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Digital Solutions for Online Assessment in English for Specific Purposes (ESP) Courses

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Abstract. In the wake of the pandemic, universities have responded to the educational paradigm shift by partaking in blended and distance learning mediated by digital tools. Lecturers are challenged to reconsider traditional forms of assessment in order to find the most effective means to conduct the final examination process. Technology has been introduced in the ESP classroom since the dawn of the digital revolution and as the web-based materials evolve so do the possibilities for integrating a wide range of authentic, innovative resources. This paper overviews a number of effective alternative methods of "e-assessment", outlining both their advantages and their limitations in the context of higher education. **Keywords**: *ESP, online assessment, open book exam, e-project, proctoring software tools, blogs and wikis*

1. Introduction

In the wake of the pandemic, universities have responded to the educational paradigm shift by partaking in blended and distance learning mediated by digital tools. Lecturers are challenged to reconsider traditional forms of assessment in order to find the most effective means to conduct the final examination process. Technology has been introduced in the ESP classroom since the dawn of the digital revolution and as the web-based materials evolve so do the possibilities for integrating a wide range of authentic, innovative resources. This overview explores the latest assessment practices that employ technology to devise tasks that not only engage the attention of students but also ensure the achievement of long-term ESP learning outcomes. The article also attempts to demonstrate the various elements that digital tools may add to the assessment process in terms of novelty, interactivity, authenticity, plethora of resources, autonomous learning and self-assessment, as well as the variables that must be taken into consideration when choosing digital solutions to the problems raised by the online environment.

Assessment constitutes one of the most important aspects of an educational experience. That is why it is equally regarded as one of the most difficult to reform. Recently, the fast pace of change has engendered a search for inventive technologies which could facilitate a revision of assessment instruments. A myriad of potentialities is widely accessible in terms of proctoring software tools, e-projects mediated by the web and various types of communicative interaction media such as wikis and blogs. Despite the clearly perceptible advantages, "[l]ike writing, and according to Plato's word, the digital is a pharmakon, that is, at once a poison, a remedy and a scapegoat" (Stiegler 2010: 19). Hence the advent of the digital may very well be the key to delivering effective lessons in the context of physical distancing yet its use is marked by an ambivalence. Indeed, within the ESP classroom teachers may encounter unexpected problems such as a fluctuating internet connection or difficulty in monitoring the progress of the students. ESP online assessment within higher education institutions demands a close examination of both the technical demands and the human aspect involved in this laborious process.

2. Open book exams and proctoring software tools

The recent transition to physical distancing and to an online teaching-learning environment has led to various pedagogical decisions regarding student assessment and evaluation strategies. When integrating digital competences to give language skills value, "[l]anguage teachers must build their teaching paths in strict accordance with the student's needs, motivations, peculiarities and resources." (see Mărunțelu, 2018: 137). Traditionally, alternative assessment, also known as "authentic assessment", "performance assessment" or "productive assessment" (see Brady and Kennedy, 2005: 3), shift from pen-and-paper exams to forms of assessment which progressively track the performance of students while kindling their interest and motivation. It is accomplished through activities that include debates, problem-solving exercises, essays or reports. In the previous year many top universities, from Harvard University to University College London, introduced alternative online assessment in the form of a long-term capstone assignment or a 24-hour open book exam. As one might suspect, a key problem that arises in the case of online examination is that cheating becomes harder to detect. In this sense, a digital solution employed by many universities is to assess students online through software tools that provide proctoring.

In an open book examination (OBE) the emphasis is no longer placed on extensive recollection of information, but on the students' understanding and application of knowledge (see Rakes, 2008; Theophilides and Koutselini, 2000). The scope of an open book exam can be wider since students can look up any piece of information or organize in advance all their materials either in their minds or with the aid of a reference list. Thus the exam tasks may focus on metacognitive abilities and teachers can construct problems that demand a higher level of understanding, multiple steps and a more significant amount of time to solve. Moreover, learning is continuously stimulated since even the interval of the exam could be used as an arena of learning. This creates a consistent learning environment instead of the anxiety and overload of information that student tend to experience during traditional exams (see Theophilides and Koutselini, 2000). Furthermore, open book exams provide more authenticity since it is not the memorization of key concepts that is tested, but the ability to apply them in a specific situation (see Williams and Wong 2009). Still this alternative type of examination may offer a false sense of security to some students who might neglect studying altogether. It is also difficult to monitor the sources that students use to solve the tasks or whether the answers even belong to them. Thus fraudulent activities may occur if the exam is not taken under watchful human or automated eyes.

