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Contributions to a successful e-learning process – a case study

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Abstract

Our study focuses on a post-graduation programme at Autonomia University, Portugal, whose regime has gone from face-to-face (f2) to blended- and e-learning. Based on semi-structured interviews, this exploratory study aims to analyse the perceived satisfaction of students attending the programme in the different regimes. Considering the interviews made thus far, we have realised that most prefer f2f, though previous experience attending online courses seems to influence students to a more positive assessment of the e-learning regime. Students consider most relevant for their learning process the methodology used – collaborative learning – and the pedagogical relation fostered by recurring to social networks in addition to the virtual learning systems employed. We aim to introduce improvements to the programme itself, as well as assess the most important aspects and tools students perceive as contributing to a successful learning process.

Keywords: e-learning, collaborative learning, virtual learning system, perceived satisfaction.

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1. Introduction

The post-graduation programme in translation at Universidade Autonoma de Lisboa, a private university in Lisbon, Portugal, has been in place since 2001. From a traditional face-to-face (f2f) structure, the programme has also become available online and has been attended by students from several parts of Portugal, as well as by students from other countries (Mexico, Argentina, Nigeria, etc.). As a consequence, the learning process has undergone changes and the virtual learning environments (VLEs) used have also changed. In addition to Moodle and Colibri (Adobe Connect), the Post-Graduation Program in Translation Studies at Universidade Autonoma has introduced social networking as yet another computer-based resource for knowledge sharing, where job posts are divulged and profiles have become professionally valuable. One can conclude that e-learning has strengthened the connection among students, who feel their interests literally go beyond the physical space of the classroom.

This study was designed to assess the most important aspects and tools students perceive as contributing to their successful learning process, to compare the latest outcomes with results from prior studies on perceived satisfaction and the learning process in the referred programme and, finally, to introduce improvements to the programme itself.

We start with a literature review of what we deem the most important issues discussed, namely knowledge acquisition, collaborative learning and perceived satisfaction, followed by a section on the methodology used and a section in which we discuss the findings. We then list the conclusions drawn and further studies to be conducted.

2. Literature review

Bearing in mind the need to respond to the gradual changes our student population has been going through, we deemed it relevant to start with a theoretical reflection on knowledge acquisition processes, followed by a review of literature on collaborative learning (which our study establishes as one of the most important elements leading to successful learning) and finally, by a discussion regarding perceived satisfaction, considering this is viewed as a fundamental factor within the learning process.

2.1. Knowledge acquisition

Learning can be generally understood as a process through which one undertakes an activity leading to a reaction change, whenever that change is not the result of innately learned answers, maturation or temporary states of our body/mind systems (Hilgard, 1973).

Learning processes are gradually becoming more focused on two dimensions that mirror a paradigm shift within teaching/learning structures: competences and the significance of interaction and interrelations. The traditional paradigm, centred on the teacher and knowledge acquisition, has changed to a student-centred paradigm, which is focused on skills acquisition. This implies a change in the educational system, given that the student, now at the centre of the learning process, becomes simultaneously the protagonist and the main responsible intervenient in this process. The teacher then becomes part of a whole gear, where other variables play a role: classmates, learning tools and a set of interactions. Learning has, as its main target, the development of the ability to apply acquired knowledge.

Interpersonal relations and collaborative learning become part of this structure, which is built upon relationships and is conceived within a collective intellectual interaction. Borrowing from Cross's perspective (1998), we may say that the ultimate goal is to develop learning processes. Interaction leading to structured knowledge acquisition becomes particularly significant when we look at e-

learning and b-learning methodologies. It is therefore important to understand how we can build relationship and interaction structures within such systems.

Keeping this in mind, a study identifying three classes of learning factors within e-learning and b-learning contexts was conducted (Quintas, Silva & Teixeira, 2017), the results being as follows:

Class 1 – which we designated **e-Learning and Communication** – focuses on the dynamics of learning using the e-learning platform and students' interaction with lecturers.

Class 2 – which we designated **Face-to-face sessions and Communication** – focuses on face-to-face teaching and learning and on communication.

