The role of autonomous ESP learning in acquiring transversal professional development skills in Higher Education

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Abstract

The rapid developments in a globalised 21st Century world have brought about changes and increased competitiveness in the employability of graduates. Acknowledging these developments and the need for innovation, the European Union recognises the need for education and training beyond

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the classroom (UNESCO, 2020). Hence, Higher Education (HE) is crucial in developing transversal skills and preparing undergraduates for the labour market. Essential therefore is developing independent learning habits and a collaborative lifelong learning mindset. Likewise, competence in English at a B1 CEFR (Common European Framework of References for Languages) level is a prerequisite of independent learning in any field. Lastly, autonomous learning also depends on knowing how to exploit ubiquitous digital technologies to extend language learning into daily life. This paper aims to provide suggestions to practitioners about how the teaching of English for Specific Purposes (ESP) courses need to be approached as a critical autonomous learning skill for professional knowledge acquisition, task accomplishment and interpersonal communication. It advocates for a blended teaching and learning mode, tailored to future graduates' needs. Cloud technologies, such as Google Workspace for Education (Google, 2023), potentially offer an effective type of support for the development of transversal competencies in the context of ESP in HE.

Introduction

In recent years, the role of education has moved increasingly in the direction of preparing graduates to become employable in an ever rapidly changing world. In particular, owing to the demands of a competitive labour market as reflected in reports published by UNESCO (2015) with regards to the development of transversal skills, education is called upon to prepare future citizens to meet the requirements of employers. Therefore, there is much discussion worldwide, with regards to what quality education and learning in

the 21st century entails (European Commission, 2017). In these discussions, what is highlighted is the urgent need for educational systems and Higher Education, in particular to shift from the pure accumulation of academic "cognitive" skills to hard-to-measure "non-academic" skills and competencies. The amassing of these skills and competencies (e.g., efficient communication, innovative thinking, teamwork, problem solving, etc.) not only helps students become adequately prepared for the labour market but is also essential in ensuring that future generations are equipped with transversal skills to survive and flourish in a rapidly changing world. It is especially important that these competencies be developed in order to enable students to learn autonomously and become lifelong learners.

This paper initially discusses the importance of transversal skills and how transdisciplinary knowledge can be combined with these skills in English for Specific Purposes (ESP) courses in Higher Education. The aim is to provide some practical suggestions, considering the challenges faced in language teaching and learning, as to how these ESP courses can be approached and how a blended mode of teaching and learning can be adopted in order to meet the needs of future graduates. To accomplish this objective, it is proposed that cloud technologies and Google Workspace for Education (Google, 2023) in particular, be exploited to support transversal competencies in the context of ESP in Higher Education.

Transversal Skills and Language Learning

Transversal skills (also referred to as soft skills, 21st century skills, etc.) are considered as skills that "are not specifically related to a particular job, task, academic discipline or area of knowledge and that can be used in a wide variety of situations and work settings"

(UNESCO IBE, 2013). The development of transversal skills has been the topic of considerable attention in educational discussions in recent years, reaching particular prominence in the UNESCO reports (2015, 2016). In essence, the development of transversal skills is intended to expand how learning takes place and how it is applied across academic and professional disciplines, communities and cultures, rather than just possessing the knowledge of how to perform a task, i.e. hard skills which can be measured (Mishra, 2014).

In particular, the Education Research Institutes Network (ERI-Net) working group divides transversal skills in six main categories: critical and innovative thinking, intrapersonal skills, interpersonal skills, media and information literacy, global citizenship and others (UNESCO, 2016). Under these domains are included skills, such as creative problem-solving, communication, teamwork, persuasion, negotiation and leadership among others (Majid et al., 2012) which are of vital importance in dealing with the competitiveness and challenges faced in the labour market. Moreover, the European Union (UNESCO, 2020), recognises the role of education and training in developing these competencies.

