PODCAST CREATION FOR FOREIGN LANGUAGE ACQUISITION AND DIGITAL COMPETENCE DEVELOPMENT IN PRIMARY EDUCATION

GRADU AMAIERAKO LANA

LEHEN HEZKUNTZAKO GRADUA

2023/2024

47117859J

Author: Sílvia Cánovas Cayuela

Supervisor: Maialen Garmendia Larrañaga

Atzerriko Hizkuntza Minorra

Abstract

This paper explores the potential outcomes of using ICTs for Foreign Language Learning in a primary school, along with fostering the development of the digital competence as regulated in the European Framework. A student-created podcast project was implemented, following a task-based approach aiming to improve communicative language aspects through fostering interaction and collaboration. The methods for collecting the data were an observation chart to analyse improvements on pronunciation and intonation, an observation chart to measure the development of digital competence manifested throughout the process, and a questionnaire to obtain students' perceptions regarding motivational aspects of the project. Results indicated that students improved in pronunciation and intonation through repeated recording of the podcast, applying implicit and explicit feedback. In addition, most students felt motivated towards the project, with gender differences mostly regarding self-confidence and perceived usefulness. The project contributed on the development of the digital competence at a basic level. However, further research is needed due to the limited sample size to draw firmer conclusions on the topic.

Key words: digital competence, Information and Communication Technologies, podcast, Foreign Language Learning, students' motivation.

Laburpena

Artikulu honek lehen hezkuntzako ikastetxe batean atzerriko hizkuntzak ikasteko IKTeen erabileraren balizko emaitzak aztertzen ditu, Europako Esparruan araututako gaitasun digitalaren garapenaren baitan. Ikerketarako, zereginetan oinarritutako ikaskuntza-ikuspegiari jarraituz, ikasleek sortutako podcast bat baliatu zen, hizkuntzaren komunikazio-alderdiak hobetzeko asmotan, ikasleen arteko elkarrekintza eta lankidetza sustatuz. Datu bilketan hiru meto erabii dira: ahoskeran eta intonazioan hobekuntzak aztertzeko behaketa-taula, prozesuan zehar adierazitako gaitasun digitalaren garapena neurtzeko behaketa-taula eta proiektuaren motibazio-alderdien inguruan ikasleen pertzepzioak neurtzen dituen galdetegia. Emaitzen arabera, ahoskera eta intonazioa hobetu zuten ikasleek, podcasta behin eta berriz grabatuz, atzeraeragin inplizitu eta esplizituaren arabera. Gainera, ikasle gehienak proiektuarekiko motibatuta sentitu ziren, eta genero-desberdintasunak izan zituzten, batez ere beren buruarekiko konfiantzari eta

proiektuaren erabilgarritasunari dagokienez. Proiektuak, maila apalean bada ere, gaitasun digitala garatzen lagundu zuen. Hala ere, laginaren tamaina mugatua dela eta, ikertzen jarraitu behar da gaiari buruzko ondorio irmoagoak ateratzeko.

Hitz gakoak: gaitasun digitala, Informazioaren eta Komunikazioaren Teknologiak, podcasta, atzerriko hizkuntzen ikaskuntza, ikasleen motibazioa

Resumen

Este artículo explora los posibles resultados del uso de las TIC para el aprendizaje de lenguas extranjeras en un centro de educación primaria, junto con el fomento del desarrollo de la competencia digital regulada en el Marco Europeo. Para la investigación se implementó un proyecto de pódcast creado por los estudiantes, siguiendo un enfoque de aprendizaje basado en tareas, con el objetivo de mejorar los aspectos comunicativos del lenguaje mediante el fomento de la interacción y la colaboración entre alumnos. Los métodos de recogida de datos fueron una tabla de observación para analizar mejoras en pronunciación y entonación, una tabla de observación para medir el desarrollo de la competencia digital manifestado a lo largo del proceso, y un cuestionario para obtener las percepciones de los estudiantes sobre los aspectos motivacionales del proyecto. Los resultados indicaron que los estudiantes mejoraron en pronunciación y entonación mediante la grabación repetida del pódcast, aplicando retroacción implícita y explícita. Además, la mayoría de los estudiantes se sintieron motivados hacia el proyecto, con diferencias de género, sobre todo en cuanto a la confianza en sí mismos y la utilidad percibida de este. El proyecto contribuyó al desarrollo de la competencia digital a un nivel básico. Sin embargo, debido al tamaño limitado de la muestra, es necesario seguir investigando para extraer conclusiones más firmes sobre el tema.

Palabras clave: competencia digital, Tecnologías de la Información y la Comunicación, pódcast, aprendizaje de lenguas extranjeras, motivación de los estudiantes.

Index

1. INTRODUCTION

In the context of an era characterised by rapid digital advancements in accordance with a globalised and interconnected world, there is impelled an increasing necessity to recognize the relevant role that Information and Communication Technologies (ICTs) have in our society in terms of shaping how people collaborate, communicate (Bawden, 2001; Pérez Tornero et al., 2010), learn, work, and interact with the world (Ala-Mutka, 2011; Kingsley & Ugwu, 2019).

Considering the multiple applications of ICTs in diverse domains and understanding the nature and potential that schools have as socializer agents (Mena Merchán & Marcos Porras, 1994), it is relevant to contemplate the sort of approach that the educational institutions make towards the use of ICTs in the formal education scene (Kingsley & Ugwu, 2019). Research has studied how the application of ICT devices in education can suppose a transformation towards a way of providing opportunities for innovation, inclusion and facilitating communication (Cabero Almenara, 2015; Cebrián de la Serna & Gallego- Arrufat, 2011) aimed to enhance the quality of learning to meet the demands of contemporary times and suggest a more competent future (Ala-Mutka, 2011; UNESCO, 2009).

In essence, the following dissertation endeavours to explore the capabilities that ICTs can bring forth through the implementation of a student-created podcast among primary school students during foreign language lessons. By means of recognizing the complexity of a right management of digital resources, the research is carried out under a common framework that has the aspiration to regulate the digital competence, which is specifically the DigComp 2.2 developed by the Joint Research Centre (JCR) from the European Commission (Vuorikari et al., 2022). It also seeks to examine the importance of Foreign Language Learning (FLL), towards a multilingual approach as a catalyst for individual, academic, professional and societal transformation (Ala-Mutka, 2011; Kingsley & Ugwu, 2019).

The Commission Staff (2018) and the Council of Europe (2023) recognised ICTs as enablers to arise exposure to the target language, enhancing students' confidence towards its production. As well, deemed to have benefits on increasing engagement and motivation (Bolliger et al., 2010; Indahsari, 2020; Oliver, 2005).

With the aim to combine both ICTs implementation and FLL, it is carried out an analysis of how the aforementioned student-created podcast, can be useful for the acquisition of English as a foreign language, regarding aspects of pronunciation and intonation improvements. It also seeks to reveal the effect that using a podcast can potentially have towards the attitudes manifested by the students in relation to the study of English through the utilization of ICTs, and finally, it aspires to check whether the podcast can be useful to contribute to the development of the digital competence.

2. THEORETICAL BACKGROUND

2.1. European Reference Framework: Key competences for lifelong learning

To frame our investigation, we looked through the Sustainable Development Goals (SDGs) presented in the 2023 Agenda for Sustainable Development elaborated by the United Nations General Assembly with the aim of setting actions that the member states must endorse towards promoting human well-being, protecting the environment and fostering prosperity (United Nations, 2015, 2023), aligned with the Venn diagram developed by Flint (2013), that sets three core concepts for sustainability, which are environment, economy and society, and that Dalampira & Nastis (2020) integrated together with the Sustainable Development Goals (SDGs) in a study that advocates its multidimensional features. Focusing on the social pillar, there can be found the fourth goal of the SDGs, which centres on the achievement of quality education, that sets its bases in the belief that education contributes to mitigating disparities and promoting gender equality, as it also empowers individuals to lead healthier and more sustainable lifestyles. It plays a key role in fostering tolerance among people and in building more peaceful societies. To achieve this goal, it is crucial that funding for education becomes an investment precedence, through improving school infrastructure, implementing digital alterations, making education free and mandatory, and expanding the teacher personnel (United Nations, 2023).

In tune with the pursuit of quality education concerning inclusivity, equality and promoting lifelong learning chances, the European Commission established a common reference framework for the member states to take action, the *Key Competences for lifelong learning framework*, (European Commission, 2019), where it is stated that the European Union (EU) citizens' "knowledge, skills and attitudes are a major factor in

boosting the EU's innovation capacity, productivity and competitiveness" (European Commission, 2019, p.3), and competences also understood as "where the learning concerns developing skills and attitudes as well as knowledge" (O'Shea et al., 2020, p.10).

According to Pampouri et al. (2021) and Dalampira & Nastis (2020), there exists an inclination towards a comprehensive understanding and assessment of skills, knowledges and attitudes in education, which are considered crucial for sustainable development, that require fostering critical thinking and strengthening human values through an increasing understanding of the human being.

However, the Council of the European Union (2018) in the *Recommendation on key competences* shared that the *UNESCO's Global Action Program on Education for Sustainable Development* sets that education does not focus exclusively on the quality education of the SDGs, but that it also serves as a pivotal facilitator of the other SDGs (UNESCO, 2016).