Class 3 – which we designated **Learning Rhythms and Tools** and whose categories are more diffuse – focuses on the e-learning tools and on learning rhythms.

This study emphasises the concept of interaction and communication in real time, as fundamental factors within the learning process. As such, we are led to conclude the importance of collaborative learning.

2.2. Collaborative learning

Taking into account the growing importance that IT and social networks enjoy within formal learning contexts, it becomes essential to consider the concept of collaborative learning.

Collaborative learning encompasses a variety of teaching and learning experiences which share common features. The most significant common characteristic is a progressive learner autonomy, which, by experiencing learning in a collaborative, and hence social, setting, gives way to the questioning of roles traditionally associated with teacher and student performances. The learning process is both a cause and a consequence of more active student performances, as the learner increasingly becomes more independent.

The first theoretical reflections on the need for an educational shift go back to the 1980s (Astin, 1985; Brown, Collins & Duguid, 1989; Golub, 1988). The following features contribute to a condensed, yet complete, understanding of how to define collaborative learning:

- (1) Learning is active and a process in constant progression. Learners do not process information only, but rather produce themselves new knowledge, through integrating new and previously processed data.
- (2) Learning is interrelated with the context in which it takes place. It is up to the teachers to facilitate challenging learning environments, as a means to stimulate knowledge acquisition.
- (3) Learning is necessarily diversified. The diversity amongst student populations channels a positive emergence of new perspectives and positioning.
- (4) Learning is essentially social.

There is, as a consequence of such processes, a growing accessibility to knowledge, which weakens the traditional relationship between teachers and students. There is a strong sense of belonging to a learning community, which does not demand physical presence in order to become efficient, therefore erasing any time and/or space constraints.

2.3. Perceived satisfaction

Perceived satisfaction has become a field increasingly important within education sciences. Several elements may contribute to student satisfaction, either positively or negatively. Souza and Reinert (2010) list the following as relevant positive factors: the labour market, a good study plan, meeting student expectations, lecturers and their knowledge, lecture planning, teaching methodologies and interaction. Among the negative features, these authors mention poor organisation, and unprepared

lecturers, who do not invest in the pedagogical relation with students. Moreover, Kiam-Sam, Kwok, Wing and Derek (2003) infer that not all students respond to e-learning with the same degree of satisfaction and that f2f learning is still the preferred regime, though satisfaction is linked to programme structuring and organisation.

3. Methods

Ours is a qualitative exploratory analysis using a case study, in this case the post-graduation program in translation at a private university in Portugal – Universidade Autonoma de Lisboa (hereon referred to as Autonoma). According to Stake (2005, p. 133), ‘case studies have become one of the most common ways to do qualitative inquiry’. However, case studies deal with a specific scenario which, in truth, may not be fully extrapolated but is representative of a given reality. According to Yin (1992), a case study aims to build a more or less detailed narrative to explore/describe/explain a specific reality in a specific context.

The semi-structured interview was the basis of our research. Ghiglione and Matalon (1997) distinguish between the semi-structured and the structured interview, stating that the latter is a standardised interview and the former a more open one that allows for an easier understanding of social representations, the different meanings the participants give to reality, as well as their values and behaviours.

A series of interviews was thus conducted to students attending different editions of the programme and a set of open questions were asked in order to assess their perception of the learning process and the relevant elements influencing it. All participants were fully informed of the objectives and methodology of our study, having explicitly agreed to participate in the established terms. Analysis of aggregated data was conducted and student anonymity was ensured.

These interviews were analysed using textual analysis software in order to dissect discourse from a descriptive and an interpretative perspective. The descriptive analysis was made using Alceste, a software that classifies text units and the co-occurrence of words in the units. Interpretation is then conducted based on the outputs provided by the software. According to its official website, ‘Alceste is textual data analysis software (...) that uses hierarchical descending classification (...) ascending classification and a thematic classification’ (Logiciel Alceste, 2017).

