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The integration of AI in developing young learners' writing skills
through Wikis: Action Research in a Greek EFL context

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Patras, Greece, June 2024

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Dedication

To my beloved family

My father, Ioannis

My mother, Eleftheria

My brother, Christos

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Abstract

In today's society where technology is constantly evolving and new developments arise, it is essential for educators to explore the benefits of the new technologies for English language teaching (ELT) and integrate them in their practices. The purpose of this dissertation is to explore the effects of a Wiki platform with integration of AI writing tools in the Greek EFL classroom to investigate its impact on young learners' writing skills. The participants are thirteen Greek learners whose level of English is A2, and they attend afternoon English lesson in a private language school in Ioannina. More precisely, the research focuses on investigating whether a wiki platform with the integration of AI can help learners develop their writing skills following a process writing paradigm and explore the effects of the proposed tool on their motivation, engagement and critical thinking abilities. The participants were engaged in four writing lessons where they were asked to complete writing tasks both individually and in groups through a wiki platform using the AI writing tools of Quillbot and Grammarly. A needs analysis questionnaire, classroom observations, three post-session and a post-research questionnaire were used to collect information and analyse the results of each writing session. The research followed the qualitative design through the method of action research. Hence, data was analysed thematically and was presented in narrative form. The analysis of the data confirmed the usefulness of wikis and AI in enhancing motivation and engagement in the writing process while learners' critical thinking was also positively affected by the intervention practices. Ultimately, through comparison of the findings to similar studies, the results were found to be in accordance with previous research, further confirming the usefulness and importance of integrating technology to the learning process. This research contributes to the field of English language teaching by providing insights into the Greek EFL setting. The findings encourage the incorporation of more up-to-date technological tools in education that can enhance current practices and caters for the needs of 21st century learners.

Keywords

Technology, Web 2.0 tools, CMC tools, Artificial Intelligence (AI), action research, process writing

Η ενσωμάτωση της τεχνητής νοημοσύνης στην ανάπτυξη των δεξιοτήτων γραφής των νεαρών μαθητών μέσω των Wikis: Έρευνα δράσης στο ελληνικό πλαίσιο της διδασκαλίας της Αγγλικής γλώσσας

Βασιλάκη Σταυρούλα

Περίληψη

Στη σημερινή κοινωνία όπου η τεχνολογία εξελίσσεται συνεχώς και προκύπτουν νέες εξελίξεις, καθίσταται απαραίτητο για τους εκπαιδευτικούς να διερευνήσουν τα οφέλη των νέων τεχνολογιών για την διδασκαλία της Αγγλικής γλώσσας και να τις ενσωματώσουν στις πρακτικές τους. Σκοπός της παρούσας διπλωματικής εργασίας είναι να διερευνήσει τα αποτελέσματα μιας πλατφόρμας Wiki με την ενσωμάτωση εργαλείων γραφής τεχνητής νοημοσύνης στο ελληνικό πλαίσιο της διδασκαλίας της Αγγλικής γλώσσας για να εξετάσει τον αντίκτυπό της στις δεξιότητες γραφής των μαθητών. Οι συμμετέχοντες είναι δεκατρείς Έλληνες μαθητές των οποίων το επίπεδο της αγγλικής γλώσσας είναι Α2 οι οποίοι παρακολουθούν απογευματινά μαθήματα αγγλικών σε ιδιωτικό φροντιστήριο ξένων γλωσσών στα Ιωάννινα. Πιο συγκεκριμένα, η έρευνα επικεντρώνεται στη διερεύνηση του κατά πόσον μια πλατφόρμα wiki με την ενσωμάτωση τεχνητής νοημοσύνης μπορεί να βοηθήσει τους μαθητές να αναπτύξουν τις δεξιότητες γραφής τους ακολουθώντας την προσέγγιση «έμφαση στη διαδικασία παραγωγής γραπτού λόγου» καθώς και στη διερεύνηση της επίδρασης του προτεινόμενου εργαλείου Web 2.0 στα κίνητρα, την αφοσίωση και τις ικανότητες κριτικής σκέψης τους. Οι συμμετέχοντες παρακολούθησαν τέσσερα μαθήματα γραφής, όπου τους ζητήθηκε να ολοκληρώσουν εργασίες συγγραφής τόσο ατομικά όσο και σε ομάδες μέσω μιας πλατφόρμας Wiki χρησιμοποιώντας τα εργαλεία γραφής τεχνητής νοημοσύνης Quillbot και Grammarly. Για τη συλλογή πληροφοριών και την ανάλυση των αποτελεσμάτων της έρευνας χρησιμοποιούνται ένα ερωτηματολόγιο ανάλυσης αναγκών, παρατηρήσεις στην τάξη, καθώς και ερωτηματολόγια

κατά τη διάρκεια και μετά το τέλος της διαδικασίας. Η έρευνα ακολούθησε τον ποιοτικό σχεδιασμό μέσω της μεθόδου της έρευνας δράσης. Ως εκ τούτου, τα δεδομένα αναλύθηκαν θεματικά και παρουσιάστηκαν σε αφηγηματική μορφή. Η ανάλυση των δεδομένων επιβεβαίωσε τη χρησιμότητα των Wiki και της τεχνητής νοημοσύνης στην ενίσχυση των κινήτρων και της συμμετοχής στη συγγραφική διαδικασία, ενώ η κριτική σκέψη των μαθητών επηρεάστηκε επίσης θετικά από τις πρακτικές που εφαρμόστηκαν. Τέλος, μέσω της σύγκρισης των ευρημάτων με παρόμοιες μελέτες, τα αποτελέσματα βρέθηκαν να είναι συμβατά με προηγούμενες έρευνες, επιβεβαιώνοντας περαιτέρω τη χρησιμότητα και τη σημασία της ενσωμάτωσης της τεχνολογίας στη μαθησιακή διαδικασία. Η παρούσα έρευνα συμβάλλει στον τομέα της διδασκαλίας της Αγγλικής γλώσσας παρέχοντας πληροφορίες για το ελληνικό πλαίσιο. Τα ευρήματα ενθαρρύνουν την ενσωμάτωση πιο σύγχρονων τεχνολογικών εργαλείων στην εκπαίδευση τα οποία μπορούν να βελτιώσουν τις ισχύουσες πρακτικές ώστε να εξυπηρετήσουν τις ανάγκες των μαθητών του 21ου αιώνα.