The learning of foreign (FL) and second languages (L2) plays a pivotal role in the development of transversal skills, since the teaching of languages involves the development of plurilingualism (or 'multilingualism'), as well as the skill of understanding different settings, relationships and cultural backgrounds (ECML, 2021). So, too, the teaching of FL and L2 is not confined to a particular topic, thus fostering space to pursue transversality (ibid.).

The role of and interest in transversality and transdisciplinarity in relation to the teaching of English as a second/foreign language is not new (Jaganathan et al., 2014). According to Jaganathan et al. (ibid.), English plays a critical role in disciplinary learning

and intercultural communication, the very bedrock of transdisciplinarity and transversality. Given the *lingua franca* status of English in virtually all spheres of disciplinary learning, its use needs to begin early in learners' formal education. Achieving this goal requires teachers to act as guides and scaffolders. However, it is equally important that students develop a strong mindset of self-direction and autonomy.

The development of transversal skills requires a degree of learner autonomy and vice versa. According to Fleisher (2009, p. 1), 'learning is enhanced as children become in charge of their learning by being supported in autonomy as well as the development of academic competencies', including transversal skills (Centre for Responsive Schools Inc, 2018). In such a case, learners engage actively and constructively in the learning process, in which they set goals and monitor their learning, thus developing both cognitive and metacognitive skills (Bosmans et al., 2023). Learners' active involvement in the learning process is also stressed in contemporary theories of learning such as social constructivism and connectivism. For social constructivist approaches to learning, knowledge is constructed through the interaction of learners' past experiences and ideas with experiences and activities which they come in contact with (Richardson, 1997). For social constructivism people learn when they are involved in social interaction, collaboration and problem-solving activities. Connectivism has similarities with social constructivism in the sense that social interaction has a prominent role. For connectivism, learning can reside outside of ourselves; it can occur through networks (Siemens, 2005).

In order, therefore, to foster the autonomous development of transversal skills as well as learner autonomy, Project Based Language Learning (PBLL) could be a possible method to be

incorporated in language education (Guven & Valais, 2014). PBLL in general is 'a particular type of inquiry-based learning where the context of learning is provided through authentic questions and problems within real-world practices that lead to meaningful learning experiences' (Kokotsaki et al., 2016, p. 267). PBLL, according to Guven & Valais (2014), 'can be used to help direct English language learners towards autonomy through well planned stages of learning that emphasise interaction, critical thinking, problem-solving and collaboration' (p.184), thus emphasising how transversal skills are developed.

Hence, once learners leave school and / or graduate from a HE institution and are on their own, they can keep up professionally through their English language skills and develop transversal competencies applied to self-directed, autonomous efforts.

ESP: transdisciplinary knowledge & development of transversal skills

By their very nature, ESP courses offer cognitive skills in the field of study of the learners in the English language, based 'on an assessment of purposes and needs and the activities for which English is needed' (Rahman, 2015, p. 24). ESP courses therefore need to smoothly blend interpersonal and academic communication skills, in order to provide opportunities for learning and practising context-specific language (Chalikandy, 2013). In these courses, learners are provided with readings (e.g., research, reports, etc.), which they may encounter as future professionals and citizens and which they will need in order to keep up to date (Graddol, 2000). To effectively access these resources, reading fluency in the language needs to be maintained at a near native level (i.e., CEFR C2). L2 learners' listening comprehension also needs to reach this level

in order to understand and evaluate professionally related information. Likewise, with English being the lingua franca of international professional meetings (Barančicová & Zerzová, 2015), an advanced-low level (i.e., CEFR B2) of listening comprehension is a minimal requirement for attendees. In the case of delivering oral presentations themselves at such meetings, professionals need to have at least advanced-mid English-speaking skills (i.e., CEFR C1). More generally, with the rapid development of information technology, they need to possess at least an overall intermediate level (i.e., CEFR B1+) of English language competence. However, ESP courses in higher education do not teach English for 'specified needs' (Johnson & Johnson, 1998, p. 105) alone.