The objective of qualitative analysis is to further study a specific case and set of individuals or groups. The aim of researchers is to understand those cases considering the context in which they occurred (Denzin & Lincoln, 2011; Ghiglione & Matalon, 1997; Guerra, 2006; Stake, 2005; Yin, 1992).

4. Findings and discussion

The post-graduation program in translation at Autonoma was created in 2001. At that time, the university offered a Bachelor Program in Translation and Interpretation, the first in the country. Considering the relevance of the European community and its translation service at the time, the post-graduation also included course units on translation for the European community and on English culture, as the working languages offered were English and Portuguese.

Since then, the programme has undergone several changes at different levels. Among other alterations, more general courses, such as those on English culture, have been replaced by courses on software for translation – CAT tools – and the programme is not only available face-to-face but also as an e-learning course.

In 2006, the Bologna Process was implemented in Portugal and emphasis was given to student-centred autonomous learning. At Autonoma, this shift resulted in, for instance, the use of Moodle (acronym for modular object-oriented dynamic learning environment) as a complementary tool for f2f

learning and a means for teachers and students to exchange information outside the classroom environment.

Moodle began being used in the post-graduation program in 2006 and, two years later, a student from the island of Madeira challenged the *status quo* by questioning the possibility of not attending all classes but rather using the Moodle platform as a means of autonomously following the work done in class. This was the start of the change in how the programme was made available – from only f2f to as b-learning and finally as e-learning.

Initially, only Moodle was used to complement to f2f sessions, but the time came when the need arose for a VLE that would allow for synchronous sessions. The first software used was WizIQ – a platform that is described, in its website as ‘easy to use integrated learning delivery platform for instructors and institutions’ (Easy to use, mobile-ready learning delivery platform | WizIQ, 2017). For two years (2012/2013, 2013/2014), WizIQ was used for synchronous sessions that were recorded and then made available to all students.

In the academic year 2004/2015, another e-learning environment was introduced – Colibri. In its website, Colibri is described as ‘a collaboration service that allows one to hold meetings remotely between two or more participants in the academic and scientific community, facilitating meetings, workgroups, classes and tutorials over the Internet. The service enables the sharing of the participants’ audio, video, text, images, white board and the computer screens. It includes a recording facility in order to record and play the sessions back afterwards’ (Colibri conference service | FCCN, 2017).

The post-graduation now includes students from all over the world. In different editions, students from Mexico, Italy, Nigeria, the islands of Madeira and Azores and from the south and the north of country have joined the classes attending the programme f2f in Lisbon, in a room especially designed for these sessions.

So as to foster a sense of group among all those involved, even before the programme starts, in November of each year, a Facebook page is created so that students and teachers may meet in an informal setting and, in particular, so that students may know one another and feel they are one class, regardless of whether they meet in person or just virtually.

Content analysis has been done recurring to Alceste. As previously alluded to, this software programme organises textual units through pertinent association of co-occurring words (Nascimento & Menandro, 2006). By means of this association, words are organised into classes. The significance of words in such classes is linked to the Phi value (0.20 or above), which then unveils the importance of such words in building the respective word class.

This is a mechanical association, whose interpretation is the researcher’s task. Statistical procedures channelled by Alceste have then been subjected to content analysis, the results being as follows.

In this study, Alceste identified six classes of words, which have revealed to be significant for our analysis, and whose distribution is visible in Figure 1.