Λέξεις – Κλειδιά

Τεχνολογία, διαδικτυακά εργαλεία δεύτερης γενιάς (εργαλεία Web 2.0), Εργαλεία επικοινωνίας μέσω υπολογιστή (εργαλεία CMC) , Τεχνική νοημοσύνη, Έρευνα δράσης, Έμφαση στη διαδικασία παραγωγής γραπτού λόγου

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List of Abbreviations & Acronyms

AI	Artificial intelligence
CALL	Computer Assisted Language Learning
CEFR	Common European Framework of Reference for languages
CLIL	Content and Language Integrated Learning
CMC	Computer-mediated communication
EFL	English as a Foreign Language
ELT	English language teaching
NA	Needs Analysis

Introduction

Our era is characterized by rapid technological advancements, constant changes and evolution. The notion of education could not remain unaffected by these changes. In the domain of foreign or second language teaching the focus has shifted from traditional structure-based approaches that were prevalent in the field for decades to more communicative applications that cater for the diverse needs of the learners in the present era of information. Accordingly, in the teaching of writing, new approaches have emerged to contradict the traditional product-oriented ones aiming to create a more learner-center environment where emphasis is placed on creativity and meaning as opposed to structure and habit-formation patterns that dominated in the past (Pincas, 1962).

The evolution of CALL has led to the emergence of various web-based tools that offer a new perspective for teaching and learning and can transform the classroom setting into a stimulating environment of authentic information that promotes creativity and collaboration. Thus, technology has become an integral part of the learning experience, and it became a necessity for educators to incorporate more innovative practices to transform their teaching and cater for the development of the necessary skills and values for learners to be able to think critically and communicate effectively in the global community (Tzotzou et al., 2021). However, even though several advancements and multimedia elements have been integrated into the learning experience, in the teaching of writing in the Greek EFL context more structure-based approaches are still opted for by educators and traditional models of writing production that restrict creativity and imagination are still predominant in the field (Alexiou & Matthaoudaki, 2013).

In light of the above, the purpose of the current research is to examine the effects of wikis and AI writing tools on young learners' writing skills. More precisely, it aims to investigate whether the use of these more up-to-date technological tools can positively affect learners' engagement, motivation and critical thinking abilities which are essential for them to develop into active citizens who are able to evaluate information and form their own opinions rather than passively absorb what is imposed to them. For the aims of the current study, the researcher developed a series of writing lessons that integrate wiki and AI writing tools in the process following a more process-oriented writing methodology. The study follows the mode of action research and includes four cycles. Its implementation focuses on

a group of thirteen A2 learners that attend afternoon English lessons to a private language school.

The present dissertation is comprised of five chapters. The first two chapters focus on the literature review, the presentation of the theoretical background and the pillars of the present study. Particularly, the first chapter introduces the notion of literacy through a presentation of the most prevalent writing approaches and explores the concept of the new digital literacies that have emerged as a consequence to the rapid technological advancements of our society. In the end, the teaching of writing in the Greek EFL context is discussed. The second chapter is concerned with the different technological tools that have emerged in the educational context to cater for the development of learners' language and 21st century skills focusing on the use of wikis and AI writing tools in the language classroom.

The third chapter illustrates the research approach followed to conduct the present study, the research questions and the educational context, namely the participants and the setting of the study. Moreover, it offers a description of the research tools and the overall methodology that has been followed. In the fourth chapter the results and findings of the research are presented and analyzed, and a discussion of the findings as regards the research questions follows. Finally, the sub-questions along with the main research question are answered separately. The fifth and final chapter is concerned with the significance of the research and its implication for education. Ultimately, the research limitations are discussed and suggestions for further research are demonstrated.

1. Writing in the EFL classroom

Introduction

This chapter is concerned with the teaching of writing in the EFL classroom which forms the basis of the present research and the different practices that are followed to develop the learners' writing skills. It offers a presentation of the most prominent writing approaches, their strengths, and weaknesses, and it discusses the teaching of writing in the Greek educational system and in particular, in the private language schools.

1.1. Approaches to teaching writing

Through the years, different approaches to writing have emerged focusing on a variety of aspects of the writing process emphasizing the importance of both the writer and the written text. Writing is not a one-dimensional process as it includes both the creation and understanding of different meanings, and it can be approached through different methodologies to enable learners develop their abilities and express their thoughts and experiences in written form (Harmer, 2007). The most salient writing approaches developed are the ones focusing on form, that is the product-oriented approaches, and the ones focusing on the writing process as a whole, called, the process-oriented approaches.

1.1.1. The product-oriented approach

The product approach to writing is the predominant model used in the teaching of writing in the EFL environment (Hyland, 2016). Influenced by structuralism, the focus of this approach lies on the final written product and emphasizes the importance of form over meaning (Hyland, 2016). In this way, texts are treated as “disembodied” and decontextualized items (Hyland, 2016, p. 4) that plainly transfer information from one person to another taking away the creativity of the writer and putting emphasis on the accuracy of the language and the grammatical rules rather than the meaning that is transmitted.

The product-oriented approach is further reinforced through the use of model texts, that aim to function as a guidance for the learners to produce their own written text, considering that the first draft is treated as the final product. Hyland (2003, p. 3) argues that in product-oriented approaches “writing development is considered to be the result of imitating and manipulating models provided by the teacher”. Model texts are provided to the learners and

studied in terms of form, grammar and syntax before writing, and learners are asked to follow the structure of the model to create their own writing piece. Moreover, fixed phrases and writing prompts are provided to guide learners through the whole process and emphasis is placed on the accuracy of vocabulary and grammar used instead of the meaning that is created. As Zamel (1976, p. 29) states, this approach views writing as “synonymous to usage and structure”, as learners are asked to imitate and use the structures presented by a model rather than generating their own ideas to create their writing and eventually explore their writing style. Hence, they are urged to passively follow the structure presented by the model text and manipulate it to create a similar text to the one given, becoming passive receivers of information as they are not stimulated to develop their creativity as writers and their ideas are restricted by the imposed model texts.

Supporters of the product-oriented approach highlight the importance of habit formation in the creation of language patterns, supporting that it helps learners in learning how to create correct and well-structured sentences (Hyland, 2003). In addition, they believe that through the manipulation of presented model text, learners are taught to use structures and patterns effectively and eventually develop their skills in writing (Hyland, 2003). Finally, it is claimed that model texts help learners become aware of the different genres and guide them through the correct use of vocabulary and an appropriate writing style (Eschholz, 1980).

1.1.2. The process-oriented approach

The process approach to writing has been widely researched and used in the EFL environment (Flower & Hayes, 1981; Grabe & Kaplan, 1996; White & Arndt, 1991; Zamel, 1976). The process writing approach emerged to contrast the traditional approaches to writing that focus on structure-based elements and viewed writing as a linear process towards the creation of the final product (Hyland, 2003). In contrast to the product-oriented approaches, the process writing approach focuses on the ways that the human mind functions while composing and emphasizes the recursiveness of the writing process by highlighting the importance of learners' engagement in the whole procedure through different stages of planning, drafting, editing, and re-drafting until the final writing product is created (Flower & Hayes, 1981). This method shifts the focus from the instructor to the writer and emphasizes the importance of genuine personal expression in the writing process and individualized instruction to provide stimulations for writing and constructive feedback to the writers (Zamel, 1976).