Through the perusal of the *Key Competences for lifelong learning Council Recommendation* (Council of the European Union, 2018) declaring the need of adapting changes in education that could adapt to today's world and enabling citizens' resilience, that conformed an update of the first key reference document towards competence-based education, the *2006 Recommendation* (European Parliament & Council of the European Union, 2006), and the final version, the *Key Competence for lifelong learning* (European Commission, 2019), we can stand out that there are put forward eight key competences that are applied throughout life and that work in an interdisciplinary manner. These are first presented in the Table 1 and briefly explained afterwards.

KEY COMPETENCES FOR LIFELONG LEARNING
Literacy competence
Multilingual competence
Mathematical competence and competence in science, technology and engineering
Digital competence
Personal, social and learning to learn competence
Citizenship competence
Entrepreneurship competence
Cultural awareness and expression competence

Source: self-elaborated. Retrieved from (European Commission, 2019)

The *literacy competence* encompasses the capacity to comprehend, communicate and interpret different forms of information, including oral and written content. It includes auditory, visual and digital resources, cultivated in different languages.

The *multilingual competence* fosters the capacity to communicate in diverse languages. The *mathematical competence and competence in science, technology and engineering*: the first one develops problem-solving skills and the use of mathematical concepts, while the second, third and fourth ones, attempt to give meaning to the natural world, taking into account scientific evidence, while they also include the comprehension of human activity and its impact. The *digital competence* is about the use of digital technologies, taking into account the ethical and the critical utilisation of them. The *personal, social and learning to learn competence* involves skills such as self-reflection, effective collaboration, self-management and capability to be flexible to respond to adverse situations. It also promotes individuals' well-being in inclusive environments. The *citizenship competence* consists on taking part of social and civic life. The *entrepreneurship competence* through creativity, critical thinking and problem-solving it contributes to turn ideas into benefits for the rest showing initiative and collaborating regarding cultural, social and financial related projects. The *cultural awareness and expression competence* consists on manifesting respect towards different cultures, understanding its ideas and meaning constructions, thus expressed through art or other

forms. Simultaneously, developing own ideas and social functions (European Commission, 2019).

2.2. The digital competence

This research aims to set the focal point in the development of the digital competence. In the following section we attempt to define the digital competence as introduced in the previous section, presented in the European Reference Framework.

Ahead, we present an analysis of the evolution of the framework in terms of characterizing the digital competence, for that, we found relevant to consider worlds' situation regarding technological advances. Ala-Mutka (2011) described that the increasing use of technologies in society and economy induces a change in the ways people work, study, communicate, obtain information and spend free time. This idea was well reflected in a more recent report carried out by the UNICEF Office of Global Insight and Policy about digital literacy for children (Nascimbeni & Vosloo, 2019), where it is pointed out that citizens should be capable of optimizing the internet and digital opportunities (OECD, 2018; World Bank, 2019). Ferrari (2012) in a study that aimed to compare different frameworks with the objective to define the digital competence as first proposed in the *Recommendation on Key Competences* (European Parliament & Council of the European Union, 2006), remarked that due to citizens' need to be operational in society according to its changing dynamic, digital competence is both a prerequisite and a human right. This conception was previously considered by James (2001), who also pointed out that digital literacy ought to be a civil right. Ala-Mutka (2011) clarified that people with a low level of digital competence are in danger of becoming excluded from reaching opportunities and that they can put themselves in risk when using digital devices and media.

In this preamble, we found authors that uphold that it does not exist a clear distinction between the concepts of digital competence and digital literacy in research and that both terms tend to overlap (Reis et al., 2019; Spante et al., 2018). Nevertheless, Ala-Mutka (2011) proposed that to develop digital competence the aspects of Information and Communication Technology (ICT) literacy, Internet literacy, media literacy, information literacy and digital literacy should be taken into account.

The European Parliament & Council of the European Union (2006) gave the following definition: "digital competence involves the confident and critical use of Information Society Technology (IST) for work, leisure and communication. It is underpinned by basic skills in ICT: the use of computers to retrieve, assess, store, produce, present and exchange information, and to communicate and participate in collaborative networks via the Internet" (p.15)

With the aim to come to a referenced agreement on how to deal with the digital competence, the DIGCOMP project (Ferrari et al., 2013) served as a framework that has been modified and extended towards improvements with time in DigComp 2.1 (Carretero et al., 2017) and with the contemporary one, the DigComp 2.2 (Vuorikari et al., 2022).

The DigComp 2.2 framework structure is divided in five dimensions that include different components, as indicated in Table 2. For our investigation, we focused on dimensions 1, 2 and 3, although we also took into account dimension 4. For what concerns dimension 5, we applied the competence in a learning environment.

Table 2

Dimensions in the DigComp 2.2 framework

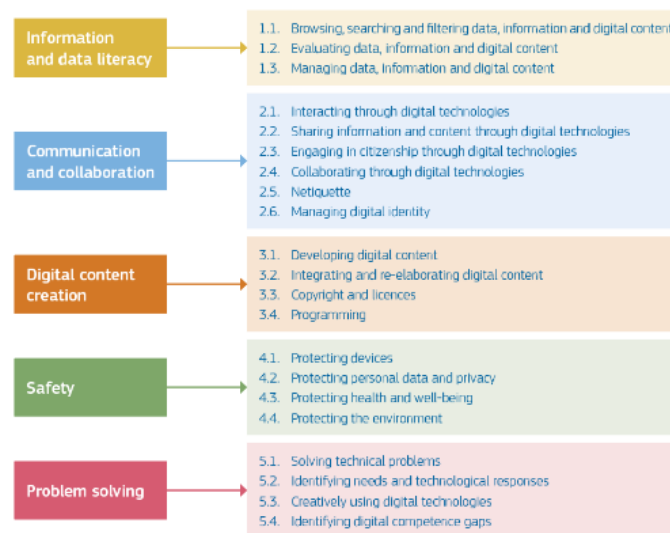| Dimension 1 | Competence areas |
Dimension 2	Competences
Dimension 3	Proficiency levels
Dimension 4	Examples of knowledge, skills, attitudes
Dimension 5	Purposes

Source: self-elaborated. Retrieved from (Vuorikari et al., 2022)

Within the second dimension there exist five competence areas: *information and data literacy, communication and collaboration, digital content creation, safety,* and *problem-solving*. In this study, we concentrate on working on the second and third areas, as they are considered to be the most transversal ones (Ferrari et al., 2013).

Each area includes dimension 2 competences which are both represented in Image 1, extracted from the DigComp 2.2 framework (Vuorikari et al., 2022).

Image 1

The DigComp conceptual reference model

Information and data literacy	1.1. Browsing, searching and filtering data, information and digital content 1.2. Evaluating data, information and digital content 1.3. Managing data, information and digital content
Communication and collaboration	2.1. Interacting through digital technologies 2.2. Sharing information and content through digital technologies 2.3. Engaging in citizenship through digital technologies 2.4. Collaborating through digital technologies 2.5. Netiquette 2.6. Managing digital identity
Digital content creation	3.1. Developing digital content 3.2. Integrating and re-elaborating digital content 3.3. Copyright and licences 3.4. Programming
Safety	4.1. Protecting devices 4.2. Protecting personal data and privacy 4.3. Protecting health and well-being 4.4. Protecting the environment
Problem solving	5.1. Solving technical problems 5.2. Identifying needs and technological responses 5.3. Creatively using digital technologies 5.4. Identifying digital competence gaps

Source: retrieved from (Vuorikari et al., 2022)

To carry out this paper, we focused on the development of the 2.2, 2.3, 2.4 and 3.1 described as expressed in Table 3:

2.2	*Sharing through digital technologies*
	To share data, information and digital content with others through appropriate digital technologies. To act as an intermediary, to know about referencing and attribution practices.
2.3	*Engaging citizenship through digital technologies*
	To participate in society through the use of public and private digital services. To seek opportunities for self-empowerment and for participatory citizenship through appropriate digital technologies.
2.4	*Collaborating through digital technologies*
	To use digital tools and technologies for collaborative processes, and for co-construction and co-creation of data, resources and knowledge.
3.1	*Developing digital content*
	To create and edit digital content in different formats, to express oneself through digital means.

Competences for the research described, chosen within the DigComp competences

Source: self-elaborated. Retrieved from (Vuorikari et al., 2022)

Dimension 3 is divided in eight proficiency levels, every two proficiency levels, they are organised respectively in the *foundation*, the *intermediate*, the *advanced* and the *highly specialised* level.

The European Framework also provides a guide for teachers to supply them with advice on how to develop the digital competence (Caena & Redecker, 2019; Redecker & Punie, 2017).

2.3. ICTs and Education

Mena Merchán & Marcos Porras (1994) described how, already in the 1920, staring in Russia, and subsequently in Eastern Europe, Technology education was provided under the label of *polytechnic training* aged between twelve and seventeen. Later on, in the 60s, the subject was included in the rest of Europe generalizing its implementation in the remaining education levels, including primary education.

On the basis of the established belief of understanding technology education as an isolated subject, Mena Merchán & Marcos Porras (1994) defended that the didactics of Technology should be related to other fields and interconnected to be able to enhance meaningful learning in students.