The digital environment has provided solutions to fraudulent practices in the form of proctoring software tools. Websites such as Examus, Proctorio, Mercer, Respondus, ProctorU, Examity or Verificent work with universities to ensure a secure, invigilated examination process that is automated and efficient. The lecturer has the possibility to use, in addition to live proctoring, an artificial intelligence that automatically flags any suspicious activities. If the examination contains a standardized test the software can provide automatic grading and create instant reports. In the case of an open book exam these proctoring applications provide identity verification, biometrics, location tracking and monitor atypical behaviour through computer vision. Proctoring tools equally configure the computers to block all applications and ensure browser lockdown. Notwithstanding the technical precision that such tools promise in exchange of payment, several issues may be raised.

Students need to be instructed in how to use these proctoring tools and have at their disposal an infrastructure that supports the software. Technology may have known an unprecedented evolution in the last years but the possibility that the student may manage to consult or receive information from unauthorized sources still exists. For example, a recent research conducted in Norway which surveyed 212 engineering students and 162 teachers revealed that both instances regarded cheating in online exams much easier than during physical exams (see Chirumamilla et al., 2020). Cameras may misinterpret some natural movements of the body caused by stress or a reaction to external factors from their own environment (e.g. sudden movements of the head, arms or eyes) as suspicious behavior. Moreover, students are not allowed to move from their seats during the exam regardless the circumstances and a simple power outage may automatically lead to failing the exam. Overall, the monitoring, use of video recording of the students as well as the possible faults in the proctoring software tools may cultivate a climate of distrust between the institution and its students if the integrity and dimensions of the assessment process are not controlled by the teachers.

3. Blogs and wikis

ESP students have come to recognize wikis and blogs as an extension to their study, a digital environment where they can learn at their own pace, share their findings and be assessed according to their progress. When thinking about the lack of motivation that students could experience during the online learning and assessment process, a valuable tool to promote communication, collaboration and an authentic use of language is the Internet. Teachers may integrate blogs, wikis, forums, even social media in the classroom and hence encourage collaboration in completing group assignments. The formative and summative dimensions are brought together in this form of assessment that, according to researchers, results in "improved learning achievements, high levels of student satisfaction […] and, in some cases, reduced teacher workload" (Nicol and Draper, 2009: 194).

Blogs and wikis allow students to create and edit online content that becomes readily available to both teacher and classmates inasmuch as the role of reader and writer is appointed to all of them. If the ESP teacher sets the right goals, prepares authentic tasks and provides opportunities for students to interact, the level of motivation will increase and students will actively engage in constructive feedback. In addition to the opportunity to display their language skills and knowledge of specialized terminology, collective projects in the form of blogs and wikis also allow teachers and learners to synchronically send remarks, comments and even questions, promoting self-improvement in a constructive manner. Although the use of blogs and wikis is still a new learning and assessment instrument, researchers who set out to explore university blogging tools highlighted the favourable shift in the attitude of students towards writing activities, their interest in engaging in the process of drafting, writing, peer reviewing and revising (see Boas 2011), as well as an increased fluency and accuracy when using the target language (see Lee 2010). It was equally observed that performance was directly related to user acceptance considering that "social influence and performance expectancy had significant relationship with behavioral intention, while effort expectancy did not" (Pardamean and Susanto, 2012: 211). Considering the emphasis that society places nowadays on visibility in the virtual environment, the prospect of the digital information being seen and distributed online develops a sense of responsibility for the content that students create. Thus a more authentic learning and assessment experience is created amidst a generation of students that has come to be more familiar with the online environment than ever before.

Blogger, WordPress or PbWorks together with the multitude of other available online resources promote self-assessment and self-monitoring which in their turn contribute to the advancement of cognitive autonomy, soft skills and critical thinking. Students may be encouraged to choose a number of authentic materials, studies, journals and comment on each resource, to draft a career plan or to use the blog or wiki as a personal reflection instrument. Through this form of continuous assessment, the progress of the students is visibly marked. Students receive constant feedback from both teacher and peers. Nevertheless, ineffective or unwanted events can occur when peers overemphasize and continuously point out or correct the choice of words or grammar mistakes. Furthermore, there are logistical concerns regarding the grading of the content. As a form of continuous assessment, however, blogs and wikis complement the final examination in a harmonious manner. The educational, social and reflective processes that are embedded in this digital tool lead to efficiency in achieving long-term ESP learning outcomes insofar as methods can be implemented to overcome and prevent any negative experiences.