White and Arndt (1991) offer a detailed description of the stages regarding the process writing approach; these are the generation of ideas, focusing, structuring, drafting, evaluating, and reviewing the ideas before the final product is composed. This process highlights the importance of coherence by shifting the focus from the structure-based activities, that traditional product approaches to writing aimed to teach in the pre-writing stage, to brainstorming and meaning based ones (Cumming, 2012). This method holds many advantages. First and foremost, it gives learners the opportunity to find their own writing “voice” as they are asked to generate ideas, plan them, and set goals for their writing (White & Arndt, 1991, p.3). Moreover, feedback is provided in “real time” through each stage of the process either by the teacher, or through peer and self-assessment practices and is primarily meaning-based in order to function as a guidance for improvement (Frankenberg-Garcia, 1999; Zamel, 1985). In contrast to traditional approaches to writing, this approach does not utilize model texts for writing instruction that confine the creativity of the learners, but instead it embraces imagination and offers the opportunity for genuine expression (Zamel, 1976). In this way, learners’ perception of English changes and they consider it as “another language to use, rather than just a second language to learn” (Zamel, 1976, pp.33-34). Finally, as feedback is provided through peer-assessment learners have the opportunity to interact with a real audience, which enhances the authenticity of the writing process (Calfoglou, 2004/2019). For those reasons the writing sessions of the research follow a more process-oriented methodology to enable learners to activate their imagination and actively engage in learning.

1.2. New literacies and writing

The 21st century is characterized by rapid technological advancement and progress. The emerging technological developments could not leave the world of education unaffected. As the internet has become part of our everyday lives and new communication tools constantly arise, the notion of literacy has changed, and new digital literacies have emerged. Traditionally, “literacy” was defined as “the ability to read and write...with varying degrees of fluency” (Inglis & Aers, 2008, p. 32). Hence, literacy was associated with the development of learners’ reading and writing skills at a certain level of competence. The different means of communication that have been developed in the last decade through the use of technology have led to the creation of digital literacies. “Digital literacy” refers to the knowledge and skills that learners need to acquire in order to interact safely in the digital

environment (Becta, 2010). Therefore, new literacies are associated with digital writing and reading, that is computer literacy, and with the ideas and the critical ability to evaluate information from different sources while composing (Dudeney & Hockly, 2016). These new digital tools do not only include text writing, but they also incorporate different multimedia such as images, videos, and sounds, and they can also be referred to as “multimedia literacies” or “multiliteracies” (Elola & Oskoz, 2017, p. 53; Kress, 2003).

The evolution of technology and the development of multiliteracies have led to the emergence of various Web 2.0 tools that are used in the classroom to cater for the development of the four language skills and the development of critical thinking and communication skills that are essential for learners to be able to stand in the 21st century society. Several research studies that concern the impact of technology and web 2.0 tools in language learning and especially in the teaching of writing have been conducted. William and Beam (2019) offer an overview regarding the use of new literacies and web 2.0 tools in the EFL classroom. In their study they present the use of different technological tools that cater for the needs of new literacies and assist the development of writing skills in different levels of education through studies that have been conducted worldwide. More precisely, as they describe, digital storytelling tools have been used with primary school students in an attempt to improve their writing skills and the results have shown that students' self-confidence has improved along with their motivation to write (Yamac & Ulusoy, 2016). Lawrence et al. (2009, in William & Beam, 2019) used PowerPoint, word processors and allowed high school students to use the internet for information resulting in the development of the students' critical thinking skills which empowered their ability to synthesize information and developed their digital literacy skills.

1.3. Writing in the Greek EFL context

Globally, new perspectives and practices in education have been developed as a result of the emergence of multiliteracies. The need to reform teaching practices is apparent and new teaching methods need to be integrated in education to cater for the diverse needs of the learners and help them develop the necessary technological and communication skills. The notion of education needs to adapt and follow the changes happening in the society. Undoubtedly, education is one of the most important parts of a country's system and the need to improve its quality is of major concern. In the Greek educational context, English

language teaching in the private sector of education follows the objectives and specifications proposed by the Common European Framework of reference (Council of Europe, 2001). The CEFR aims concern the protection and development of the heritage of the different European languages and cultures and the promotion of communication and cooperation among its countries. The importance of communicative tasks in language teaching is highlighted and a learner-centred approach that cater for the needs of the 21st century learners is adopted to urge them to develop and use their skills beyond the classroom environment (Council of Europe, 2001). Regarding the writing skill, the CEFR descriptors aim to engage learners to a variety of different text genres and help them enhance their creativity through practice in authentic text types with focus on meaning (Council of Europe, 2001).

Even though several developments have been applied in the Greek EFL environment for the development of listening, reading, and speaking, and the communicative approach is commonly followed by both coursebook materials and teachers in the language classroom, the overall approach used in the teaching of writing has not been adapted yet and traditional methods dominate in the space (Matthaïoudakis & Alexiou, 2013). In the Greek educational system great emphasis is placed on testing in order to effectively prepare learners for their English language certificate examination (Papaefthymiou-Lytra, 2012; Tzagari & Papageorgiou, 2012). Hence, writing instruction is shaped by following the examination format and different genres are presented through the use of model texts and linguist sets of phrases that restrict the imagination and creativity of the learners, while functional language and correct format of writing are considered of greater importance than the meaning and ideas that are conveyed in a written text.

The overall approach conforms to a more traditional product writing ideology and does not meet the objectives of a creative and meaningful writing experience as proposed in the CEF curriculum. As a result, learners are negatively disposed towards writing and develop feelings of writing anxiety due to the pressure imposed on them by the success and exam-oriented system of the private sector of English language teaching (Gkonou, 2011). Therefore, the Greek educational system needs to reform its practices regarding the writing skill and integrate communicative tasks along with technological tools in the writing process to meet the needs of the new literacies and help learners overcome their writing anxiety by employing more enjoyable writing practices that highlight the creative aspect of the whole

process and include different forms of assessment. In light of the above, this dissertation intends to integrate a wiki and AI tools in writing following a more process-oriented paradigm aiming to explore its impact on learners' writing, motivation, engagement and critical thinking skills.

Conclusion

Chapter 1 has focused on the presentation of the major approaches to writing in the English Foreign Language environment displaying their methodology, their strengths, and weaknesses. Moreover, the notion of literacy and the new digital literacies were thoroughly discussed. Finally, the current teaching situation regarding the writing skill in the Greek EFL context has been extensively demonstrated and the rationale behind the approach followed was analysed. The next chapter will focus on the use of wikis as educational tools to contribute to the writing process and offer a new perspective to the writing experience while catering for the needs of the new literacies in the EFL classroom.