According to Jiang et al. (2022), in the past few decades, transversal skills, such as teamwork, communication and problem-solving, have become an integral part of universities' educational objectives, aiming to develop professional lifelong learning. Considering that such skills depend on the ability to understand, empathise and effectively communicate with others, not only in the workplace, but in society in general, this is where ESP courses play an important role. From a language learning perspective, engaging students in collaborative tasks provides them with the opportunity to communicate, collaborate and complete their tasks. It is through this communication that learners practise what they have learned (Sinkus, 2020). This is also true of disciplinary knowledge. Through communicative and collaborative project-based activities, students not only learn and share disciplinary information, but they also synthesise and internalise that knowledge. Collaboration requires negotiation of meaning, which is as essential for language learning as it is for critical thinking and disciplinary knowledge acquisition and to a greater extent for autonomous and lifelong learning (ibid.).

In theory, the focus on developing transversal skills in ESP courses in HE is an attempt that would be successful in ideal settings in which learners already have a developed mindset of self-direction. However, in practice, instructors are faced with a number of daily challenges, among which are student resistance (Yi-Ping, 2018), lack of student engagement (Mystkowska-Wiertelak, 2022), collaborative skills (Casper, 2017), critical thinking skills (Fadhlullah & Ahmad, 2017), as well as lack of autonomy. The parameters and the scope of the above challenges may differ according to each context in various studies. However, these are common challenges faced in language learning and teaching contexts.

In order to overcome or reduce these challenges and at the same time develop language learners' transversal skills, they could engage in Project-Based Language Learning (PBLL), as appropriate for their field of study. The key here is to make it professionally and personally relevant, interesting and authentic (Tuyen & Tien, 2021; Kokotsaki et al., 2016). Students can be divided into small groups to discover each other's interests, which can then be matched to the thematic units of the curriculum.

At a first stage, the above process should be teacher guided by instructing students about the steps they need to take (Bell, 2010). This may take some extra time for teachers to prepare, but once students have been prepared, instructors need only track their progress. Teachers can suggest websites to find information and explain why these websites are best for searching, without instructing exactly how the project should be structured. Teachers should encourage students to take initiatives and allow space for decision making as to how they will achieve their end product (Prastiwi et al., 2021; Tuyen & Tien, 2021; Rodríguez-Peñarroja, 2022).

Overall, working on something that interests them with others who share the same interests can encourage collaboration (Casper, 2017), critical thinking (Socciarelli et al., 2020), negotiation and creativity (Thuan, 2018), thus developing those transversal skills necessary for their further studies, their future profession, professional development as well as their lives. Consequently, their engagement may also increase (Aubrey, 2022), if they are allowed to be innovative, take initiatives and use technologies that will help them carry out their project.

Hence, working on projects iteratively in ESP courses can allow students to further develop their transversal skills and eventually take charge of their own learning, and thus develop learner autonomy. To this effect, the development and use of Information and Communications Technologies (ICT) could be used to contribute to the pedagogy of ESP courses and to the development of those transversal skills that will enable learners to succeed in both their academic and professional ventures.

Cloud technologies: The case of Google Workspace for Education

The integration of ICT in education has allowed the transition of teacher-centred traditional classrooms to student-centred educational environments (Almendo, 2020) and has transferred the responsibility of the learning process to the learner. Cloud technologies or cloud computing in particular, belong to a category of ICT that can significantly enhance PBLL by providing a dynamic, interactive, and resource-rich environment, and thus facilitate the development of transversal competencies in the context of language education. Especially in ESP contexts, where educators and

learners need access to information pertaining to specific disciplines, the qualities of cloud technologies could be invaluable.

To understand the value of cloud technologies for language learning in general and ESP in particular, it is useful first of all to focus on their attributes and characteristics. According to the National Institute of Standards and Technology (2021), cloud computing is "a model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction". Through the years certain concerns have been expressed with regards to the use of cloud technologies in education, such as uncertainty over their cost in the future, the lack of user control over these technologies and issues of reliability, security and privacy. Nevertheless, cloud computing offers great potential benefits for educational organisations and its viability has been confirmed many times in CALL literature (Sultan, 2010; Lakshminarayanan et al., 2013; Pokrovska et al., 2020). The various attributes of cloud technologies foster synchronous and asynchronous collaboration and communication and provide access to a variety of resources and therefore facilitate the implementation of PBLL practices, creating an interactive flexible learning environment.