Globalisation has brought technological advances that have given rise to a new global economy and society that is technology-driven, information-fuelled and knowledge based. (Ala-Mutka, 2011; Kingsley & Ugwu, 2019). Back in 1997, the European Round Table of Industrials stressed that communities are in transition from an industrial stage into becoming information societies, where the emphasis is on the creation and distribution of knowledge (ERT (European Round Table of Industrialists), 1997). This transformation poses relevant challenges to the nature and role of educational institutions. With ever-increasing access to information, schools can no longer be conformed to teach a limited set of knowledge in a given period of time. They must adapt to constantly evolving knowledge and be equipped with the technology to manage it (Kingsley & Ugwu, 2019). Mena Merchán & Marcos Porras (1994) emphasized the need to shape the future through a proactive role that education can provide regarding societal matters, therefore, schools should endow students with technological knowledge to propitiate critical thinking that allows them to make decisions.

Information and Communication Technologies (ICTs) are part of the technological transformation. Ala-Mutka (2011) affirmed, additionally, that the beneficial use of digital tools and media can contribute to support various aspects of life in today's society. This statement was supported as well by the UNESCO (2009) in a guide to measuring ICTs in education, informed that they have the potential to play a key role in renewing education to meet the needs of an information-centred society.

When used in educational settings, ICTs can be beneficial when implementing more effective learning methods, introducing pedagogical innovations and organisational changes, facilitating communication, flexibility of time and space; and promoting novel approaches to educational assessment, creating new ways of interacting with information (Cabero Almenara, 2015; Cebrián de la Serna & Gallego- Arrufat, 2011).

ICTs, regarding academic affairs, encompasses all types of technology, both hardware and software, that aid in the management of information for educational purposes (Kingsley & Ugwu, 2019). Any Information Technology that concentrates on acquisition, storage, manipulation, management, transmission and reception of data for educational reasons describes the significance of ICT implications in the field (Kingsley & Ugwu, 2019).

It is essential that students are actively involved in their own learning process, participating in regular assessments and reflecting on their progress. By encouraging them to generate, share and relate knowledge to the world using available digital tools in a collaborative manner, meaningful learning can be stimulated, and students can be motivated (Hewlett Foundation, 2012).

Both Pérez Tornero et al. (2010) and Bawden (2001) mentioned the relevance of ICTs in collaboration and communication. The rise of the Internet and various social platforms along with communication tools has created multiple opportunities for people to connect and participate. In particular, social networking applications offer innovative spaces where individuals can connect, share and collaborate, either by integrating into pre-existing communities or by forming new networks and communities (Pérez Tornero et al., 2010).

2.4. ICTs in Foreign Language Learning towards a multilingual society

To build an understanding of the relevance on the utilization of ICTs for Foreign Language Learning (FLL) in schools, we have to first inquire into the reasons behind the intentions of policymakers towards defining the relevance of language diversity learning and its relationship with technology.

2.4.1. Multilingualism

The European Council in the Recommendation about approaching the teaching and learning of languages of 2019, highlighted the importance of language learning and teaching for reinforcing the ability of modelling a European identity through the recognition of its diversity (Council of the European Union, 2019). This idea was mentioned previously in the Recommendation on key competences for lifelong learning of 2018, where it was considered the relevance of language learning education to foster the intercultural understanding and cooperation of modern societies (Council of the European Union, 2018). In the same document there can be found the design of the multilingual competence for approaching the challenges and opportunities that the existing linguistic diversity presents.

To explain the necessity for a multilingual perspective, it is necessary to explore the benefits and motives for choosing this approach of society. According to the Council of the European Union (2018), the multilingual competence consists on "the ability to use different languages appropriately and effectively for communication" (p.8). As identified in a research study conducted by Cenoz (2013), and in concordance with the previous statements concerning the need for language learning, multilingualism is closely related to needs that globalisation has awakened. Cenoz (2013) also pointed out the benefits of multilingualism in metalinguistic performances, its cognitive outcomes and its influence on shaping identity in individuals. As well, benefits in academic achievement, and in enhancement of creativity were supported in Fox et al. (2019) findings.

2.4.2. Interaction and collaboration in Foreign Language learning

English is the most used language around the world becoming a *lingua franca*, that is why it is put as one of the main focuses for foreign language learning in educational institutions (Cenoz, 2013).

To determine effective approaches on the design of FLL lessons useful for our implementation, we investigated the effectiveness of interaction and collaboration in the classroom. In a study led by Philp & Tognini (2009), ideas on interaction were cited from different authors. Pica & Doughty (1985) declared that teacher-student (T-L) and learner-student (L-L) interactions in different classroom settings, whether in large groups, small groups or one-to-one, in foreign language classes offer a variety of opportunities and benefit different aspects of the language learning process. These aspects include the

amount of information received and produced, the grammatical correctness of the information received, and the feedback. Alcón Soler (2002) found that, during teacher-led interaction, a wider use of the target language occurred when giving feedback. On the other hand, in the interaction between learners, more active collaboration in knowledge construction through joint dialogue was observed. Nevertheless, both are connected and often occur simultaneously in the classroom.

Philp & Tognini (2009), mentioned several authors (Gass, 1997; Krashen, 1982; Long, 1983) that support the idea that interaction facilitates environments where learners are exposed to input in foreign language and develop a better understanding of the language, they find challenging. Interaction provides learners with the opportunity to experiment with language, identify and address language issues through the collaboration among peers. Recognizing connections with form and meaning (VanPatten et al., 2004).

Interactional feedback plays an important role in promoting learning, when implicit and explicit forms of feedback are form focused, such as recasts, elicitation and direct corrections (Havranek, 2002; Lochtman, 2002; Muranoi, 2000; Nassaji, 2015).

Bento et al. (2004) in *Collaborative Design and Learning. Competence Building for Innovation*, a book, that includes diverse contributions associated with education designs within the influence of ICTs, incorporates the study of Peña-Mora et al. (2000) which investigates within other matters, the importance of a collaborative environment in lessons, citing Salvin et al. (1985) who highlighted how, as opposed to solitary learning, collaborative learning has been shown to boost students' motivation and encourage interaction and social integration. Various studies (Hanna, 2000; Salvin et al., 1985) defended the idea that collaborative learning plays a part in allowing the development of academic skills, for instance, high-level reasoning and metacognitive thinking. Strommen & Lincoln (1992) underlined that making students co-cultivate and reflect on each other's ideas, unlikely as in only working on their own ones, contributed to the advantage of perceiving peers not as competitors but as resources for common knowledge construction.

2.4.3. ICTs for Foreign Language Learning

With the aim to explore the contributions of ICTs in the teaching and learning of foreign language process, it is relevant to first recognize its role in the general setting of learning languages. As it is shown in a complementation document of the European council's

recommendation on an approach to teaching and learning languages from 2019, digital tools can be promising to enhance language learning, teaching, and assessment. Technology can greatly support expanding the language offer and provide opportunities for language exposure towards the development of students' language competences (Commission Staff, 2018).

Furthermore, digital tools are perceived to boost leaners' motivation, engagement in the learning process, while promoting collaboration between learners and deriving the nourishing in confidence regarding the use of the target language (Commission Staff, 2018; Council of Europe, 2023).

Jones (2009) and, later on Jones & Sigmon (2016) executed a study of a method to measure motivation in students, composed with the aspects of empowerment, relating it to the autonomy shown and self-regulation; usefulness, that relates to the utility value; success, related to self-perception of ability to success; interest, that consists in whether they found something interesting and, lastly, caring, which consists in their perceptions on how people involved in the learning process cares about their procedure.

Balanskat et al. (2006), in a study that had the purpose to identify the impact of ICTs on learning and learners, recognized that ICTs could emerge positive outcomes concerning academic achievement in primary schools, particularly in the English subject.

Dedja (2015) stated that a major constituent of cultural elements in foreign language learning is the teaching that is ICT mediated.

In concordance with the previous mentioned ideas about collaboration and motivation, these were also supported by a study carried out by Yundayani et al. (2019) about teaching English through a task-based approach and through the utilization of ICTs, affirming that had a potential to change the foreign language learning paradigm by means of generating occasions to use the language communicatively and practically with a meaningful purpose. Assylzhanova et al. (2022) also made remarks on the benefits of ICTs for promoting interaction, motivation, students' achievements, and adapting the content to students' necessities in the English subject.

2.5. The podcast

Within a variety of potential digital resources to intervene in the teaching-learning of English as a foreign language process, researches have considered the implementation of

podcasts as a useful tool for several reasons, which have also been reflected in official documents that regulate educational purposes adapting them to 21st century societal demands, which include the treatment of foreign languages and technology. The European Commission (2014) suggested the podcast as a useful digital tool for language learning. This was as well-supported by Evans (2008) and Walls et al. (2010), that considered podcasting's integration and use effective for learning languages.

Celaya et al. (2019) pointed out its worth to guarantee the perpetuation of lifelong learning attitudes, under the belief that individuals must be able to take initiative and manage their own continuous learning, considered an essential objective for a cognitive society.

Podcasts are characterized by its simplicity of use, portability and ubiquity (Bolliger et al., 2010; Evans, 2008). These features make them flexible and adequate for first time implementations of digital resources in language lessons.

These have also demonstrated to have benefits on enhancing students' motivation and engagement (Bolliger et al., 2010; Indahsari, 2020; Oliver, 2005). Approaching diversity in the classroom is also viable as a podcasting trait, especially regarding difficulties in learning English (Cebeci & Tekdal, 2006), this profit relates with its collaborative and interactional attribute, and availability to be shared (Alexander, 2005; Ractham & Zhang, 2006), that makes it possible for students to gain benefits from each other's' interexchange of knowledge (Vigotsky, 1986).

According to Fouz-González (2019) and Rosell-Aguilar (2007) working on writing competences, vocabulary and pronunciation is possible by means of podcast execution.