2. The use of Wikis in the EFL classroom

Introduction

The second chapter is concerned with the pillars of this research; the Web 2.0 and AI tools used in writing. Particularly, it discusses the use of Wikis and their use in language learning as valuable educational tools that can promote collaboration and engagement in learning and cater for the development of writing skills. Moreover, it provides a presentation of newly developed AI writing tools and their use to promote writing and critical thinking skills, motivation and engagement.

2.1. Web 2.0 tools

The notion of “computer-assisted language learning (CALL)” was first introduced in the learning environment in 1983 by the TESOL convention in order to describe learning that uses a computer as an assistance of the learning experience (Chapelle, 2001). The notion of “CALL” in language learning started as “behaviouristic CALL” through the 1970’s, focusing on repetition and drilling activities (Levy, 1997). In the 1980’s it has developed to “communicative CALL” focusing on the aspect of communication in educational activities. Finally, from the 20th century “CALL” has been referred to as “integrative CALL” to emphasize the use of multimedia and digital learning with the assistance of different web tools (Warschauer, 1996).

The evolution of CALL gave rise to the creation of various Web 2.0 tools that are used in the classroom to cater for the development of the four language skills and 21st century competencies. These tools are widely used in the teaching of English both in schools and in private language centres to enhance the learning experience. Coined by DiNucci (1999) and broadcasted by O’Reilly (2004) the term “Web 2.0 tools” is used to refer to a variety of web-based tools that enable the user to interact with others, collaborate, and create content (Vlachos, 2020). Web 2.0 tools can help learners socialize and use language in authentic situations, collaborate, enhance their creativity by integrating multimedia in their learning and share their ideas with a real audience (Peachey, 2019). In this way, learners can develop their writing skills and engage with the new digital literacies to acquire the ability to gather and evaluate information from digital sources.

Among the various web 2.0 tools that are integrated in teaching to cater for the diverse needs of today's learners, the teaching of writing was highly influenced by computer-mediated communication (CMC) technologies and different tools were implemented to offer a new perspective in the writing experience. Computer-mediated communication (CMC) refers to the writing and interpretation skills that a person needs to acquire in order to communicate effectively through digital media (Warschauer, 2003). This type of online communication can happen in synchronous time through chatting online or in asynchronous time through email writing, wiki projects, as the one we implemented in this study, and blogging. In writing, CMC tools can enhance collaboration between learners through pair activities and engage learners with authentic information and a real audience (Zheng & Warschauer, 2017).

2.2. Wikis in the EFL classroom

One of the most prominent tools used in the language classroom is the Wiki. The term derives from the Hawaiian word “wiki wiki” that means “quick” (Godwin-Jones, 2003, p.15). Wikis can be defined as collaborative tools that can be used both in synchronous or asynchronous time by many users who can edit and modify different content (Hsu & Lo, 2018). Wikis' aim is “to become a shared repository of knowledge” thus, they include an open editing system where users are allowed to modify the available content of different pages and improve the quality or add new information regarding a topic (Godwin-Jones, 2003, p.15). The most prominent wiki platform is “Wikipedia” which is an online encyclopaedia where different writers compose and modify its pages (“Wikipedia,” 2024). As their inventor Ward Cunningham (2002) explains, wikis are designed to be the simplest digital information database available, making it accessible for everyone to use. Thus, even learners that are not competent with technology have the ability to use wikis, making it a very valuable and practical technological tool to be used in the language classroom.

The use of wikis in the language classroom holds many benefits for the learners and for the learning experience as a whole. As Gowin-Jones (2003, p. 15) claims, “wikis are intensely collaborative”, therefore they can be used to enhance participation and collaboration between the learners. As they offer learners the ability to customize and edit content from different devices simultaneously, they can make the process of drafting, editing and revising easier and more time efficient. Thus, learners can focus both on form and content and

collaborate to create a clear and well-structured writing piece. In addition, wikis offer a real authentic purpose for writing and bring the learners' "real world into the classroom" (Harding, 2007, p. 8) as learners have the opportunity to present their content to a real audience and express their genuine thoughts and experiences to the reader. In this way, they gain a real and authentic purpose for writing which arouses their motivation to engage in the whole experience (Alexander, 2006). Furthermore, learners can enhance their critical thinking abilities as they are asked to critically evaluate information from different sources and edit each other's content which makes them more autonomous and self-dependent as they are able to provide feedback to each other and not merely rely on the teachers' correction for their improvement (Kourtis-Kazoullis & Vlachos, 2014).

2.2.1. Wikis and process writing

As Hyland (2016) discusses, the development of computers and their increased availability for the public in the 1980's created new possibilities for the use of the process writing approach. Different word processor and CMC programmes were developed and were used to facilitate writing, as they made the process of planning, editing, drafting, and re-drafting easier and quicker for the writer (Bloch, 2008 in Hyland, 2016). The use of computers and online writing through different technological tools in the language classroom offers the ability to combine multiple sources of information and use different multimedia elements such as images and sound to accompany a writing piece.

Web 2.0 tools and in particular wikis, are easy to use and allow the rapid exchange of information and collaborative work which makes them a useful tool for writing in the language classroom (Boulos et al., 2006). Learners can easily learn to use wikis and elaborate in tasks without getting distracted by technological difficulties and focus on the writing and revising process to engage in a meaningful writing experience where emphasis is placed on meaning (Kirkpatrick, 2006 in Park & Chao, 2007). As Lamb (2004) discusses, wikis discourage product-oriented writing while they enhance a more process-oriented methodology as they enable learners to track all the previous drafts from a document, closely evaluate and revise them, and focus on the information created in it rather than their software. Computer-mediated communication tools (CMC), such as blogs and wikis increase collaboration and enhance the planning and drafting process as they give learners the opportunity to access each other's drafts in synchronous or asynchronous time and make changes and comments regarding both the content and the form of a written text (Hsu & Lo,

2018). These tools offer the opportunity for less threatening peer evaluation feedback to occur (Lee, 2015), which can increase learners' motivation and cater for their writing improvement (Godwin-Jones 2018).

Even though extensive research regarding Web 2.0 and CMC tools in writing has been conducted worldwide, research in this field in the Greek context is limited (Koufadi, 2014). There are certain studies that present the use of web 2.0 tools in process writing in Greek state or private language schools, but they mainly focus on the use of emailing, word processors and multimedia (Bozatzi, 2021; Tzotzou, 2018). Koufadi (2014) explored the use of wikis to learners of the first and second grade of a Greek state High school focusing learners' motivation, autonomy, higher order thinking and intercultural communicative competence. The study revealed a significant enhancement in learners' motivation and positive attitudes towards learning while they became more selective towards information and displayed the ability to evaluate content, which demonstrated a positive impact on their critical thinking and autonomy as well. A similar study conducted by Kontogeorgi (2014) in a private language school with four groups of learners ranging from A1 to B2 has brought positive findings to light reporting that learners' engagement and motivation were highly aroused through wikis. Avgerou and Vlachos (2016) have conducted research regarding the use of the blog as a tool to improve writing and develop new literacy skills and revealed positive findings of CMC tools on learners' writing skills and critical thinking abilities. This dissertation aims to further investigate the specific area and its effects in young learners' writing skills to display new data in the particular domain of research.