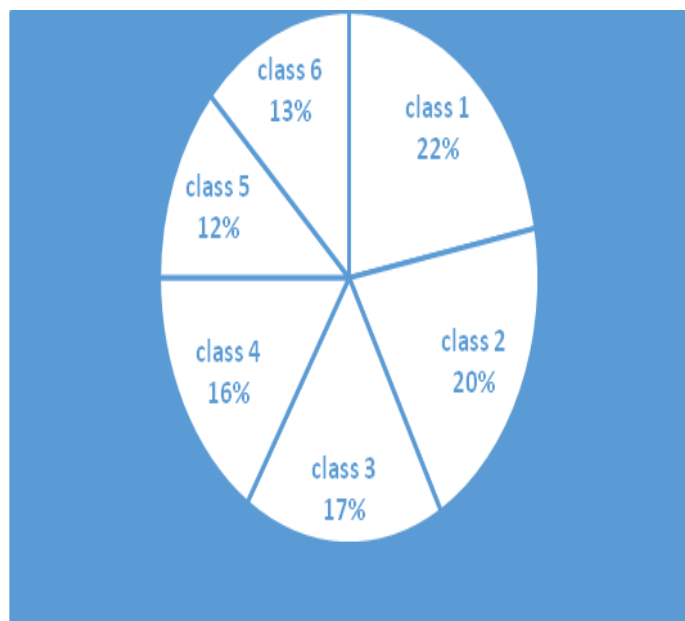


Figure 1. Class distribution by Alceste

As we realised that some of the classes were linked, a new class distribution was designed (Figure 2).

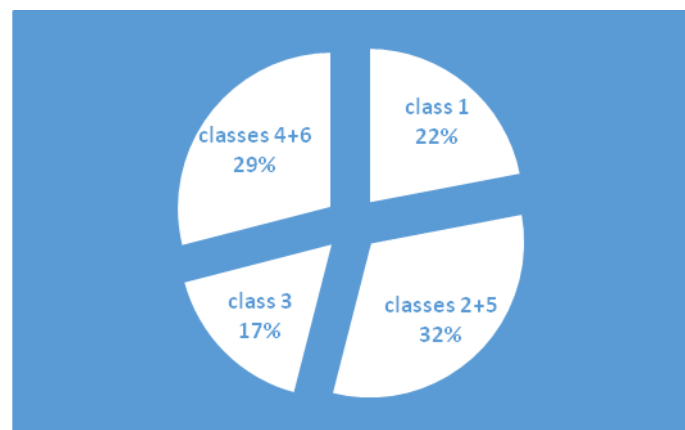


Figure 2. Final class distribution

As referred to before, upon analysing the textual data, Alceste divided it into six stable classes, each with a minimum of 15 Elementary Context Units (unites de context elementaires, u.c.e.), with a total of 56% of classified Elementary Context Units. The number of words analysed in each class is represented in Figure 3.

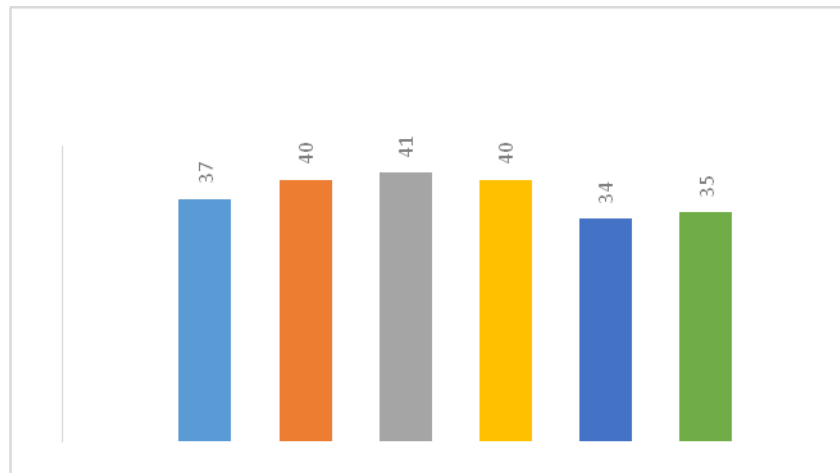


Figure 3. Number of words analysed in each class

Based on the results provided by the software regarding the number of word in each class and the number of words with meaning (above 0.20 Phi), we propose an analysis of the classes whose categories are as follows: Class 1 – ‘Pedagogical Dynamics’; Classes 2 and 5 – ‘Tools’; Class 3 – ‘Communication and Integration’; Classes 4 and 6 – ‘Pragmatic/Hands-On Approach’.

