassing them from multiple databases including Web of Knowledge, ERIH and Google Scholar using keywords such as “e-mentoring”, “electronic mentoring”, and “telementoring”. The publications were then classified according to the relevance to the issue of peer e-mentoring for transition into higher education (only 13 of those were closely related to it) and analysed from an interpretive approach. The main results of this review are presented next.

### *Peer e-mentoring for transition to university*

Single and Muller (P. B Single & Muller, 2005) define mentoring as a “relationship within a programme that is established between a more senior individual or *mentor* and a lesser skilled or experienced individual or *mentee* (also known as *protégé*), and is intended to develop and grow

the skills, knowledge, confidence, and cultural understanding of the lesser skilled individual to help him or her to succeed” (p. 236). It is consistently associated with the idea of a close and safe relationship underpinned by empathy and mutual trust, free of power relationships, where benefits are bidirectional and mutual. Mentoring has progressively been adopted by higher education institutions in order to facilitate academic, social and personal integration of students. Most mentoring interventions at university are aimed at psychological support, establishing goals and helping to define the career project, providing academic support in specific disciplines, and role modelling (Crisp & Cruz, 2009). Yet, these authors point to numerous limitations in much of the existing literature and call for studies that test the impact of a wide range of educationally significant mentoring perspectives and interventions.

Electronic mentoring (or *e-mentoring*) refers to the use of computer mediated communication (CMC) to support a mentoring relationship. It shares fundamental similarities to the face-to-face version regarding their ultimate goals and programme structure; but it is also different in many fundamental ways, due to space and time flexibility, loss of non verbal cues, asynchronous interaction, attenuation of status differences, scalability, and possibilities for monitoring and evaluation. In the context of higher education, e-mentoring programmes enjoy ever increasing popularity, whether working on their own or in combination with face-to-face provision. They are often presented intrinsically linked to curriculum activities, with a professional or experienced student facilitating problem based learning, such in the classical *Electronic Emissary* programme at the University of Texas (Harris, O'Bryan, & Rotenberg, 1996). In other examples, professionals or college students mentor youths in secondary education about their vocational preferences, (such as HeMentorNet in UK); or college students considered to be in disadvantage (for example, women in engineering and science), as in *MentorNet* in USA and Canada (P. B Single & Muller, 2005).

The examples of peer e-mentoring programmes for transition to university which have been subjected to detailed evaluation are extremely scarce. Hixenbaugh (2005) reported on their experience at the University of Westminster, where participation in a peer e-mentoring programme was associated to higher levels of social integration and attachment to college, academic confidence, self-esteem, self-efficacy and academic ambition. More recently, the pilot undertaken at UNED (Madrid) has contributed interesting research results relating to competencies developed through mentoring and the processes by which this happens (Sánchez, Manzano, Risquez, & Suarez, in press, 2011). Also, a pilot peer e-mentoring programme has been extensively evaluated at the University of Limerick in Ireland which has found indications of the relationship between active participation and academic adjustment, although no effects on academic performance and retention were observed (Rísquez, 2010). Still, peer e-mentoring for transition to university remains largely unexplored. Furthermore, the gaps highlighted by Crisp and Cruz (2009) in research in mentoring in higher education are even more acute for electronic mentoring, as research is mostly based on self-reports and impact is only measured with satisfaction. The implications for guidance practitioners are discussed next regarding the context where programmes take place, their design, the process and their product.

### *Regarding the context*

After her long experience with e-mentoring programmes, Harris (en Kevin O'Neill, Harris, Cravens, & Neils, 2002) concludes that the strategic integration is the most important determinant of their success, which has implications for quality control, financing, and curriculum design. In her words (Kevin O'Neill, et al., 2002):

*E-mentoring should never be planned as primarily publicity for the sponsoring organisation, and should only be done when a genuine need is perceived and a realistic plan can be implemented long-term. (p.9)*

Ideally, required resources should be identified in direct proportion to the number of students served since too often the advantages of e-mentoring cover up the administrative and support resources required for them to be effective (K. O'Neill & Gomez, 1996; Harris, en Kevin O'Neill, et al., 2002; Williamson, in Ross, 2004; Peg Boyle Single & Single, 2005). Moreover, there is great potential to adopt e-mentoring as a pedagogical strategy within subjects, as in the case of well established initiatives such as the Electronic Emissary in U.S. (Harris, et al., 1996). Indeed, Miller (in Ross, 2004) emphasises that e-mentoring programmes focusing on personal development may be more successful if they are made available through project related work within the curriculum. This aligns with the importance on getting teachers and academics directly implied in the guidance process, which requires their implication and time, changes in the role of the guidance provider, team working and a longitudinal approach to programme intervention (Jarrot, 2010).

### *Regarding the design*

The existing literature suggests two main implications for the design of peer e-mentoring programmes for transition to university. The first of these revolves around voluntary participation, which is an essential element of mentoring, yet paradoxically, imposes a challenge to active engagement. While in the programme at the University of Westminster a mentor is assigned to all first year students (Hixenbaugh, et al., 2005), the e-mentoring literature also presents clever applications of technology to assess entry cohorts in a scalable way (Peg Boyle Single & Single, 2005).

The second design implication which arises from the use of computer mediated communication (CMC) to facilitate peer mentoring relationships is the adoption of hybrid models that, where possible, combine face and virtual contact, as initial meetings have been found useful in other e-mentoring experiences (Ensher & Murphy, 1997; Headlam-Wells, Gosland, & Craig, 2005; Milne, 2005; Purcell, 2004).