The improvement of listening comprehension and reflection of the language through podcasts can also be beneficial in compliance with Saeedakhtar et al. (2021).

As reported by Alm (2013), podcasts enable students to access and develop content of foreign language that matches their interests and that establishes meaningful relations with daily life situations.

In a study conducted by Yeh et al. (2021) about students' podcast-making, presented in concordance with Phillips (2017) idea that podcasts eased pupils' learning and creative thinking. Enrolling students into podcast making as a creative task, enable students' role to transition from passive learners to active knowledge builders (Yeh et al., 2021). Besides, they constitute an aid for teachers to identify weaknesses in apprentices and for them to be able to provide guidance (Yeh et al., 2021).

In agreement with Meng Chan et al. (2011), creating podcasts provides learners with the opportunity to improve their speaking in English through metacognitive processes such as planning, monitoring, evaluation and revision. In the planning stage, they write podcasts' content of their interest, then write and record audio scripts. The monitoring phase involves making preliminary recordings and examining both their own work and that of their peers. During the evaluation, they share comments, and, in the final revision phase, they adjust their podcasts according to the feedback received.

Yeh et al. (2021) concluded that the autonomy that podcast-making arise in students enhances English-speaking fluency and accuracy. Moreover, students' perceptions demonstrated that through self-reflection and self-regulation there occurred an improvement of the speaking competence in the foreign language (Yeh et al., 2021).

3. METHODOLOGY

3.1. Context

The following study was carried out in a charter school located in the capital of Gipuzkoa, situated in the Basque Country in northern Spain. The region is characterised by being a bilingual community, where Basque and Spanish are the primary official languages. English has become a relevant third language to intercede towards a multilingual approach to society. Therefore, the selected educational institution where the research was conducted sets the learning of the English language as the conductive thread within a trilingual model where English is first started to learn at age one, alongside the introduction of both Spanish and Basque at the age of three and four, respectively.

3.2. Objective

The main goal of this research is to implement ICT devices in a primary education setting for the enhancement of foreign language learning, particularly focusing on the improvement of pronunciation and intonation in accordance with the development of the digital competence within the European Union Framework. Furthermore, the investigation pretends to observe the potential changes in the students' attitudes towards learning the language.

The participants were engaged in a four-week duration task-based project performed in the second semester within the English language subject. This project had a final task

which consisted of a self-created collaborative podcast generated by the classroom members. Students were organised in nine groups of three members per group.

The initial classroom sessions were dedicated to introducing the concept of a podcast to students for them to get familiar with its features and its potential, in conjunction with presenting it as the final task of the project. The subsequent lessons served to discuss the podcast's content, based on students' interests including the utilization of tablet devices to make schemes of the emerged ideas, thus resulting in a story-sharing podcast project. With the aim to foster creative writing within the English language subject, students, arranged in the working groups, composed their own stories. Later on, the script was created and last, the stories for the podcast were recorded using the *Audacity* program for podcast creation for sharing it later on with the school community.

3.3. Research questions

With the aim to guide the investigation related to the potential benefits of incorporating podcasting into primary school foreign language lessons and its impact on students' language proficiency, motivation, and digital competence development, the following research questions are proposed:

The first research question seeks to unravel the means in which the use of the podcast can be a helpful ICT tool in terms of pronunciation and intonation awareness and improvement.

RQ1: Can the utilisation of podcasting as an ICT tool be useful for foreign language learning in primary education students in terms of improving pronunciation and intonation?

The second research question has the aim to explore the impact of the implementation of the podcast project on the students' willingness to learn the language through measuring the motivation shown along the process.

RQ2: Is the elaboration of a self-created collaborative podcast a motivating ICT tool for primary education students when learning a foreign language?

Lastly, the third research question is dedicated to examining the potential of the podcast for acquiring the digital competence as established in the European Framework, focusing on specific competences from the second and the third competence.

RQ3: Is the podcast a useful ICT tool to work on the development of the digital competence, specially focusing on the *Communication and collaboration* (*2.2, 2.3, 2.4*) and *Digital content creation* (*3.1*) competence areas and its respective sub-competences, as outlined in the European Framework?

3.4. Participants

The study consisted of a sample of twenty-seven participants who were fifteen female and twelve male students from fourth grade with ages between nine and ten years from a trilingual model primary school. Students in this range of ages are being exposed to English in the Science, Mathematics, Arts and English language subjects, completing a total of twelve hours per week of English as the vehicular language.

Among the students who took part in the research, there was a student who came from an Anglo-Saxon country whose mother tongue was English, four students who spoke Italian, Polish, German or Arabic with their families, a large number of representatives who spoke Spanish and a small minority who spoke Basque.

The sample presented low levels of digital competence due to the limited exposition to the use of ICTs. The school members shared a total of 27 tablet devices to share among the school. The participants only made use of them once a week to work on an app for the Mathematics subject.

3.5. Instruments

When implementing the project in the primary school setting under study, a qualitative method was selected in order to develop the research, aligning the instruments used with the characteristics of its context and purpose. We considered this methodological choice a convenient approach to enable investigators to take part in the social dynamics and the physical environment of the active subjects expected to be examined, by means of fostering interaction, as well as providing an overall holistic vision of the process via a participant observation leading to the use of observation charts for gathering the data

about Research Question 1 and 3. Additionally, to collect data on the students' own perceptions, we selected a quantitative approach in the form of a questionnaire that had the purpose of measuring motivational conceptions for Research Question 2.

3.6. Data collection

With the aim to investigate the first research question presented, the students were recorded four different times when explaining the stories that they had previously created, arranged in nine groups of three people each. After each recording, the students listened to them to make an analysis, to raise awareness of the way they explained the story and made proper corrections on each occasion regarding the pronunciation and intonation. The initial recording was dedicated to identifying the pronunciation mistakes; both the researcher and the members of the groups made contributions to highlighting the errors. The second recording had the purpose of assuring that the pronunciation mistakes were corrected. In the subsequent recording the focus was put on the intonation matter, thus intonation improvements were discussed after listening to the recording and thought to be implemented in the last and final recording. For what concerns the data collection assembled in the process, the information was classified in Observation chart 1 that showed four items to take into consideration: the pronunciation mistakes made in the first recording, the respective corrections made in the second recording; subsequently, the intonation corrections offered after the third recording, and, lastly, whether the previously mentioned intonation corrections were applied in the fourth recording.

Observation chart 1

Recordings focused on pronunciation and intonation

	1ˢᵗ recording Pronunciation mistakes (number of mistakes)	2ⁿᵈ recording Pronunciation Mistakes correction (number of mistakes)	3ʳᵈ recording Intonation corrections (yes or no)	4ᵗʰ recording Intonation corrections have been applied (Yes or no)
Group 1				
Group 2				
Group 3				
Group 4				
Group 5				
Group 6				
Group 7				
Group 8				
Group 9				

Pronunciation and intonation mistakes and corrections related to the first research question. Source: self-elaborated.

The second research question aimed to determine the grade of motivation that students presented when being engaged in the project. Data was collected through an individual questionnaire adapting the MUSIC Model of Academic Motivation Inventory (Jones, 2009), adjusted to elementary school students, that assesses students' perceptions on the constructs of empowerment, usefulness, success, interest and caring, maintaining that they have a close relation with behavioural and cognitive engagement, and as a result, they have an impact on students' performance (Jones & Sigmon, 2016). Those five factors were related, accordingly, with the items expressed in Table 4 below, which students had to rate on a scale from 1 to 4, with 1 = *Totally disagree,* 2 = *Disagree*, 3 = *Agree,* 4 = *Totally agree* as indicated in Questionnaire 1 (Appendix 2).

Table 4

Items from the MUSIC Model of Academic Motivation Inventory related with the research items.

Empowerment	*I could make decisions about the podcast project on my way.*
Usefulness	*I can use what I learned during the development of the podcast project.*
Success	*I knew I could do well in the podcast project.*
Interest	*What I did was interesting.*
Caring	*My teacher and classmates cared about how well I did.*

Source: self-elaborated

Finally, the third research question attempted to focus on how the collaborative, student-created podcast could contribute to the build-out of the digital competence as defined in the DigComp 2.2 (Vuorikari et al., 2022).

The criteria followed to choose among the five competence areas that the framework presents, consisted on analysing the needs identified when programming the project, centred on the goals that its implementation sought to reach regarding pupils' learning. Two competence areas from the first dimension were chosen:

- *Competence area 2: Communication and collaboration.*
- *Competence area 3: Digital content creation.*

Afterwards, we selected the following specific competences comprehended in the previously picked out competence areas (*2* and *3*), constituting the following ones from the second dimension:

Table 5

Competences belonging to the competence areas 2 and 3

2.2	*Sharing through digital technologies*
2.3	*Engaging citizenship through digital technologies*
2.4	*Collaborating through digital technologies*
3.1	*Developing digital content*

Source: self-elaborated. Retrieved from (Vuorikari et al., 2022)

The target was to measure the development of the competences, based on the two first proficiency levels, *1* and *2* in the *foundation* level, out of the existing eight proficiency levels (Carretero et al., 2017) due to the nature of the project, as one of the first ones implementing the utilization of ICTs on the research participants' experience. Godaert et al. (2022) developed a structured analysis examining how to assess digital competences, and Zhang & Zhu (2016) studied how to measure digital media literacy on students, both taking into account knowledge, attitudes and skills. Following a combination of those findings, we adapted Observation chart 2, taking into account five items and differentiating whether students were able to accomplish them at a basic level and with guidance, or at a basic level, with guidance when required and showing autonomy, that aimed to analyse each student individually, accordingly to what was expected from the project.