In the first textual class, ‘Pedagogical Dynamics’, the interviewees talked about their previous experience with e-learning tools or the lack thereof. The textual units under analysis revealed the predominance of the words ‘previous’, ‘experience’, ‘study’ and ‘availability’, which leads us to conclude that the existence or the absence of previous experience with e-learning tools seems to play a significant role in the way learners have positioned themselves within our pedagogical model. Also, it becomes clear that the importance of strengthening a feeling of belonging to a particular group comes up, as the word/concept of ‘availability’ also stands out. By ‘availability’ we should understand not only that of teachers within the learning process, but also of learners themselves, as they have engaged in a collaborative network, building on a solid sense of belonging to an academic community. It then becomes clear that the introduction of a social network – Facebook – geared towards specific purposes that would channel the possibility to socialise within common academic and professional interests, would only make sense, turning out to be yet another successful venture towards the effectiveness of the programme’s pedagogical aims. Pedagogical relations, then, take shape in a two-fold way: through the theoretical component of the courses, provided by teachers, and in a more participating attitude on the part of learners, as they have built on the learning process themselves, becoming active participants in it. Moreover, the relevance of a pragmatic approach to knowledge, as learners validate the possibility to apply the theory, becomes clear in this utterance ‘A pratica valida mais o conhecimento teorico da aula a que tivemos acesso. A aplicacao pratica e imprescindivel – Practice further validates the theoretical knowledge acquired in class. Applied knowledge is fundamental’. Significantly enough, learners recognise the importance of recurring to e-learning tools in consolidating a more pragmatic approach in their learning process. Nonetheless, the f2f regime is still favoured, as the following attests: ‘E portanto (prefiro) mesmo as aulas presenciais, (prefiro) mesmo– And so I really prefer f2f classes. I really do’.

Due to content proximity, we have chosen to merge classes 2 and 5, under the common designation of ‘Tools’, conceived both as learning vehicles and as a means to store information. Words such as ‘WiziQ’, ‘platform’, ‘Moodle’, ‘Facebook’, ‘Colibri’, ‘work’, ‘problems’, ‘easy’ and ‘difficulty’, come out significantly, since interviewees express the importance of e-learning tools, both as a learning vehicle and a as possibility to deliver their projects to teachers, as well as to store relevant information. Interviewees expressed their satisfaction and the relatively easiness with which they have been able to adapt to the new learning environment: ‘A minha (adaptacao) foi (simples) confesso. Nao achei (nenhuma) das (ferramentas) particularmente dificil [...] – My adaptation was easy, I must say. I didn’t

find any tool particularly difficult [...]’ Again, pedagogical relations become solidified, as e-learning tools alike facilitate communication amongst peers and teachers, as well as make it possible to store information channelling virtual spaces of reference source: ‘[...] acho excepcional ajuda bastante, a parte do (forum), colocarmos (la) os (trabalhos) e partilharmos (alguma) experiencia (tida) ate em relacao (ao) (espírito) de (grupo) com as colegas. – I thought the forum was something extraordinary ...to be able to post our work there and to share some experience, even in what concerns team spirit among class mates’. Team spirit has effectively taken place, as learners reveal the way e-learning tools and social networking has facilitated their learning process.

We named class 3 ‘Communication and Integration’ as the most important words ‘first’, ‘week’, ‘colleague’, ‘know’, ‘knowledge’ and ‘doubt’ point to the doubts arising in the first week(s) of classes and the importance of colleagues and the exchange of knowledge. As in previous studies (...), the relevance of interpersonal communication is emphasised, as well as the importance of the bonding and group spirit. Among relevant textual units, we could refer to utterances such as ‘a(primeira) (semana) andei (um) (bocadinho) perdida – I felt somewhat lost during the first week’, which refers to the importance of the welcoming week and the need for guidance by both colleagues and teachers, as well as the difference they perceive between doing the programme f2f or online, ‘(relacao) (pedagogica) com professors e (colegas) sim atras de (um) computador, quer (dizer) nao (temos) (um) (contacto) com o (colega) se quisermos perguntar uma (coisa) (temos) de interromper a aula (sei) la – the pedagogical relation with teachers and classmates as an e-learning student, you are not in contact with other classmates, if you want to ask something, you have to interrupt’ and a statement on the similarities between the two regimes in terms of personal relations ‘eventualmente a (relacao) (que se) estabelece no e-learning (de que) a relacao presencial – eventually a relation is created online as in f2f’.