### *Regarding the process*

From the existing literature, suggestions for future programmes and research emerge around two main areas. The first one concerns the design of virtual communication environments that maximise networked learning and social presence, and which accommodate individual preferences and maximise the advantage of spatial and temporal flexibility which e-mentoring offers. Ideally, tools should be easy to find and use, and full integration is needed with email and mobile technology. Additionally, mentors must be able to create a sense of "social presence" through the use of emoticons (☺☺☺), humour, pictures, etc., in order to create relational attachment and "electronic chemistry" (Hamilton & Scandura, 2003) and help the cultivation phase of the mentoring relationship. This can be facilitated through the use of mobile technology (Peg Boyle Single & Muller, 2000); and other tools commonly used in social networks (e.g., tests, poking, tweeting, etc.), as advocated by (Sobrado, Fernández, Ceinos, & García, 2010).

The second implication revolves around the challenge found in peer e-mentoring programmes for transition to university to generate and maintain realistic expectations and responsibilities (Hixenbaugh, et al., 2005; Sánchez, et al., in press, 2011). In this direction, Kasprisin et al. (2003) have experimented with online interactive materials based on case studies, and Oliveros et al.

(2003-2004) propose contact and online support among mentors. It would also be necessary to formalise the negotiation of the expected amount of contact and procedures to follow in the absence of participation (also recommended by Bonnett, Wildemuth, & Sonnenwald, 2006; Clutterbuck & Cox, 2005; D. K. O'Neill, 2001), which would be more likely to implement within the context of a programme which is embedded within the curricular design of the course.

### *Regarding the product*

While it is necessary that an e-mentoring programme sets specific targets, its impact is strongly influenced by the effect of multiple individual and contextual variables. Qualitative evaluation of process and product can provide information on contextual and individual variables that are associated to the success of the relationship. For example, research suggests that those individuals who are isolated, stigmatised, or experience lack of support may be especially motivated to participate and can derive higher returns on interventions offering help via CMC, and literature places gender as another important mediating variable (see Risqued, 2010 for a review). However, the impact of peer e-mentoring programmes for transition over quantitative indicators such as academic performance and retention has not found much support yet (Risqued, 2010). In short, we suggest a cautionary note on the impact of guidance initiatives that professionals assume. Longitudinal assessments of the impact of early e-mentoring throughout a student's stay at university; and consideration of other developmental goals during the whole degree and at the time of departure from university are possible outcomes to be evaluated further.

## **Conclusion**

Through e-mentoring, early guidance at the university can move on from a once-off or marginal activity to being immersed in the teaching and learning process towards facilitating student involvement, personalised and continuous attention to students, and experiential and independent learning. There is huge potential to further explore and examine the benefits of e-mentoring for student reflection along his/her studies and further career, aided for example by the use of electronic portfolios. Academic and guidance professionals must help to generate research evidence in order to inform innovation in specific contexts and guarantee programme quality. But beyond research, university culture must promote teachers taking their share of responsibility in student guidance to a greater extent than they already do, which is more likely to happen when initiatives for early student orientation are integrated into the core activities of the institution, constituted by faculty members, and coordinated centrally. It is also interesting to study the potential for curricular integration of this type of initiatives in academic planning and module accreditation, as is the case in some Spanish universities (Sánchez Ávila, 2009).

We also believe that curriculum integration of peer e-mentoring transition programmes is the most sustainable solution to the challenges to active engagement that voluntary participation poses. Alternatively, programmes may focus on those students who show early signs of maladjustment, which would imply a move towards secondary prevention focused on early diagnosis and solution of problems. This has implications for identifying needs, selecting mentees and perhaps predicting levels of participation. For example, Garcia et al. (2001) hypothesise that e-mentoring could be less effective than traditional face-to-face contact for students who display behavioural, attitudinal or high risk characteristics.

We have also exposed the implications of social networking for peer e-mentoring programmes for transition in university, as Internet has revolutionised how we understand the use of CMC in

education and guidance. Redecker et al. (2010) note that *Web 2.0* or *Learning 2.0* is being used in European education and training to provide access to information to new and prospective students; extend learning to wider communities; support the exchange of knowledge; increase academic achievement with the help of motivational, customised and attractive environments; and implement instructional strategies to support, facilitate, enhance and improve learning processes. A recent European Commission report (2010) highlights the potential of online networks to facilitate peer-supported learning. Yet, despite of widespread adoption of these technologies across sectors of society, significance reticence is observed to its adoption for developmental and guidance purposes (Sobrado, et al., 2010). The use of Internet social networks in the context of e-mentoring programmes can emphasise peer communication within a first year "community of belonging", encouraging new students' autonomous participation instead of dependency from a mentor. Internet social networks offer great potential for combining the dyadic mentoring model with more flexible and complex ones (such as group, multiple or network mentoring), where students are encouraged to develop multiple relationships with other mentors or peers. There is great potential to explore students' perceptions on the use of social networks to manage e-mentoring programmes, since, as indicated by Headlam-Wells et al. (2005) there is very little empirical research on the potential of CMC for mentoring programmes beyond email. And, where student virtual communities grow naturally, it would be most interesting to explore their impact on students' adjustment to their new environment.

There is, in short, a great potential for future applications and research in the area of peer e-mentoring in higher education for the transition to university. The emergence of communities of practice at local, national and European level will be crucial to this, as we continue working toward the ideal of European university to which we aspire.

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