Student:		
2.2 Sharing through digital technologies	1. Basic level / with guidance	2. Basic level/autonomy/guidance (when needed)
• The student is able to use the tablet device to communicate and create knowledge with peers (use of *Google Drive*): - Give ideas for the story - Give ideas for the script		
2.3 Engaging citizenship through digital technologies	1. Basic level / with guidance	2. Basic level/autonomy/guidance (when needed)
• The student is able to recognize the aim of the project in terms of community impact		
• The student knows the potentials of the podcast (Example: sharing information).		
2.4 Collaborating through digital technologies	1. Basic level / with guidance	2. Basic level/autonomy/guidance (when needed)
• The student knows how to collaborate with peers in the process of making the podcast.		
3.1 Developing digital content	1. Basic level / with guidance	2. Basic level/autonomy/guidance (when needed)
• The student knows how to record audio with the chosen software. *(Audacity)*		

Source: self-elaborated

4. RESULTS

This section has the goal to present the results obtained from the analysis of the data collected in the centre where the investigation was carried out. With the purpose of organizing the outcomes in the most suitable form for the investigation, we categorized the information in three subsections, each one dedicated to a different research question. For the data analysis, we used the Statistical Package for the Social Sciences (SPSS) software tool.

4.1. Results obtained from investigating Research Question 1

The first research question aimed to deepen on the specific aspects of the language that occur within English subject lessons, when students were enrolled in the podcast-making project. The focus was put on what regards pronunciation and intonation as considered relevant aspects of the communicative competence, and as well, core objectives of the podcast concerning the ability to tell and share self-made stories.

With the purpose of describing the results extracted from the designed Observation chart 1 for collecting data about the first question, we will divide them in two different aspects. To begin with, we will reveal the findings extracted from analysing pronunciation, where we attempted to identify mistakes in a first recording trial and observed if students, after receiving corrective feedback, were able to correct those mistakes in the second attempt.

Figure 1 is organised in two types of bars that show the relation between the prior mistakes and the subsequent corrections that each group manifested. Initially, it can be observed that out of nine groups, the totality of them happened to have at least one word mispronounced. An 11.3% of the groups made one mistake, two mistakes were made by a 22.2%. The maximum number of mistakes identified were up to four mistakes, as in the case of two of the groups (5 and 9), conforming the 22.2% of the sample. Six of the groups (1, 3, 4, 6, 7 and 9) were able to correct all the previous mistakes they had made when proceeding to do a second recording. Two of the groups (2 and 5) were able to correct 50% of the mistakes they had made. One of the groups (8) corrected nearly 70% of the mistakes. Lastly, two of the groups (2 and 5) were able to correct 50% of the mistakes they had made. To conclude, we want to emphasise that for our investigation, the

relevance of the analysis was given to the capacity of correction that students could manifest during the process as a sign of learning reflection on the language, instead of looking for a full lack of errors. For that we can culminate that all the students made reflections to a specific extent.

Pronunciation mistakes and corresponding corrections on the 1st and 2nd recording
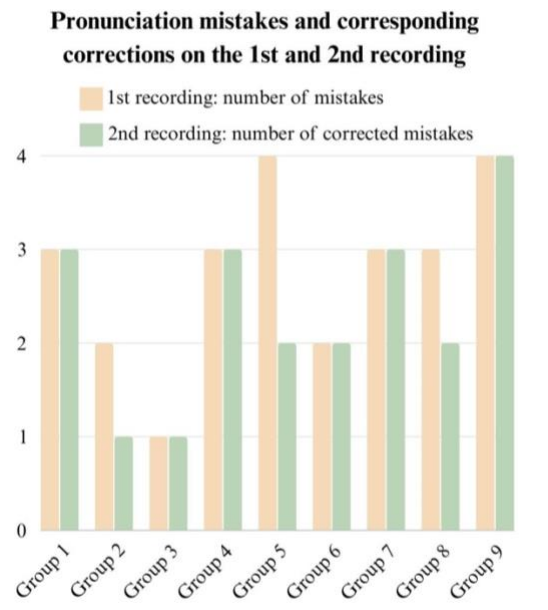
Table 6 had the purpose to expose those groups that had to apply intonation corrections in the third recording when telling the story in an accurate manner. Among all the groups 89% received feedback on intonation (1, 2, 4, 5, 6, 7, 8, 9), from this category, two of them were not able to apply the received corrections and remained the same.

Table 6

Results for Research Question 1

**Intonation corrections and corresponding applied
corrections on the 3rd and 4th recording**

	Group 1	Group 2	Group 3	Group 4	Group 5	Group 6	Group 7	Group 8	Group 9
3rd recording: Intonation corrections	yes	yes	no	yes	yes	yes	yes	yes	yes
4th recording: Applied intonation corrections	yes	yes	no	yes	yes	no	yes	no	yes

☐ groups that did not apply corrections

Source: self-elaborated

4.2. Results obtained from investigating Research Question 2

The second research question was put forward to investigate students' perceptions on the podcast project, paying attention on motivational aspects regulated by the constructs of empowerment, usefulness, success, interest and caring. For the data analysis, we concentrated on each of the items that students rated with a scale from totally disagree to totally agree (1-4) as shown in Table 7. For the first item (1st column) we found that the mean of students was 3.40. For the second item (2nd column), the mean was 3.48, the third and fourth item (3rd and 4th column) were 3.85 and the fifth item (5th column) 3.88. The mean values are quite similar.

Table 7
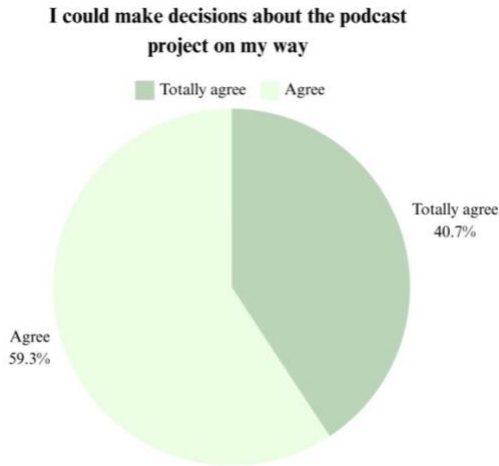
Results for Research Question 2

	I could make decisions about the podcast project on my way	I can use what I learnt during the development of the podcast project	I knew I could do well in the podcast project	What I did was interesting	My teacher and classmates cared about how well I did
Total number	27	27	27	27	27
Mean	3,4074	3,4815	3,8519	3,8519	3,8889
Standard deviation	0,50071	0,50918	0,45605	0,36201	0,32026

Source: self-elaborated

Each of the items were as well analysed individually, giving the following outcomes: Figure 2 on the item *I could make decisions about the podcast project* on my way shows that 59.3% of students agreed and 40.7% totally agreed. Figure 3 shows how approximately one half of the students agreed and around the other half totally agreed on that they could use the podcast project learnings acquired for the future.
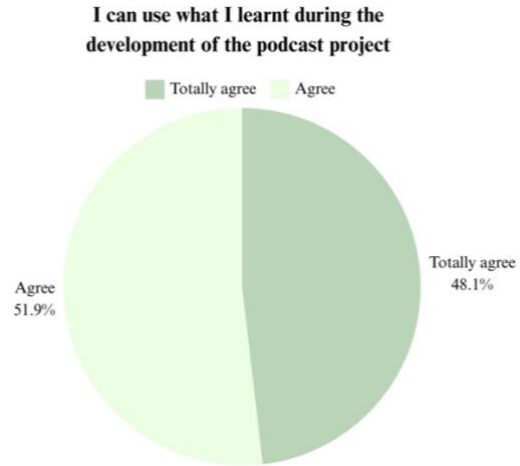
Figure 2

Results diagram for Item 1

Figure 3

Results diagram for Item 2

I could make decisions about the podcast project on my way

Totally agree   Agree

Totally agree
40.7%

Agree
59.3%

I can use what I learnt during the development of the podcast project

Totally agree   Agree

Totally agree
48.1%

Agree
51.9%

Source: self-elaborated

Source: self-elaborated

Figure 4 was related to self-confidence and success. Nine out of ten students totally agreed on that they could do well in the project, while a small amount agreed, and a small minority disagreed. Figure 5 shows that a large proportion of students (85%) totally agreed on what they did was interesting, while a 14.8% agreed on it being interesting.