The content similarity between Classes 4 and 6 has led us to aggregate them into one single group, as can be seen in the graph presented. We have chosen to designate this group as ‘Pragmatic/Hands On Approach’, as it points out a group of words that stress the importance of a hands-on approach with practical exercises being fundamental within the learning process. This becomes evident in the following utterances: ‘eu gosto muito dos formatos de aulas em que nos e dado a um bocadinho, um texto e depois nos traduzimos e discutimos – I really like those classes in which we are given a text which we translate and then discuss the translation’ and ‘Pos-graduacao tem que ser uma coisa muito orientada, muito especifica- a post-graduation programme has to a very focused, very specific program’.

In this group, ‘learning’, ‘work’, ‘post-graduation’, ‘class’ and ‘teacher’ show up as keywords, as well. Interviewees have shown an appreciation for knowing how to do things, together with the worthy diversity of fields where translation takes part. There is indeed an appreciation of knowledge acquisition, which can then be applied, as well as recognition of the importance of getting feedback from teachers.

Additionally, a set of words which is associated with knowledge to be applied professionally can also be identified. These textual units channel the appreciation of the variety of performance within the field of translation, which the programme offers. It also becomes clear that applied knowledge and the possibility to have a professional career in translation is closely related to previous experience. Holding a certificate mentioning the conclusion of a post-graduation programme in translation is a stand-out factor in this class of words, as interviewees have pointed out the importance of a diploma, which can be seen in the following: ‘exigem me que eu tenha no meu curriculo uma linha em que diga que eu/tenho qualquer formacao academica em traducao’ – I am required to include some academic training in translation in my CV.

We can therefore conclude that Classes 4 and 6 share the recognised importance of applied knowledge. Applied knowledge then can be linked to the learning process (especially evident in class 4) or related to the possibility to hold a job in the field (visible in class 6).

Prior studies (Quintas et al., 2017; Silva & Quintas, 2013) on the learning process in e-learning and b-learning had emphasised the importance of communication and the possibility of immediately clarifying doubts as crucial for learning, preference thus being given to f2f learning. This is confirmed in this study, in which, however, applied knowledge and collaborative learning methodologies, together with the pedagogical relation, are evidenced core elements fostering successful learning.

The e-learning tools are also relevant, considering they facilitate interaction and communication and provide a meeting point and the possibility of storing and making available resources, materials and other tools.

Our study has given shape to a project we aim to further sustain and develop. So far, the relatively reduced number of students in each edition of the post-graduation programme in translation has implied a necessarily scarce corpus for analysis. Therefore, we are still unable to infer facts to be solidly related to a significantly represented learners' population. There is, nonetheless, significant data collected, in order for further conclusions leading towards the understanding of the impact of e-learning and b-learning tools on the learning process, as well as the improvement of our programme's pedagogical strategies.

5. Conclusions and future directions

As with prior studies on this post-graduation, one of the conclusions drawn is that students consider communication and the pedagogical relation fundamental for their learning success. Preference is given to f2f learning and to virtual learning systems and/or software that allows for interaction.

In this particular case, collaborative learning and the practical/hands-on approach are also deemed relevant for the learning process, as well as social networks, such as Facebook. Finally, reference is also made to the importance of obtaining a certificate so as to more easily access the labour market in Portugal.

As there is no official need for a diploma to be a translator in Portugal, this programme, and its practical approach in particular, may contribute to training acknowledged and confident professionals in this area.

In the future, we aim to do a comparative analysis with similar programmes in Portugal and abroad, so as to understand which tools are the best for learning and which variables contribute for successful e-learning and student perceived satisfaction, as well as create a good practices group on e-learning systems in partnership with national and/or international institutions. We also plan to foster discussion on new or updated e-learning tools.

In terms of the post-graduation itself, the relevance students have given to collaborative learning that will lead to this methodology being implemented in most courses.

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