2.3. Weaknesses of Web 2.0 tools

Although the integration of Web 2.0 tools in education holds many advantages for the language classroom, it also involves some challenges which cannot be neglected. A major concern regarding the use of Web 2.0 tools for writing instruction is plagiarism. As Harris and Rea (2009) discuss, in the digital world it is very easy for learners to copy information from different internet sources and use it as such in their assignments. In order to avoid plagiarism, it is important for teachers to demonstrate ways that plagiarism is detected and guide learners on how to effectively evaluate and use information found online to support their own writing rather than copying another person's work.

Another challenge is associated with the relation that learners have with technological tools. Some learners may not be familiar with digital tools and may even not have access to a computing device outside the classroom (Harris & Rea, 2009). Therefore, they may feel that their efforts to engage in a web-based project will be fruitless and get discouraged from participating. This may affect their motivation in learning and acquire a negative attitude towards Web 2.0 tools and technology. Hence, educators should inform learners about the benefits of using Web 2.0 tools, as doing so will help them develop their writing skills as well as the multiliteracy, critical thinking and communication skills that are essential for the twenty-first century. They should also provide them with detailed instructions on how to effectively use the selected tools through training to boost their confidence and enhance their motivation (Lai & Morrison, 2013).

Finally, teachers should be aware of the fact that the learners' work in "web resources can be vandalized" (Harris & Rea, 2009, p. 141). This challenge should be of particular importance while creating wiki projects as their open-editing environment can lead to learners' work being edited by users outside the school community which can disrupt the flow of the project and negatively affect learners' motivation in online writing. Thus, teachers should select a wiki platform that allows for restricted access (Parker & Chao, 2007), to only permit members of the project to make changes and edit a writing piece. As far as editing is concerned, previous research on wiki projects revealed the unwillingness of learners to edit or offer suggestions to correct each other's work due to lack of confidence in their writing abilities (Lee, 2010; Chao & Lo, 2011). It is important for teachers to display different ways of correcting learners' work through peer correction forms and prompt questions to get them accustomed to it and lead them to the effective evaluation of each other's work which will strengthen their confidence and problem-solving skills.

2.4. The use of AI in the teaching of writing

The emergence of Web 2.0 tools and online writing have led to a shift from computer-assisted language learning (CALL) to "Intelligence CALL" (ICALL) (Pokrivcakova, 2019, p. 135) and to the creation of different Artificial Intelligence (AI) writing tools that are used to facilitate the writing experience in the digital world. The AI writing tools include different features of grammar and vocabulary checking, writing prompts and programs that can create written sentences related to the meaning of a text and even generate entire written pieces

(Marzuki et al., 2023). Some of the most used applications are Grammarly, Wordtune, Quillbot and Chat-GPT.

Several studies have been conducted worldwide regarding the use of AI grammar checkers and paraphrasers such as Grammarly and Quillbot in English language learning. Grammarly is one of the most used grammar checkers as it entails an accurate identification of grammatical, structural and vocabulary errors, providing learners with various alternatives. The use of Grammarly in the EFL classroom revealed positive results as it provides immediate online feedback which was found to enhanced learners' confidence in evaluating their own mistakes and has led to improvement of their writing skills (Ghufron & Rosyida, 2018; Huang et al., 2020). In addition, studies revealed the learners' positive attitude and increased motivation in using Grammarly, as online feedback was considered as less critical and intimidating in comparison to the feedback provided by the teacher, which increased learners' participation in the learning experience (Karyuatry et al., 2018; Saadi & Saadat, 2015). Quillbot is an online paraphrasing tool, which offers various paraphrased options of a sentence in different styles and has proven beneficial for the writing process as it helped learners improve their writing and paraphrasing skills (Kurniati & Fithriani, 2022, in Marzuki et al., 2023).

However, despite the educational benefits that AI technologies can offer to the language classroom, there are also some concerns that question their efficiency to cater for the development of the learners' writing skills. A major concern discussed in the aforementioned research pertains to the matter of overreliance. Using AI as an assistance for the writing experience may lead to overcorrection of learners' mistakes without a critical evaluation of the suggested alternatives that AI tools provide, which can negatively affect their critical thinking skills and restrain them from understanding their mistakes and eventually improve their writing abilities (Iskender, 2023; Johnke et al., 2023; Marzuki et al., 2023). What is more, AI feedback primarily targets grammatical mistakes and offers accurate alternative options regarding the form of a written text, while suggestions regarding the meaning of a text may not always match the given content and consequently alter the original meaning and ideas of the writer (Haleem et al., 2022). This may result in inappropriate word and structure selections that can make a text incomprehensible and alter the learners' tone and style, taking away their creativity and originality in writing (Rogerson & McCarthy, 2017 in Jasper et al., 2023). This can be the case with lower-level learners that

do not have the ability to effectively evaluate the correct use of the AI suggestions and apply them properly in their writing (Ghufron & Rosyida, 2018; Van Beuningen et al., 2012). Teachers should be aware of their learners' aptitudes and guide them towards the proper use of the AI writing tools to successfully improve their skills and not restrain their abilities and limit their critical thinking. In this research, the AI tools of Grammarly and Quillbot are incorporated in each wiki-based lesson, while explicit instruction was provided to the learners prior to their actual use, to assess their effects on young learners' writing abilities, motivation, critical thinking and reflective skills.

Conclusion

Chapter two has focused on the presentation of Web 2.0 tools, the benefits they can offer to education and the challenges regarding their implementation, with the focus being on the use of wikis in the teaching of writing in the EFL classroom. Additionally, the key features of AI writing tools were discussed along with their implementation in English language teaching. The next chapter will include the research methodology as well as the context, the participants and the research tools that will be implemented in the study.

3. Research Methodology

Introduction

The third chapter offers a presentation and analysis of the main aims of the research, the research questions and the overall methodology that is followed to conduct the research. In particular, it examines the teaching context, the participants, and it thoroughly describes the methodology and the rationale of the research along with the research tools that are employed to gather the necessary data to provide answers to the research questions.

3.1. The aims of the research

In light of what has been presented in the literature review, the current study attempts to explore and evaluate the use of wikis and AI tools to young learners' writing skills following a process writing paradigm. More precisely, it aims to explore whether the use of wiki-based lessons with the integration of AI writing tools can assist learners develop their writing skills by enhancing their motivation, engagement and critical thinking. By employing a more process-oriented writing methodology learners will engage in multiple drafting, revising, and editing using a wiki platform contrasting the traditional writing model that they are accustomed to following in the EFL classroom.

