10th EDEN Research Workshop

Towards Personalized Guidance and Support for Learning

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Introduction

High quality research into open learning is indispensable. It provides important information to enhance learning with technologies, improving the learner's experience, to assist effective decision-making, and helps to ensure the viability of products and services. This is vital in a field where change is constant and new innovations arise on a daily basis.

Significant interest from the professional community has clearly confirmed the relevance of the EDEN initiative to run the forum of the bi-annual Research Workshops. The RWSH series represent the meeting place of top European and global research for open learning and draws the map of major trends in the field.

EDEN's 2018 Workshop "Towards Personalized Guidance and Support for Learning" focused on the crucial and changing roles of teachers in supporting student learning in the digital world. This includes the creation of enabling conditions that encourage learning personalization, learner agency and self-direction. Experiences of learner empowerment resulting from balanced "guide on the side" teaching, timely teaching interventions, consistent feedback and feedforward, explicit teaching of learning-to-learn strategies, assessment for learning, and technology-based adaptive teaching provided substantive background for reflection and discussion.

Research topics of interest included: Personalized learning: accompanying learners while addressing distinct learning needs, situations or preferences – Teachers' and learners' roles: rethinking teaching facilitation strategies using the potential of digital technologies – Open education: making the most of openness to ensure student success – Adaptive teaching: enhancing teacher decisions through course analytics and course awareness methodologies – Formative assessment: assessment for learning and the implementation of complementary approaches – Feedback: reinforcing teacher-learner dialogue through different channels in networked environments.

The tradition of awarding the "EDEN Best Research Paper" will be continued. The selection process takes place in collaboration with the Ulrich Bernath Foundation for Research in Open and Distance Learning. In 2018, the 10th Anniversary of this movement has ben celebrated. The Foundation also supported five young scholars with grants for successfully submitting a conference paper to be presented in Barcelona in 2018.

A PhD Student Symposium was organised the day before the Research Workshop, hosted by the Universitat Oberta de Catalunya (UOC), with the participation of 30 young scholars. The Symposium has been designed to foster the exchange of experiences and knowledge among doctoral students doing research in the area of the event's theme, while providing a discussion forum for the advancement of doctoral research. The Symposium was led by a panel of international experts on e-learning.

Higher Education is changing in nature. The new way of thinking, shaping a new paradigm is based on modularization. In this paradigm, the vision of personalized pathways of higher learning, qualifications and certification is manifested. In frames of the RWSH10, the OEPass Multiplier Event was organised, as initiative of the Open Education Passport project on the topic of micro-credentials, a timely and relevant concept in higher education and adult learning.

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THE TIME FACTOR IN STUDIES ON DROPOUT IN ONLINE HIGHER EDUCATION: INITIAL REVIEW OF THE LITERATURE AND FUTURE APPROACHES

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Summary

This paper addresses the factor of *time* in relation to dropout in online higher education (OHE), linking both to fully online models such as UOC's. In OHE, time-related reasons are the most important factors for dropping-out; conversely, time management factors emerge as a key issue for continuance intention and re-enrolment. This paper thus presents an initial review of the literature, with key concepts and approaches on the time factor, which shall inform future research. Key issues are centred upon two phenomena: the *flexibility* offered by OHE and asynchronous learning, which is the main attraction for busy adult learners but can also induce *procrastination* and conflict; and the common *misconceptions* about the magnitude of workload, time, and effort required by OHE. We present two main theoretical approaches: time management studies, and work-study-home conflict/balance; and discuss possible implications and interventions for fully online models of OHE.

Dropout in online higher education and the time factor

Over the last 20 years, research on dropout in online higher education (OHE) have gained tremendous importance. Most studies investigate the factors that influence attrition, retention, persistence, and success, trying to construct new models of attrition and profiles of students most likely to dropout or persist. A review of the research (Holder, 2007) on the profile of persisters indicates that, besides being academically prepared, they possess time management skills and high levels of engagement, self-directedness, self-discipline, motivation, and commitment.

In that regard, the time factor has been pointed out as an important issue for dropout in many studies in traditional, brick-and-mortar universities. Kember (1999), the author of a classic model on attrition, mentioned that many students face difficulties in trying to conciliate study requirements with conflicting demands from family, work, and social commitments. Reviewing the literature in Spanish on dropout in higher education, Tuero, Cervero, Esteban, and Bernardo (2018) found that one of the most important variables is the time dedicated to work while studying. However, other studies (e.g. Sánchez-Gelabert & Andreu, 2017) found that what really makes it difficult for the students to persist are not the hours dedicated to a job, but their time management skills – which allow them to balance effectively their study and job responsibilities. Other factors connected to dropout proneness and persistence also have strong

correlations with the time factor. Success and performance in traditional educational settings are strongly influenced by time management skills (Michinov, Brunot, Le Bohec, Juhel, & Delaval, 2011). That influence is stronger in non-traditional students – adult learners, which constitute the majority in OHE – who are usually more affected by work-study and family-study obligations (O'Toole & Essex, 2012).