Google Workspace for Education is one of the most popular examples of cloud technologies for education. It is a set of tools and services provided by Google which are tailored for schools and educational institutions in general to collaborate, streamline instruction and allow for learning to occur in a safe environment (Google, 2023). The tools and services offered by Google Workspace for Education can foster social constructivist and connectivist approaches to learning. They allow for collaboration,

communication, organisation of different tasks and material and maintain the connection between users, and therefore have the potential for creating an ideal environment for the implementation of PBLL and the development of transversal competencies. Additionally, they may promote students' responsibility and learner autonomy. They can individualise the learning process and enhance self-study and students can learn at their own pace having an enormous amount of materials and resources at their disposal (Borova et al., 2021).

Google tools have been used extensively in education and in language classrooms in particular. There are many examples of how they can be utilised to develop learner autonomy and create a lifelong learning mentality. Almendo (2020) describes how Google forms and Google Translate can be employed to provide support and minimise reading challenges when students are engaged in reading tasks in a language class. Drawing on the challenges that COVID-19 brought about, Dantes et al. (2022) elaborate on the use of Google classroom in a vocational school in Bali in an online context. Their study showed that despite the challenges faced, the use of Google Classroom was positively perceived by the students from cognitive, affective and behavioural perspectives. It also showed the importance of teacher's guidance in a learning journey on which students had to embark autonomously due to the situation. Furthermore, Xie et al. (2019) discuss how Google Expeditions, an interactive Virtual Reality tool can be used in an advanced Chinese language class easing cognitive burden and increasing students' interest in the target culture and their motivation.

The potential of the use of Google tools for the development of transversal competences and an autonomous and lifelong learning mindset can just as well be experienced in HE ESP contexts and this is where discussion will focus on in the next section.

Google Workspace for Education as a medium for the development of transversal competencies and learner autonomy in ESP contexts

Examples of employment of Google tools in HE language courses can be found across the globe. Susilawati (2023) discusses the positive views of students on the use of Google Docs for the development of academic writing skills at a private Indonesian university, stressing students' comments on Google Docs direct checking of their writing, the auto saving and auto translation modes, the feedback from the lecturer, their engagement in collaborative writing and the possibility to write in an organised manner. Similarly, Humeniuk et al. (2023) describe the use of Google applications for ESP teaching in Ukraine during wartime, concluding that Google applications and more specifically Google Meet and Google Classroom, are preferred by students, improving the motivational, cognitive, technological and social aspects of the educational process. On the same note, another study from Ukraine (Benadla & Hadji, 2021) reports on the positive results from the utilisation of Google tools in an ESP context at Taras Shevchenko National University of Kyiv during the COVID-19 pandemic. Examples of the employment of Google tools in ESP environments can also be found in the Cypriot Higher Education context again with satisfactory results for both students and course instructors (Kakoulli Constantinou, 2018). In all the aforementioned studies, apart from the fact that participants believe that these tools have enhanced their knowledge acquisition, it can be inferred that these tools have also facilitated the development of students' transversal competencies as well as autonomous learning skills.

The flexibility of Google Workspace for Education tools creates an ideal environment for the implementation of PBLL and the cultivation of transversal competencies. Table 1 shows some examples of how Google Workspace for Education can accommodate PBLL practices.

Steps	**Tools**	**Objectives**
1. Students of Business English are given instructions for a group-based project. They have to create a scenario requiring them to work together to suggest ways in which a company, which is on the verge of bankruptcy, can escape this difficult situation.	• Google Classroom (the LMS on which the assignment is posted)	Students: ➢ are introduced to the project. ➢ are familiarised with the evaluation criteria.
2. The students study the financials, do research and start brainstorming collaboratively in groups.	• Google Chrome (for research) • Jamboard (for brainstorming)	Students develop: ➢ research and critical thinking skills. ➢ communication skills
3. Students prepare a presentation in which they incorporate their ideas and suggestions on actions the company needs to take in order to solve the problems they are facing.	• Google Slides (for presentation) • Google docs (for notetaking) • Google Classroom (for submission of presentations)	Students develop: ➢ their writing skills ➢ public speaking skills. ➢ their vocabulary.