3.2. Research questions

To test the aforementioned aim which is to explore the effects of Wiki-based writing lessons that integrates AI writing tools to learners' writing skills the following question was formed by the researcher:

- How do Wikis and AI writing tools affect young learners' writing skills?

In order to answer the main question, three subquestions were formed to highlight the aspects that need to be examined:

- How do Wikis with the use of AI writing tools impact learners' engagement in writing?
- To what extent can young learners develop their critical thinking skills when using wikis with AI writing tools?

- To what extent do Wikis with the integration of AI affect learners' motivation?

The main question and the sub questions are answered through the collection of qualitative data through the mode of action research. Attitudinal data is gathered by a needs analysis questionnaire, three post-session and a post-research questionnaire, where behavioral data is also collected using a classroom observation checklist. The participants' writing input generated in the wiki platform is also used to contribute to the results of the study.

3.3. The research context

3.3.1. The research setting

The research is conducted in a private English language school in Ioannina. It is a family business that consists of the owner, which is an English teacher with forty years of experience, and five more English teachers. The language school is comprised of five classrooms equipped with a laptop, a whiteboard, and a projector. The teaching material is available both in print and digital form, and it is displayed on the projector during the lesson. In this way, it can attract the learners' attention and make the lesson more interactive as it allows learners to interplay with the material presented on the whiteboard.

3.3.2. The participants

The method of non-probability sampling has been implemented to select the participants for the research, hence the sample is not randomly selected from the population, but it is chosen by the researcher. More specifically the "convenience sampling" method has been utilized as it is time efficient and relies on the participants available to take part in the research which in our case are the classes that the researcher teaches (Dörnyei, 2007). Therefore, as the sample cannot be completely unbiased, the results cannot be generalized to the whole population, but detailed data can be gathered from the participants in order for the phenomenon under study to be deeply analyzed. The participants are learners that attend afternoon lessons in the particular private language school in Ioannina that the researcher works in. From the overall population of the language school, the teaching context to be examined consists of thirteen learners, nine female and four male learners separated into two classes; one with two female and three male learners, and one with seven females and one male. Their ages range from ten to thirteen years old, and they have been learning English in the language school for three years.

They are all monolingual learners – native speakers of Greek – and they are learning English as a foreign language, thus they belong to the Kachruvian “expanding circle” of language learning (Kachru, 1985). Based on the Common European Framework of reference (Council of Europe, 2001) they correspond to the A2 “waystage” level and they can be classified as pre-intermediate level learners, as they are able to understand information about personal and everyday issues and communicate in simple and direct language both in oral and written form (Council of Europe, 2001). Both classes can be described as mixed-abilities ones, as, based on the needs analysis questionnaire results, the participants have revealed preference for different learning styles, and their motivation is aroused through different types of activities. The classes consist of both spirited and more mellow personalities that actively participate in the learning process and display great willingness for cooperation with each other. The learners are familiar with the new technological advancements and internet devices as the vast majority own a technological device and use the internet in their everyday lives for communication, learning and entertainment purposes.

3.3.3. The teaching materials

The learners have recently completed the “Marbles 3” (Puchta et al., 2023) coursebook and they are currently using the “Marbles Booster 3” (Kanellopoulou, 2024) one for their English language lessons. Published in 2023 by Helbling Languages, the “Marbles” series follows the communicative approach rationale and supports Content and Language Integrated Learning (CLIL) through the presentation of real-world content based on different topics. It also provides contextualized presentation of vocabulary and grammar through videos, images, and texts. It is comprised of four components; the student’s book, the activity book, the grammar book, and the companion book. Moreover, it includes classroom presentation tools such as flashcards, a digital coursebook with videos and songs, games, and an online practice platform with web-based activities for further practice.

3.4. Research Methodology

The objective of this dissertation is to explore the effects of AI writing tools and Wikis on learners’ writing skills following a process-oriented writing paradigm. The design that is used to conduct the research is qualitative. The qualitative approach to research aims at analyzing information in depth and employs open-ended tools in order to generate data from a situation (Cohen et al., 2007). The purpose of this study is to collect data from a small

group of participants that attend English lessons in a private language school and analyze them in detail in order to acquire a deeper understanding of the phenomenon under exploration in the particular context and offer an insight into the participants' views and opinions regarding its effectiveness. The research method employed to conduct the study is Action Research.

3.4.1. Action Research

Action Research is a mode of research used for the detailed study of a phenomenon presented in a classroom in order to “bridge the gap between research and practice” (Somekh, 1995, in Cohen et al., 2007, p. 298) so as to acquire a better understanding of a situation and plan solutions (Hopkins, 1985). Different researchers presented the stages of action research as spiral cycles where each cycle entails four main steps; “plan”, “action”, “observation” and “reflection” (Arora, 2017, p. 164; Burns, 2005, p. 59; Dickens & Watkins, 1999). The stages of evaluation and reflection are of significant assistance to teachers to observe a situation and make the necessary adjustments to improve current teaching practices and cater for their overall improvement as professionals that are able to identify their learners' needs and provide the necessary assistance for their learning development (DeLong 2004, in Sela & Harel, 2012).

The mode of Action Research is implemented to conduct the particular study as the sample of the population is relatively small and the aim is to study the effects of the aforementioned intervention in depth, in order to gain an insight of the efficiency of the method in the particular educational context and reform practice regarding the writing skill. It does not aim to produce generalizable results for the overall population, but to function as a way to understand such type of situations in similar contexts (Cohen et al., 2007).

3.4.2. Overview of the teaching process

The current study is comprised of four cycles; the first cycle includes the needs analysis questionnaire and the piloting, where wikis and AI tools are introduced to a small group of learners along with the research tools. The following three cycles involve wiki-based lessons followed by an evaluation and reflection stage. Table 1 offers a detailed depiction of the process followed in each cycle.

Cycle	Stage	Description
1 st Cycle (Pilot study) (week 1)	Planning	C1.1 Design of the research. C1.2 Needs analysis questionnaire. C1.3 Planning of the pilot study.
	Implementation	C1.4 Implementation of the pilot lesson.
	Observation	C1.5 Footage analysis and completion of the observation checklist after the lesson. C1.6 Analysis of the data.
	Reflection	C1.7 Conclusion and modifications on the process and data collection tools.
2 nd – 3 rd Cycle (two sessions) (week 2-3)	Planning	C2-3.1 Lesson planning based on the needs analysis questionnaire and the pilot lesson.
	Implementation	C2-3.2 Delivery of the writing lesson. C2-3.3 Post-session questionnaire collection upon completion of the session.
	Observation	C2-3.4 Analysis of footage and completion of the observation checklist after the lesson. C2-3.5 Data analysis of the tools (Questionnaire, Observation checklist).
	Reflection	C2-3.6 Conclusion and modifications for the following session.
4 th Cycle (week 4)	Planning	C4.1 Lesson planning based on the data of the previous sessions.
	Implementation	C4.2 Delivery of the writing lesson. C4.3 Post-session questionnaire upon completion of the lesson.