Figure 4

Results diagram for Item 3

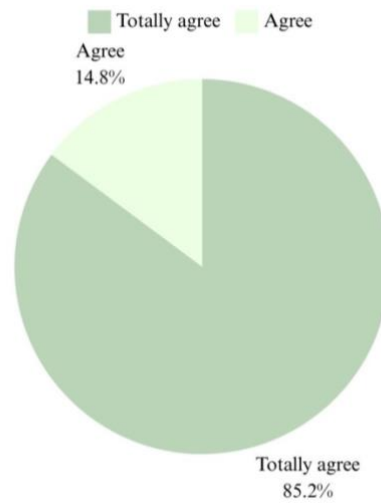**I knew I could do well in the podcast project**
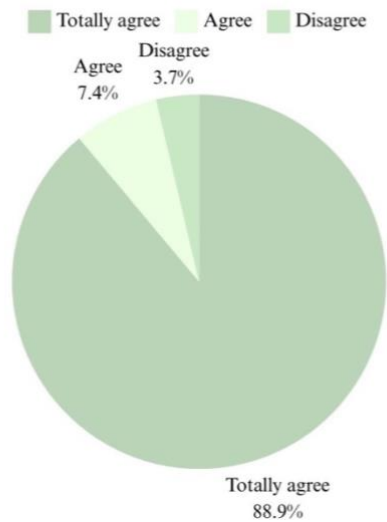
Source: self-elaborated

Figure 5

Results diagram for Item 4

What I did was interesting
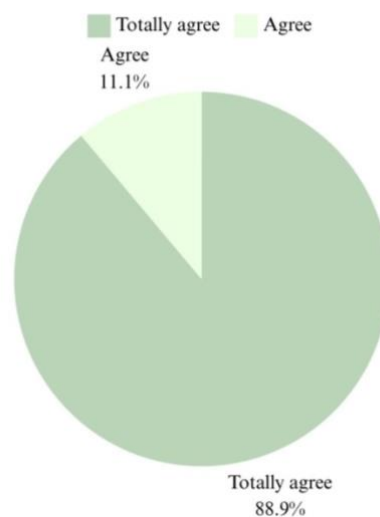

Source: self-elaborated

Figure 6 focuses on the caring aspect, showing that a big proportion of students totally agreed on their teacher and classmates caring about their performance when being involved in the project. A little amount agreed on this aspect.

Figure 6

Results diagram for Item 5

My teacher and classmates cared about how well I did

Source: self-elaborated

We as well considered relevant to take into account a gender perspective when analysing the results in order to identify the dynamics that emerge when adding this value. These outcomes were gathered in tables organised per items following the order that has been established in the previous analysis. Within the participants, there were fifteen girls and twelve boys.

Table 8 demonstrated that a bit above half of the number of girls totally agreed on the first item, related with empowerment, while the rest agreed. A bigger difference can be observed among the boys, who 75% of them agreed and 25% of them totally agreed.

Table 8

Results for Item 1 gender variable

I could make decisions about the podcast project on my way		gender		
		girl	boy	Total
Agree	recount	7	9	16
	% within gender	46,7%	75,0%	59,3%
Totally agree	recount	8	3	11
	% within gender	53,3%	25,0%	40,7%
Total	recount	15	12	27
	% within gender	100,0%	100,0%	100,0%

Source: self-elaborated

Table 9 has the second item related to the usefulness of the project. Among the girls, a 60% of them agreed and the 40% totally agreed on the item. Similar proportions were expressed by the boys but switching the degrees of agreement.

Table 9

Results for Item 2 gender variable

I can use what I learnt during the development of the podcast project		gender		
		girl	boy	Total
Agree	recount	9	5	14
	% within gender	60,0%	41,7%	51,9%
Totally agree	recount	6	7	13
	% within gender	40,0%	58,3%	48,1%
Total	recount	15	12	27
	% within gender	100,0%	100,0%	100,0%

Source: self-elaborated

Table 10 shows the answers to the third item that relates with self-perception, most of the girls completely agreed on the item, around a quarter totally agreed, and a small minority disagreed. A total percentage of the boys completely agreed on the item.

Table 10

Results for Item 3 gender variable

I knew I could do well in the podcast project		gender		
		girl	boy	Total
Disagree	recount	1	0	1
	% within gender	6,7%	0,0%	3,7%
Agree	recount	2	0	2
	% within gender	13,3%	0,0%	7,4%
Totally agree	recount	12	12	24
	% within gender	80,0%	100,0%	88,9%
Total	recount	15	12	27
	% within gender	100,0%	100,0%	100,0%

Source: self-elaborated

Table 11 shows the opinions related to the fourth item, associated with how interesting students found the project. Among the girls, 80% totally agreed, and a 20% agreed. While most of the boys totally agreed, and under a 10% agreed.

Table 11

Results for Item 4 gender variable

What I did was interesting		gender		Total
		girl	boy	
Agree	recount	3	1	4
	% within gender	20,0%	8,3%	14,8%
Totally agree	recount	12	11	23
	% within gender	80,0%	91,7%	85,2%
Total	recount	15	12	27
	% within gender	100,0%	100,0%	100,0%

Source: self-elaborated

Table 12 shows students' perceptions on how their peers and teachers care about their actions. Almost all of the girls totally agreed, and a very small quantity agreed. A bit above 80% of the boys totally agreed, and around a quarter of them agreed.

Table 12

Results for Item 5 gender variable

My teacher and classmates cared about how well I did		gender		Total
		girl	boy	
Agree	recount	1	2	3
	% within gender	6,7%	16,7%	11,1%
Totally agree	recount	14	10	24
	% within gender	93,3%	83,3%	88,9%
Total	recount	15	12	27
	% within gender	100,0%	100,0%	100,0%

Source: self-elaborated

4.3. Results obtained from investigating Research Question 3

The third research question's objective was to investigate the development of competences from the digital competence as presented in the EU framework and centred in the *foundation* level out of the eight proficiency levels (Carretero et al., 2017) and the buildout of skills, attitudes and knowledge expressed in Table 13.

Firstly, within the 2.2 competence, the first item which presented the students' ability to use the tablet device to communicate and create knowledge with their peers. Around 30% of the students were situated in the first level that relates to accomplishing a basic level with guidance, and around 70% of students were situated in the second level, which indicates a basic level, with guidance when required, while showing, as well, autonomy. The 2.3 competence encompasses the second and third item which relate, respectively, to the realization of the impact that the podcast can have in the school community and the acknowledgement of the potentials that making a podcast can provide. For the second item, nearly 45% of the students were situated on the first level, and about a 56% of the students acquired the second level. The third item showed that 37% of the students were in the first level and a 63% were in the second level.

The 2.4 competence was formed by the fourth item, based on the ability to collaborate to build knowledge. The proportion of students falling into the first level was around a 30% and the ones belonging to the second level were a bit above a 70%.

Lastly, competence 3.1 contained the fifth item related to the usage of a software at a basic level. Students in the first level were below a fifth part of the total, and a bit above an 80% of the students were in the second level.

Table 13

Results for Research Question 3

	2.2	2.3		2.4	3.1
	Item 1	Item 2	Item 3	Item 4	Item 5
Number of students in level 1	8	12	10	8	5
Number of students in level 2	19	15	17	19	22

Source: self-elaborated

5. DISCUSSION AND CONCLUSION

Deriving out of the research investigation carried out for constituting this paper, we had the possibility to explore the potential outcomes that the use of ICTs could have when being applied in foreign language learning settings as a convenient educational concern for the present and future suitable development of individuals in a society in transformation (Ala-Mutka, 2011; Council of the European Union, 2018; Kingsley & Ugwu, 2019; Nascimbeni & Vosloo, 2019).

On the one hand, we opted for following a framework that could regulate the introduction of ICTs in primary schools for the optimal development of digital competence, which is the digital competence European Framework. Mena Merchán & Marcos Porras (1994) mentioned how a combination of technology education with other disciplines could increase the chance to reach meaningful learnings. Consequently, we backed up the idea of initiating students in digital matters, providing them with the pertinent contextualization that English lessons can provide. In such manner, enabling to work transversally with different key competences for lifelong learning (European Commission, 2019).

On the other hand, and following this line of thought, we looked into the aptitude of a student's created podcast implementation as an ICT tool supported by the need to engage students in meaningful tasks that allow the persuasion of quality education (United Nations, 2023; Yundayani et al., 2019), and we chose a Task-based approach for accomplishing it, in agreement with Yundayani et al. (2019), who affirmed that the approach could foster opportunities for using the language in a communicative and practical manner.

Following the characteristics of the investigated sample, which was characterised by a very scarce digital infrastructure, and therefore, a very low level of digital knowledge and skills, we supported the idea of using a podcast for its simplicity of use as Bolliger et al. (2010) and Evans (2008) stated.

Findings on the first research question indicated that, overall, students were able to reflect on the language they produced regarding pronunciation and intonation through the process of recording several times the podcast, and we conclude that they could apply corrections, and they made improvements aligned with Pica & Doughty's (1985) and Alcón Soler's (2002) studies that showed that through teacher and students interaction

and interaction with peers, in large, small groups or pairs could benefit the language learning process, mentioning the relevance of feedback. Implicit and explicit forms of feedback were applied in the corrections which are considered by several authors (Havranek, 2002; Lochtman, 2002; Muranoi, 2000; Nassaji, 2015) to be effective for promoting learning. Also, following the findings of Fouz-González (2019) and Rosell-Aguilar (2007), who highlighted the possibilities to work on pronunciation through podcasts. The participants of this study corroborated the positive outcomes of a study carried out by Meng Chan et al. (2011) that through metacognitive processes including planning, monitoring, evaluating and revision they could improve aspects on their speaking, in this case, in terms of pronunciation and intonation when telling stories.

For the second research question, we investigated whether enrolling students in a podcast-creation project could be motivating for them, as studied by several authors (Bolliger et al., 2010; Indahsari, 2020; Oliver, 2005). The outcomes of our paper showed that the majority of students agreed or totally agreed on the items that were related to the motivation concepts of empowerment, usefulness, success, interest and caring (Jones, 2009; Jones & Sigmon, 2016).