(Continued)

Steps	Tools	Objectives
4. The students also produce related written reports which they have to send to the board of directors of the company	• Google docs (for report writing) • Google Classroom (for submission of reports)	Students develop: ➢ their report writing skills.

Table 1: Example of PBLL in an ESP context through the use of Google Workspace for Education tools.

Table 2 describes ways in which some of the most important Google Workspace for Education tools can be used in ESP contexts to promote transversal competencies and create the potential for the development of autonomous and lifelong learning skills.

Google Workspace for Education tools	Practical suggestions for use in ESP contexts
Google Classroom	• Management of ESP coursework • Organisation of assignments and materials • Posting of announcements • Communication (Emails, sharing posts, commenting on posts)
Google Docs	• Collaborative synchronous and asynchronous writing on ESP topics with options for spell and grammar checking, dictionary, translation and voice typing • Use of Suggesting mode and Comments by course instructor and peers for feedback • Online chat • Possibility to see version history

(Continued)

Google Workspace for Education tools	Practical suggestions for use in ESP contexts
Google Slides	• Collaborative synchronous and asynchronous creation of slides for the delivery or oral presentations on ESP topics with options for spell checking and dictionary • Voice typing of speaker notes
Google Sheets	• Collaborative synchronous and asynchronous creation of sheets with spell checking • Possibility to see version history • Measurement of student progress and quick visualisation of results for the instructor
Google Meet	• Real-time visual or audio virtual communication between instructors and students or students themselves in an ESP class • Real-time student collaboration and discussion • Real-time provision of audio-visual feedback by instructor and peers
Google Forms	• Building of surveys for ESP course evaluation • Measurement of student success • Administration of quizzes
Google Sites	• Creation of English class sites related to students' specific discipline • Creation of students' e-portfolios
Google Chrome	• Searching for ESP audio-visual and written material • Researching databases in English related to students' specific discipline

Table 2: Practical suggestions for the use of Google Workspace for Education in ESP contexts.

The exploitation of these tools in ESP language classes, and the employment of new cloud technologies in general, can foster learner autonomy as well as other skills by providing learners with easy access to a range of resources, tools and environments for out-of-class learning experiences (Hafner & Miller, 2011). So, too, apart from enhancing the effectiveness of the teaching and learning process, such tools also help in the increase and improvement of students' responsibility and autonomy levels and study motivation (Borova et.al., 2021).

Conclusion

The need for the development of competencies and skills beyond the classroom has been generally recognised and acknowledged by the European Union and UNESCO and constitutes the focus of discussions on educational issues in many parts of the world. To achieve this goal, Higher Education should aim at developing such competencies and autonomous learning skills so that future graduates are equipped with the necessary qualifications to succeed in their professional and personal life. As part of Higher Education, ESP courses are particularly well suited to contribute to this endeavour through the development of learners' language skills, with specific focus on their field of study.

This paper aimed at providing readers with insights on the importance of transversal competencies and autonomous learning skills and making suggestions on how this can be achieved in ESP contexts. To develop language learners' transversal skills, Project-Based Language Learning (PBLL) is suggested, making projects professionally and personally relevant. Teachers guide the initial stages, suggesting resources but allowing student initiative. Trough an iterative project-based approach, collaboration,

critical thinking, creativity, and engagement can be fostered, ultimately promoting learner autonomy and lifelong learning. Particular focus is placed on how transversal skills and independent learning habits can be developed through the use of cloud technologies. It discusses the different features of Google Workspace for Education and suggests ways in which different Google tools can be utilised in ESP contexts for the fostering of transversal skills and autonomous learning that may eventually lead to the development of a lifelong learning mindset.

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