		C4.4 Post-research questionnaire two days after the session.
	Observation	C4.5 Analysis of footage and completion of the observation checklist. C4.6 Data analysis of all the tools (post-session and post-research questionnaires, observation checklist).
	Reflection	C4.6 Findings and conclusion of the research.

Table 1: Overview of the research

Prior to the implementation of the intervention, informed consent letters (Appendix A) were distributed to the parents of the learners in order to get them informed about the purposes of the research and get their permission in written form. Similarly, a needs analysis questionnaire (Appendix C) was given to the participants to gain detailed information regarding their views and attitudes towards English language learning, writing and technology and plan the intervention lessons based on the provided input. In the next step, the intervention plan was piloted to a group of six learners of the language school who are of the same level as the participants. Piloting can help the researcher to establish whether the methods chosen, and the tools implemented can produce the desirable results in order to safeguard the natural flow of the research and ensure that useful data can be generated for the purposes of the study.

The three following cycles concern the actual implementation of the intervention to the chosen group of participants. A wiki platform was created by the teacher-researcher and the AI writing tools of [Quillbot](#) and [Grammarly](#) were introduced and installed to the learners' preferred electronic devices. Initial guidance was provided by the teacher in order to help learners' become accustomed to using the tools, as they have never taken part to a wiki-based project before and the majority was not familiar with using a wiki platform or AI writing tools as the NA questionnaire results have revealed. Each cycle was comprised of a teaching session, followed by a short post-session questionnaire (Appendix E). Each session was conducted once a week to allow enough time for reflection and modification of the material of the subsequent cycle. The sessions were composed of a wiki-based writing

lesson, where learners were asked to complete a writing task individually or in groups via the wiki platform on topics of their interests following the steps of planning, revising, and editing using AI writing tools for suggestions.

At the end of each lesson, a short post-session questionnaire was administered to the participants in order to allow them to share their views on the process and express their preferences (Appendix E). An observation checklist regarding the participants' behavior and attitude was completed by the teacher-researcher after each session (Appendix D). By the end of a session, the writing input emerged during its implementation was analyzed by the researcher along with the questionnaires and the observations in order to identify the strengths and weaknesses of each plan and make the necessary adjustments for the following cycle. Finally, after the implementation of the fourth cycle, a post-intervention questionnaire (Appendix F) was distributed to the participants so as to triangulate the validity of the information generated from the post-session questionnaires (Hyland, 2006) and gain more in-depth information regarding their views on the overall process in order to combine and analyze all the data gathered and allow for valid conclusions to be drawn.

3.5. Data collection tools

Four types of data collection tools were utilized to gather different types of information aiming to analyze the phenomenon in depth and confirm the validity and reliability of the results. The tools selected were; a needs analysis questionnaire, post-session questionnaires, a behavioral observation checklist, a post-research questionnaire and the written documents generated by the participants using the wiki. These tools were used to collect some demographic characteristics about the participants, behavioral data generated by their contribution in the wiki platform, and attitudinal data to display their attitudes and feelings towards the process under study.

All data were collected in four teaching sessions, pilot included, conducted in April 2024. The data collected by the questionnaires and the wiki platform derived from the participants while the data generated in the observation checklist derived from the researcher. All questionnaires included the Greek translation equivalent in order to avoid misunderstandings due to the participants' level of competence in the English language (Griffiee, 2012). The questionnaires were distributed in the presence of the teacher-researcher to offer clarifications if needed and preserve comprehension.

3.5.1. Needs analysis questionnaire

A needs analysis questionnaire was initially administered during the first cycle of the research (Appendix C). Needs analysis is an important instrument for classroom practices as it can accurately identify the abilities, needs, lacks and wants of the learners in order for each practitioner to reform current practices in teaching and adapt the materials to better suit the different teaching contexts (Davies, 2006). The particular questionnaire aimed to collect information regarding the participants' aims for learning English, their language competences, their relationship to technology and writing and their attitudes towards writing practices and digital writing.

The questionnaire includes different types of close-ended questions and is composed of four sections; learners' attitudes towards English, language wants and attitudes towards the writing skill, learning styles and preferences and finally, learners' attitudes and thoughts on technology. The first section, which as Pope et al. (2005, p.11) discuss, can be referred to as the "program impact section", consists of twenty close-ended yes/no items that aim to explore the learners' attitudes and motivations towards English language learning. The second section includes ten yes/no items about the writing skill while the third section contains two multiple choice items concerning learners' preference and topics of interest in learning, along with ten items about learning styles in the form of a four-point bipolar "Likert" scale (Burgess, 2001) with the absence of a "neutral" point, which intends to make the participants reveal their direction in each question (Pope et al. 2005). The final section involves twelve yes/no questions and involves the use of technology. Each section was accompanied by explicit instructions in order to preserve understanding and the questionnaire was piloted to two learners of the same level to detect any problematic items.

3.5.2. Post-session questionnaires

A post-session questionnaire was distributed to the learners after each teaching session in order to gain detailed information about their thoughts regarding the content of the sessions (Appendix E). The questionnaire encompasses nine closed ended items in the form of a bipolar four-point Likert scale and concern the participants' attitudes, thoughts and motivation towards the wiki platform, the AI writing tools used, and the overall writing method followed throughout the session. In addition, an open-ended item was added in the end of the questionnaire to "stimulate free thought" (Pope et al., 2005, p. 28) and allow the

participants to thoroughly express their views and offer more information, either positive or negative, regarding the content of each session in order for the researcher to gain fruitful data connected to research questions, but also to be able to make changes and improve the content of the following sessions. As Cohen et al. (2007) point out, open-ended questions allow for responses that might include information that would not have been able to be gathered in close-ended fixed items.

3.5.3. Behavioral observation checklist

Apart from the questionnaires, an observation checklist was used by the researcher to evaluate verbal and nonverbal communication signs occurring during each session in order to allow for triangulation of the data generated by the post-session questionnaire (Appendix D). The observation checklist was filled out by the teacher-researcher right after each session in order to maximize concentration during the teaching sessions and retain the accuracy of information gathered.

The checklist contains eight statements that concern the learners' behavior and attitudes towards the lesson. The participants' behavior and performance are measured using a rating scale with points from 1 to 5, with 1 representing the lowest performance and 5 depicting the highest. The checklist is used to measure the participants' engagement, participation, performance, and motivation throughout the process targeting both verbal and nonverbal cues occurring in each lesson. Nonverbal signs such as facial expressions, voice tone and gestures are of paramount importance for the triangulation of the data in research as they can occur both consciously and unconsciously in a situation and reveal the genuine views and feelings of an individual (Barry et al., 2011; Miller, 2005).