We considered relevant to investigate whether the gender could influence on the topic. Following the idea of Celaya et al. (2019), who affirms that to work on lifelong learning attitudes, students should learn in a condition where they are able to take initiative and manage their learning, and Yeh et al. (2021) who considered enrolling students in a podcast-making as a creative task, could transform students' role to transition from passive to active learners. We observed that on the first item, which was related to showing autonomy and making decisions, girls showed a higher percentage on choosing the option of totally agreeing. Regarding the second item, related to the usefulness of the project, there existed a small difference between genders, both of them mostly agreeing on finding it useful. The third item was related to self-perception around the capacity they believe to have to success in making the project. We found that boys appeared to be more confident about their ability to carry out the work, while girls appeared to be less confident. The fourth item had the purpose of showing the interest that students had around the project. Both genders appeared to be highly interested in participating. The last item referred to the caring aspect, both genders mostly showed to totally agree on teachers and peers showing concern about their performance.

These outcomes line up with studies carried out by Assylzhanova et al. (2022), the Commission Staff (2018) and the Council of Europe (2023) that affirm that digital devices are perceived to boost learners' motivation and engagement, combined with the encouragement to collaborate between peers, which also improves the confidence into making use of the language.

Through the practical implementation of the podcast in our research we could see that students could collaboratively construct common knowledge, as Strommen & Lincoln (1992) through the advantages of interaction (Gass, 1997; Krashen, 1982; Long, 1983). The third research question aimed to study whether enrolling students in a collaborative podcast served to work on the digital competence. When conducting or data collection phase, we concentrated on those competences that adjusted to the nature of the project to see if the podcast project could contribute on working on them (*2.2, 2.3, 2.4* and *3.1*). For our research, we took into account the conditions that the sample presented originally before enrolling students in the project, which was a nearly absent contact with technology. Derived from a null level of digital competency, we were able to observe that through the participation on the podcast, students could mostly achieve the second level of the *foundation* level. Even though this would not serve as a way to evaluate students' digital competence, it serves as a guide to identify that, as an implementation project, it places as a helpful starting point to develop knowledge, skills and attitudes that associated with the development digital competence as presented in the DigComp 2.2 (Vuorikari et al., 2022).

By the means of carrying out the present dissertation and through the analysis of its findings, we considered the implementation of a students' created podcast project a tool to foster the construction of values and lifelong learnings, in accordance to the arising of quality education. As well, constituted as a potential tool to work on the development of the digital competence while also providing an engaging approach to work on the acquisition of English as a Foreign Language Learning for primary school students. However, due to the limited sample size used in this study, we find it necessary to conduct further research on the topic in order to be able to draw more determining conclusions.

6. BIBLIOGRAPHY

Ala-Mutka, K. (2011). *Mapping Digital Competence: Towards a Conceptual Understanding*. http://is.jrc.ec.europa.eu/pages/EAP/DIGCOMP.html

Alcón Soler, E. (2002). Relationship between teacher-led versus learners' interaction and the development of pragmatics in the EFL classroom. *International Journal of Educational Research*, *37*(3–4), 359–377. https://doi.org/10.1016/S0883-0355(03)00010-7

Alexander, B. (2005). *Podcasting and the Liberal Arts*.

Alm, A. (2013). Extensive listening 2.0 with foreign language podcasts. *Innovation in Language Learning and Teaching*, *7*(3), 266–280. https://doi.org/10.1080/17501229.2013.836207

Assylzhanova, D., Seisenbek, N., Uzakbaeva, S., & Kapalbek, B. (2022). The Effect of ICT-Enhanced Blended Learning on Elementary School Students' Achievement in English and Attitudes towards English Lesson. *International Journal of Education in Mathematics, Science and Technology*, *10*(3), 632–649. https://doi.org/10.46328/ijemst.2463

Balanskat, A., Blamire, R., & Kefala, S. (2006). *The ICT Impact Report A review of studies of ICT impact on schools in Europe*. http://partners.becta.org.uk/index.php?section=bp&catcode=_be_em_02

Bawden, D. (2001). Information and digital literacies: A review of concepts. *Journal of Documentation*, *57*(2), 218–259. https://doi.org/10.1108/EUM0000000007083

Bento, J., Duarte, J., Heitor, M. V., & Mitchell, W. (2004). *Collaborative Design and Learning. Competence Building for Innovation* (J. Bento, J. Duarte, M. V. Heitor, & W. Mitchell, Eds.; 1st ed.). Praeger Publishers.

Bolliger, D. U., Supanakorn, S., & Boggs, C. (2010). Impact of podcasting on student motivation in the online learning environment. *Computers & Education*, *55*(2), 714–722. https://doi.org/10.1016/j.compedu.2010.03.004

Cabero Almenara, J. (2015). *Reflexiones educativas sobre las tecnologías de la información y la comunicación (TIC)*.

Caena, F., & Redecker, C. (2019). *Aligning teacher competence frameworks to 21st century challenges: The case for the European Digital Competence Framework for Educators (Digcompedu)*. https://doi.org/10.1111/ejed.12345

Carretero, S., Vuorikari, R., & Punie, Y. (2017). *DigComp 2.1: The Digital Competence Framework for Citizens with eight proficiency levels and examples of use*. https://doi.org/10.2760/38842

Cebeci, Z., & Tekdal, M. (2006). Using Podcasts as Audio Learning Objects. *Interdisciplinary Journal of E-Skills and Lifelong Learning*, *2*, 047–057. https://doi.org/10.28945/400

Cebrián de la Serna, M., & Gallego- Arrufat, M.-J. (2011). *Procesos educativos con TIC en la sociedad del conocimiento* (Ediciones Pirámide).

Celaya, I., Ramírez-Montoya, M. S., Naval, C., & Arbués, E. (2019). *The educational potential of the podcast: an emerging communications medium educating outside the classroom*.

Cenoz, J. (2013). Defining multilingualism. In *Annual Review of Applied Linguistics* (Vol. 33, pp. 3–18). https://doi.org/10.1017/S026719051300007X

Commission Staff. (2018). *Proposal for a Council Recommendation on a comprehensive approach to the teaching and learning of languages*. http://ec.europa.eu/dgs/education_culture/repository/languages/library/studies/executive-summary-eslc_en.pdf

Council of Europe. (2023). *The CEFR Companion Volume: Enhancing engagement in language education.Reflection Day Report*.

Council of the European Union. (2018). *COUNCIL RECOMMENDATION of 22 May 2018 on key competences for lifelong learning*.

Council of the European Union. (2019). *Council Recommendation of 22 May 2019 on a comprehensive approach to the teaching and learning of languages*.

Dalampira, E. S., & Nastis, S. A. (2020). Mapping Sustainable Development Goals: A network analysis framework. *Sustainable Development*, *28*(1), 46–55. https://doi.org/10.1002/sd.1964

Dedja, M. (2015). ICT in Foreign Language Teaching and Learning. *European Journal of Language and Literature Studies*, *1*(2).

ERT (European Round Table of Industrialists). (1997). *Investing in Knowledge: The Integration of Technology in European Education*.

European Commission. (2014). *Improving the effectiveness of language learning: CLIL and computer assisted language learning*.

European Commission. (2019). *Key competences for lifelong learning*. https://doi.org/https://data.europa.eu/doi/10.2766/569540

European Parliament, & Council of the European Union. (2006). RECOMMENDATION OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 on key competences for lifelong learning. In *Official Journal of the European Union*.

Evans, C. (2008). The effectiveness of m-learning in the form of podcast revision lectures in higher education. *Computers & Education*, *50*(2), 491–498. https://doi.org/10.1016/j.compedu.2007.09.016

Ferrari, A. (2012). *Digital Competence in Practice: An Analysis of Frameworks*. https://doi.org/10.2791/82116

Ferrari, A., Punie, Y., & Brečko, B. N. (2013). *DIGCOMP: A Framework for Developing and Understanding Digital Competence in Europe*. https://doi.org/10.2788/52966

Flint, R. W. (2013). *Practice of Sustainable Community Development A Participatory Framework for Change*. https://doi.org/https://doi.org/10.1007/978-1-4614-5100-6

Fouz-González, J. (2019). Podcast-based pronunciation training: Enhancing FL learners' perception and production of fossilised segmental features. *ReCALL*, *31*(2), 150–169. https://doi.org/10.1017/S0958344018000174

Fox, R., Corretjer, O., & Webb, K. (2019). *Benefits of foreign language learning and bilingualism: An analysis of published empirical research 2012–2019.*

Gass, S. (1997). *Input, Interaction and the Second Language Learner*.

Godaert, E., Aesaert, K., Voogt, J., & van Braak, J. (2022). Assessment of students' digital competences in primary school: a systematic review. *Education and Information Technologies*, *27*(7), 9953–10011. https://doi.org/10.1007/s10639-022-11020-9

Hanna, D. E. (2000). *Higher Education in an Era of Digital Competition: Choices and Challenges.* 362.

Havranek, G. (2002). When is corrective feedback likely to succeed? *International Journal of Educational Research*, 255–270.

Hewlett Foundation. (2012). *Deeper learning: Strategic plan summary*.