4. E-projects

Project-based learning (PBL) assessment represents another current alternative to online examinations. E-projects entail cooperation to stimulate participation and prompt an active participation in digital group tasks. Final research projects have been successfully used in the assessment process even before the pandemic due to their distinct ability to congruously bridge the formative and the summative processes. "An alternative assessment strategy, such as a project, can more easily provide for the complexity of the learning, the connection among skills, and the need for a more authentic basis for judging student learning" (Nădrag and Buzarna-Tihenea (Gălbează), 2018: 201). Indeed, electronic projects provide a more holistic perspective on the progress of the students while concomitantly displaying learning in itself as an outcome. In a similar manner in which future employees would independently prepare for a job assessment, so do students select and show evidence of their best work in search for validation and appraisal. Specifically, the degree of independence that e-projects offer

fosters lifelong learning. From this perspective, e-projects offer "a personalised view of their accumulating summative assessment results. After graduation, students can build on their existing portfolio and skills profile, rather than starting with a blank sheet again" (Cotterill et al., 2006: 197). Therefore, students assume more responsibility taking into account that assessment determines their progress in foreign language acquisition.

Naturally, the ESP teacher has the essential task of guiding, advising and preparing meaningful, diverse and attractive tasks that would motivate students to both internalize and apply the language skills and content included in the course. As Kern observes, "[s]uccess in technology-mediated projects has been repeatedly shown to depend largely on teachers' efforts in coordinating learners' activities, structuring language and content, and helping learners to reflect critically on language, culture and context." (Kern, 2011: 210). Teachers can take advantage of the possibilities opened by this alternative form of assessment when faced with the challenges posed by physical distancing. E-projects represent valuable tools to stimulate creativity and critical thinking by solving problems, investigating issues, providing explanations and answering questions. Teamwork engenders a flow of ideas, constructive criticism, the exploration of key issues and the overall broadening of knowledge.

The context of the assessment in the form of an e-project creates a simulation of reality. In the workplace soft skills such as leadership, project management skills, the ability to be productive in a team or to tackle any conflicts that may arise between the members of the group are vital. Nevertheless, these skills are difficult to assess through a standard form of examination. Usually e-projects take an open-task form. There is not only one correct answer to the task and instead students decide their own path towards reaching the objective. Some may consider this aspect an impediment. Still, their motivation increases and they experience more confidence in applying language structures, specialized terminology and concepts as they choose. Therefore, as the ESP teacher implements this alternative form of assessment students feel more empowered to take control over their success.

5. Conclusion

Higher education is currently undergoing a reform which fosters the need for a quality assessment process. Innovative approaches move away from the outdated high-stakes assessment and take a stance in favour of methods which not only measure, but also promote learning. In this respect, the use of technology in the ESP class has spurred educational changes by providing students with authentic materials and engaging them in a stimulating learning environment that offers them the tools to ultimately become autonomous life-long learners. The digital learning environment represents an attractive alternative to traditional assessment, capable of integrating the four language skills towards fulfilling the academic needs of the students together with their professional needs for their future occupational settings.

Nevertheless, it is essential to acknowledge that online assessment is a double-edged sword that presents a plethora of variables which could affect the success of educational change. Issues regarding the degree of authenticity, fairness and accuracy of assessment constitute real problems. Furthermore, when adopting alternative methods of "e-assessment", particularly in times of pandemic, it is necessary to take into consideration that their success is predicated not only on how well these fit the overall learning outcomes of the course, but also the degree in which they suit the learning conditions and needs of the students. Online classroom interactions have to recognize and overcome factors ranging from digital insecurities to socio-economic inequalities in order to build a strong academic community, to encourage and motivate learners through the process of teaching and assessing. Thus, when exploring digital solutions that would overcome the possible drawbacks of an online form of examination in the ESP classroom, the new vision on assessment should reflect an understanding of the ethical issues raised by the use of technology and advance digital tools that are adapted to specific educational contexts in order to help students flourish.

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