In the context of online open universities, on the other hand, the influence on dropout of factors related to time are even stronger. In a review of dropout factors in OHE, Lee and Choi (2011) found a number of studies that highlighted time management skills, estimation of the time required to balance academic and professional obligations, and ability to juggle roles/balancing multiple responsibilities as key factors that influence persistence and attrition.

The Universitat Oberta de Catalunya (UOC) radicalizes such context. As a *fully* distance teaching university, it delivers education through an asynchronous mode based on e-learning (Sangrà, 2002), with a highly flexible educational model with no permanence requirements and very few enrolment requirements. UOC's typical students mirror the main group likely to enrol in virtual university degrees, that of *non-traditional learners*: mature-aged or adult, with full-time or part-time jobs and family responsibilities, or a combination of these characteristics. Statistically, 40.5% of students are 30 or over, 81.5% study and work, and 72.6% have a prior university education; dropout rate at UOC is 57.6%, with first semester drop-outs accounting for nearly half of this total (Grau-Valldosera, Minguillón, & Blasco-Moreno, 2018). The correlation is clear: "non-traditional students tend to drop out more frequently than their traditional counterparts even when they have good performance" (Sánchez-Gelabert & Andreu, 2017; p.28). UOC's flexible model implies that online learning is largely self-directed and dependent upon the learners' agency and ability to manage their personal and academic responsibilities. However, this produces high attrition rates, especially after finalizing their first semester, due to misconceptions learners have about the workload (Bawa, 2016), and their home/family obligations and employment commitment (Carroll, 2008). Grau-Valdossera et al. (2018) thus point that time-related reasons were the most important factors for dropping-out; conversely, time management factors during the first semester emerge as a key issue for continuance intention and re-enrolment.

Therefore, if *time* appears to be a crucial factor for attrition both in face-to-face and online learning environments, more research is needed on its impact and dynamics in fully OHE models such as UOC's, so as to improve retention, performance, evaluation, and personalized guidance and support for e-learning.

The time factor: initial review and implications for OHE

This paper thus presents an initial review of the literature, with key concepts and approaches on the time factor, which shall inform future research. The key issues seem to be centred upon two phenomena: the *flexibility* offered by OHE and asynchronous learning, which is the main attraction for busy adult learners but can also induce or facilitate *procrastination* and conflict (Doherty, 2006; Holder, 2007); and the common *misconceptions* about the magnitude of

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workload, time, involvement, and effort required by OHE (Bawa, 2016). Indeed, time related issues involved in online courses have replaced the problem of distance (Mason, 2001) that was more typical of brick-and-mortar universities and are clearly connected to high attrition rates in online learning environments.

In that regard, many authors (see Holder, 2007, for a review) stressed the importance of *time management* for persistence and successful online learning. Bunn (2004) found that students with a heavy workload tended to persist and succeed, provided they had good time management skills so as to deal effectively with conflictive demands. Reviewing the literature, Lee and Choi (2011) found that the skills included the ability to estimate the time and effort required for a task, to manage time effectively, and to balance multiple responsibilities. Conflictive demands raised by engaging with OHE degrees seem to be central for persistence and attrition. Reviewing the most common reasons for withdrawal, Ashby (2004) found that the most important ones were "the difficulties students have in juggling their studies with other aspects of their lives", especially personal/family or employment responsibilities, concluding that "[t]ime is clearly a major issue for O[pen] U[niversity] students" (p.72). Corroborating other literature, Yukselturk and Inan (2006) found that the most important factor affecting student retention is finding sufficient time to study; work life demands played a special role in that. Such phenomena have been studied via two main theoretical approaches: *time management* and *work-study-home balance/conflict*.