Indahsari, D. (2020). Using podcast for EFL students in language learning. *JEES (Journal of English Educators Society)*, *5*(2), 103–108. https://doi.org/10.21070/jees.v5i2.767

James, E. (2001). Learning to Change: ICT in Schools. Schooling for Tomorrow. Education and Skills. In *OECD*. https://files.eric.ed.gov/fulltext/ED459698.pdf

Jones, B. D. (2009). Motivating Students to Engage in Learning: The MUSIC Model of Academic Motivation. *International Journal of Teaching and Learning in Higher Education*, *21*(2), 272–285. http://www.isetl.org/ijtlhe/

Jones, B. D., & Sigmon, M. L. (2016). Validation evidence for the elementary school version of the MUSIC® model of academic motivation inventory. *Electronic Journal of Research in Educational Psychology*, *14*(1), 155–174. https://doi.org/10.14204/ejrep.38.15081

Kingsley, U., & Ugwu, P. (2019). *THE CONCEPT AND APPLICATION OF ICT TO TEACHING/LEARNING PROCESS*.

Krashen, S. (1982). *Principles and Practice in Second Language Acquisition*.

Lochtman, K. (2002). Oral corrective feedback in the foreign language classroom: How it affects interaction in analytic foreign language teaching. *International Journal of Educational Research*, *37*(3–4), 271–283.

Long, M. (1983). Linguistic and conversational adjustments to non-native speakers. *Studies in Second Language Acquisition*.

Mena Merchán, B., & Marcos Porras, M. (1994). *Nuevas tecnologías para la enseñanza. Didáctica y metodología* (Ediciones de la Torre).

Meng Chan, W., Won Chi, S., Nyet Chin, K., & Yao Lin, C. (2011). Students' Perceptions of and Attitudes towards Podcast-Based Learning-A Comparison of Two Language Podcast Projects. In *Electronic Journal of Foreign Language Teaching* (Vol. 8). http://e-flt.nus.edu.sg/

Muranoi, H. (2000). Focus on form through interaction enhancement: Integrating formal instruction into a communicative task in EFL classrooms. *Language Learning*, *60*(4), 617–673.

Nascimbeni, F., & Vosloo, S. (2019). Digital literacy for children: exploring definitions and frameworks. In *UNICEF Office of Global Insight and Policy*.

Nassaji, H. (2015). How to draw learners' attention to form in communicative contexts. The use of interactional feedback. In *Ellis & Sheen: Vol. Long*. Nassaji.

OECD. (2018). *The Future of Education and Skills, Education 2030*.

Oliver, B. (2005). Mobile blogging, 'Skyping' and podcasting: Targeting undergraduates' communication skills in transnational learning contexts. *Microlearning*, *107*(4), 587–600.

O'Shea, M., Hougaard, K. F., McGrath, C., Grainger Clemson, H., Vrhovski, I., & Kozak, M. (2020). *Supporting Key Competence Development: Learning approaches and environments in school education*. https://doi.org/10.2766/8227

Pampouri, A., Tsolakidou, P., & Mavropoulos, A. (2021). *KEY COMPETENCES FOR LIFELONG LEARNING IN EUROPE: TOWARDS A CONCEPTUAL FRAMEWORK OF UNDERSTANDING, FORMULATION AND IMPLEMENTATION*. https://doi.org/10.21125/inted.2021.1716

Peña-Mora, F., Struminger, R., Favela, J., & Losey, R. (2000). Supporting a Project-Based, Collaborative, Distance Learning Lab. *Computing in Civil and Building Engineering (2000)*, 170–176. https://doi.org/10.1061/40513(279)22

Pérez Tornero, J. M., Varis, Tapio., & Unesco Institute for Information Technologies in Education. (2010). *Media literacy and new humanism*. Unesco Institute for Information Technologies in Education.

Phillips, B. (2017). Student-Produced Podcasts in Language Learning – Exploring Student Perceptions of Podcast Activities. *IAFOR Journal of Education*, *5*(3). https://doi.org/10.22492/ije.5.3.08

Philp, J., & Tognini, R. (2009). Language acquisition in foreign language contexts and the differential benefits of interaction. *IRAL - International Review of Applied Linguistics in Language Teaching*, *47*(3–4), 245–266. https://doi.org/10.1515/iral.2009.011

Pica, T., & Doughty, C. (1985). *Input and interaction in the communicative language classroom: A comparison of teacher-fronted and group activities. Input in second language acquisition*. 115–132.

Ractham, P., & Zhang, X. (2006). Podcasting in academia. *Proceedings of the 2006 ACM SIGMIS CPR Conference on Computer Personnel Research: Forty-Four Years of Computer Personnel Research: Achievements, Challenges & the Future*, 314–317. https://doi.org/10.1145/1125170.1125241

Redecker, C., & Punie, Y. (2017). *Digital Competence of Educators DigCompEdu*.

Reis, C., Pessoa, T., & Gallego-Arrufat, M. J. (2019). Alfabetización y competencia digital en Educación Superior: una revisión sistemática. *REDU. Revista de Docencia Universitaria*, *17*(1), 45. https://doi.org/10.4995/redu.2019.11274

Rosell-Aguilar, F. (2007). Top of the Pods—In Search of a Podcasting "Podagogy" for Language Learning. *Computer Assisted Language Learning*, *20*(5), 471–492. https://doi.org/10.1080/09588220701746047

Saeedakhtar, A., Haqju, R., & Rouhi, A. (2021). The impact of collaborative listening to podcasts on high school learners' listening comprehension and vocabulary learning. *System*, *101*. https://doi.org/10.1016/j.system.2021.102588

Salvin, R., Saharan, S., Kagan, S., Hertz-Lazarowitz, R., Webb, C., & Schmuck, R. (1985). *Learning to Cooperate, Cooperating to Learn* (R. Slavin, S. Sharan, S.

Kagan, R. Hertz-Lazarowitz, C. Webb, & R. Schmuck, Eds.). Springer US. https://doi.org/10.1007/978-1-4899-3650-9

Spante, M., Hashemi, S. S., Lundin, M., & Algers, A. (2018). Digital competence and digital literacy in higher education research: Systematic review of concept use. In *Cogent Education* (Vol. 5, Issue 1, pp. 1–21). Taylor and Francis Ltd. https://doi.org/10.1080/2331186X.2018.1519143

Strommen, E. F., & Lincoln, B. (1992). Constructivism, Technology, and the Future of Classroom Learning. *Education and Urban Society*, *24*(4), 466–476. https://doi.org/10.1177/0013124592024004004

UNESCO. (2009). *Guide to measuring Information and Communication Technologies (ICT) in education*.

UNESCO. (2016). *Global Action Program on Education for Sustainable Development*. http://en.unesco.org/gap

United Nations. (2015). *Transforming our world: the 2030 Agenda for Sustainable Development Transforming our world: the 2030 Agenda for Sustainable Development Preamble*. https://documents.un.org/doc/undoc/gen/n15/291/89/pdf/n1529189.pdf?token=7DnVs0y9irtlIjoi8Z&fe=true

United Nations. (2023). *The Sustainable Development Goals Report 2023*. https://unstats.un.org/sdgs/report/2023/The-Sustainable-Development-Goals-Report-2023.pdf

VanPatten, B., Williams, J., & Rott, S. (2004). *Form-meaning connections in second language acquisition*.

Vigotsky, L. S. (1986). *Thinking and Speech*.

Vuorikari, R., Kluzer, S., & Punie, Y. (2022). DigComp2.2: The Digital Competence Framework for Citizens - With new examples of knowledge, skills and attitudes. *Publications Office of the European Union*. https://doi.org/10.2760/115376

Walls, S. M., Kucsera, J. V., Walker, J. D., Acee, T. W., McVaugh, N. K., & Robinson, D. H. (2010). Podcasting in education: Are students as ready and eager as we think they are? *Computers & Education*, *54*(2), 371–378. https://doi.org/10.1016/j.compedu.2009.08.018

World Bank. (2019). *The Changing Nature of Work*. https://documents1.worldbank.org/curated/en/816281518818814423/pdf/Main-Report.pdf

Yeh, H. C., Chang, W. Y., Chen, H. Y., & Heng, L. (2021). Effects of podcast-making on college students' English-speaking skills in higher education. *Educational Technology Research and Development*, *69*(5), 2845–2867. https://doi.org/10.1007/s11423-021-10026-3

Yundayani, A., Kardijan, D., & Herawan, T. (2019). *Integrating ICT in English for Academic Purposes Materials through Task-Based Approach*. https://doi.org/https://doi.org/10.3991/ijet.v14i17.10753

Zhang, H., & Zhu, C. (2016). A Study of Digital Media Literacy of the 5th and 6th Grade Primary Students in Beijing. *Asia-Pacific Education Researcher*, *25*(4), 579–592. https://doi.org/10.1007/s40299-016-0285-2

APPENDIX

Appendix 1

Table: Data collected for Research Question 1

	1st recording Pronunciation mistakes (number of mistakes)	2nd recording Pronunciation Mistakes correction (number of mistakes)	3rd recording Intonation corrections (yes or no)	4th recording Intonation corrections have been applied (Yes or no)
Group 1	3	3	yes	yes
Group 2	2	1	yes	yes
Group 3	1	1	no	no
Group 4	3	3	yes	yes
Group 5	4	2	yes	yes
Group 6	2	2	yes	no
Group 7	3	3	yes	yes
Group 8	3	2	yes	no
Group 9	4	4	yes	yes

Appendix 2

Questionnaire 1: template for Research Question 2

• Mark each box with a cross depending on: 1 = *Totally disagree;* 2 = *Disagree;* 3 = *Agree;* 4 = *Totally agree*				
Name:	1	2	3	4
I could make decisions about the podcast project on my way.				
I can use what I learnt during the development of the podcast project.				
I knew I could do well in the podcast project.				
What I did was interesting.				
My teacher and classmates cared about how well I did.				