Theoretical approaches

Time management approach

Time management can be defined as the ability to plan study time and tasks (Broadbent & Poon, 2015), or the learners' scheduling, planning, and properly managing their study time (Pintrich, 2004). It has been studied as part of academic self-regulated learning (SRL) strategies (Pintrich, 2004). Self-regulation is more crucial in online education (i.e., given the lack of face-to-face interaction with instructors and peers, no need to be physically present), for it heavily relies on active, autonomous participation. Among the SRL strategies with the strongest findings for academic achievement is time management (Broadbent & Poon, 2015). An analogous, slightly more specific concept is employed by Puspitasari (2012): *study time management*, which refers to "academic time management, in which one is managing his or her time to study by setting learning goals, scheduling study time, and monitoring the attainment of the learning goals" (p.6).

A secondary and related theoretical approach refers to studies on academic *procrastination*, which is viewed as a specific learner characteristic in time management and is defined as intentionally postponing or delaying work that must be completed (Michinov et al., 2011). Research into the relationship between procrastination, motivation, and performance has forayed into their underlying self- and social-regulation processes, showing that higher levels of procrastination are related to lower levels of self-regulation and poorer learning outcomes (Michinov et al., 2011).

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Research has found numerous correlations between time management skills/procrastination and motivation, retention/persistence, performance, and dropout proneness. Holder (2007) points that time management skills are connected to learning orientation (cognitive styles), environment (allocating space and time to study), and motivation (to avoid procrastination in self-directed learning). Not surprisingly, in asynchronous learning, time management is strongly connected to performance (Loomis, 2000). Conversely, procrastination is negatively related to leaners' participation and performance (Michinov et al., 2011). Regarding online academic achievement/success, a review of the literature by Michinov et al. (2011) found a significant positive relation with time management/study management. Of course, all these factors impact dropout and persistence in OHE. Time restraints, lack of time, time management, and procrastination are the primary reasons for students failing or dropping an online course (Doherty, 2006). In contrast, time management is a key factor for persistence: persisters score higher in emotional support, self-efficacy, and time and study management (Holder, 2007).

Work-study-home conflict/balance approach

This approach is derived from the tradition of research on work-family balance/conflict. Work/study, or work/school conflict (WSC), is defined as the degree to which work affects the student's ability to meet school-related demands and responsibilities (McNall & Michel, 2017). Eller, Araujo, and Araujo (2016) extended the concept to research *work-study-home* conflict/balance in online master's students. However, the emphasis on conflict dominates research, which usually seeks to study its impact on stress and well-being, and indicates that non-traditional students experience intense conflicts between the work, study, and home domains, especially female students (Carney-Crompton & Tan, 2002). Thus, WSC is negatively related to academic performance (Owen, Kavanagh, & Dollard, 2017). Research usually focuses on the institutional domain – i.e. how its structure and dynamics produce conflictive demands and how to alleviate or prevent them. However, Eller et al. (2016) studied the individual strategies online learners used to manage demands. Yet, being rather new, this approach has produced little research, and there is a lack of research on non-traditional students. It has rarely been applied to study the relation with dropout and persistence in OHE (e.g. Pierrakeas, Xeno, Panagiotakopoulos, & Vergidis, 2004).

Future directions: possible interventions and results

Besides furthering research on the time factor in its relations with dropout and related concepts, some possible interventions and strategies can be envisioned to prevent dropout and time-related conflicts, and to develop and hone learners' time management skills – which would probably improve student retention (and agency, self-direction, performance, success, satisfaction, and motivation). Their focus should be on the first academic year, especially the first semester (which presents the highest attrition rates), and preferably be embedded in ampler interventions, for time management and issues influence and are influenced by other dropout factors - indeed, it is usually the interaction among different factors that lead to completion or

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non-completion (Lee & Choi, 2011). Such strategies would ideally address situational, institutional, and personal factors:

- Provide *flexibility in student assessment* (to avoid dropout or stop-out) (Carroll, 2008);
- *Identify at-risk students* early on and provide them with appropriate, personalized training opportunities and support (Pierrakeas et al., 2004), e.g. an introductory course for the organization of academic work;
- Provide *targeted advice and orientation* to students, regarding time management, procrastination issues, and a realistic picture of what is required at various stages of the course, especially at key points (first semester/first year) and to students identified as "at risk" (Ashby, 2004; p.74);
- Design *personalized course plans* and curricula, focusing on adequate first enrolment;
- Provide *staff trainings* to qualify staff and provide guidance/support regarding such issues (Castles, 2004).

Finally, more research on the subject is needed in order to build robust frameworks for action, implementation, and monitoring the impact of interventions (Ashby, 2004), especially in the context of fully online universities. UOC has recently implemented a research/interventional institutional project, called ESPRIA ("First-year students"), which shall further enrich our scientific understanding of these important matters and how to deal effectively with them.

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