3.5.4. Post-research questionnaire

In order to triangulate the data gathered by the observation checklist and the questionnaires distributed in each session, a post-research questionnaire was administered to the participants two days after the completion of the last cycle to get the participants to express their overall thoughts and impressions about the intervention lessons (Appendix F). In this way, the researcher had the opportunity to compare the initial views and answers of the participants prior the intervention with the ones created during and after the end of each lesson and throughout the whole writing intervention to secure the validity of the results.

The questionnaire comprises of twenty-three items in total. The first nineteen items concern close-ended statements in the form of a four-point bipolar Likert scale of agreement aiming to collect information about the participants' views regarding the effectiveness of the writing method followed and the technological writing tools, namely the wiki, Grammarly and Quillbot, used in the process. The following three items, from twenty to twenty-two, include multiple choice statements focusing on the participants' interests and motivation and finally, the twenty-third item is open-ended to get the participants to further elaborate on their thoughts about the overall experience.

3.6. Method of Analysis

Considering that the design of the research is qualitative, the data gathered are analyzed thematically, separated into categories, and are displayed in narrative form aiming to present in-depth information about the participants' thoughts and feelings (McKay, 2006). The overall process follows an inductive methodology, moving from more specific categories and patterns towards more generalized themes occurring from the data and the researchers' thoughts and observations (Cresswell, 2009). Finally, quantification of the data occurring from the closed-ended items of the questionnaires is also implemented to categorize the data and analyze the findings accordingly.

3.7. Ethical Considerations

In order to avoid any ethical and confidentiality issues given that the participants are of a young age, permission letters were distributed to the parents or guardians of the participants to give their informed consent in written form so as to safeguard the overall flow of the research ensuring that all the participants are legally taking part in it. The consent form was written and administered in the Greek language to be fully comprehensible by everyone. In addition, participants were asked to answer all the questionnaires anonymously aiming to secure their identity and make them feel more protected in giving their true answers to the questions included so as to retain the validity and reliability of the results. Furthermore, all participants were given a personal code, and nicknames were used in the presentation of the data to protect their privacy and secure their anonymity. Finally, the participants' personal data were exclusively accessed by the researcher, and they were destroyed upon the completion of the research.

Conclusion

This chapter offered a description of the research methodology followed to conduct the study. It presented the research questions and the tools used to gather information and discussed the steps followed throughout the research. The next chapter will present the findings of the research along with a discussion of the results.

4. Research findings and discussion

Introduction

This chapter will present the data gathered from both the participants and the teacher-researcher through the data collection tools used in the research. A discussion of the findings and the results follows along with the answers to the research questions.

4.1. Results of the data collection tools

This section is devoted to the analysis of the results generated by the data collection tools used in the research, namely the needs analysis questionnaire, the post-session questionnaires, the observation checklists, and the post-research questionnaire.

4.1.1. Results of the needs analysis questionnaire

The needs analysis questionnaire was administered during the first cycle of the action research. As mentioned in Section 3.3.2, the sample is comprised of thirteen participants, nine girls and four boys, aged between ten to thirteen. It should be mentioned that one more male participant contributed to the NA questionnaire results but was absent throughout the implementation of the sessions and the post-research questionnaire distribution. All the participants have been learning English both at school and in the private language school around five to six years as revealed from the background information section of the questionnaire (Appendix G).

Regarding the first section of the questionnaire, which is devoted to learners' attitudes towards the English language, around three quarters of the learners stated that English is important for them to understand the content of movies, songs, games, and for communication. All participants agreed that they are motivated to learn English in order to travel abroad and acknowledged that English is an international language, whereas only a small percentage expressed the desire to study abroad. Furthermore, the majority revealed that they are learning English to obtain a language certificate and be able to find employment, or because their parents have encouraged them to do so, indicating that most of the participants hold extrinsic motivation for learning the language. Finally, more than three quarters of the participants indicated that they like the English language.

The findings of the second section, which is about writing, reveal that more than half of participants do not like writing (57%), whereas the majority of them (79%) claimed that writing is easy. Moreover, 93% reported to be following the textbook's model in their writing and using the teachers' feedback to improve their texts revealing their dependency on external guidance and their lack of autonomy in writing, yet they conveyed that they plan their ideas and revise their text for mistakes after writing (86%) which indicates they are urged to follow a more process-oriented writing paradigm.

The third section is dedicated to the participants' preferences and interests in learning. Regarding the participants' preferred mode of work, as illustrated in Figure 1 the majority equally voted for pair and group writing, with writing alone following, where only one participant revealed preference for whole class writing.

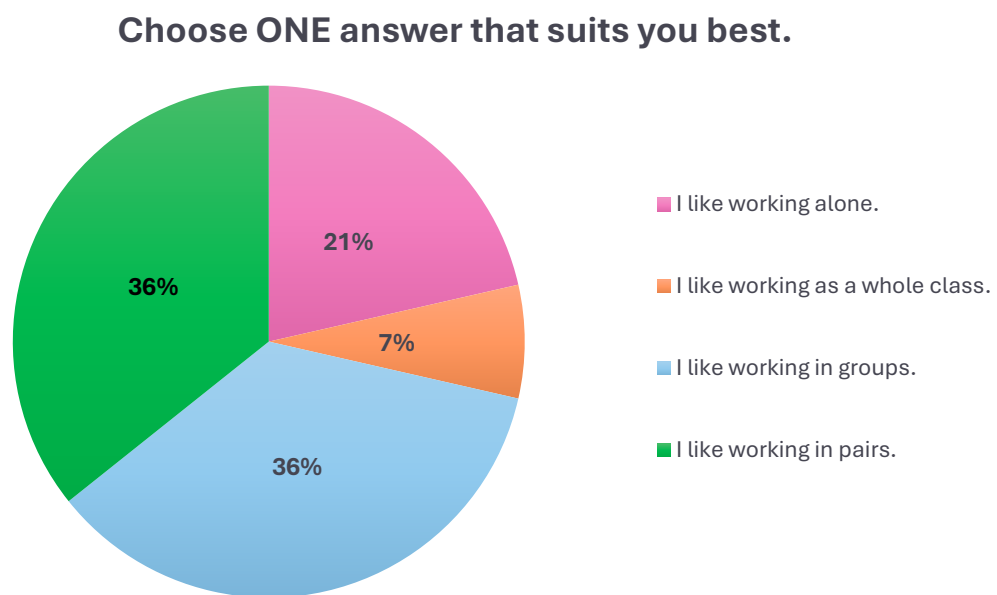


Figure 1: Learners' preference for mode of work

Concerning their learning styles, the participants stated their preferences through a four-point rating scale expressing that all the four skills are beneficial to their learning with reading and speaking being the most preferred ones as illustrated in Figure 2.

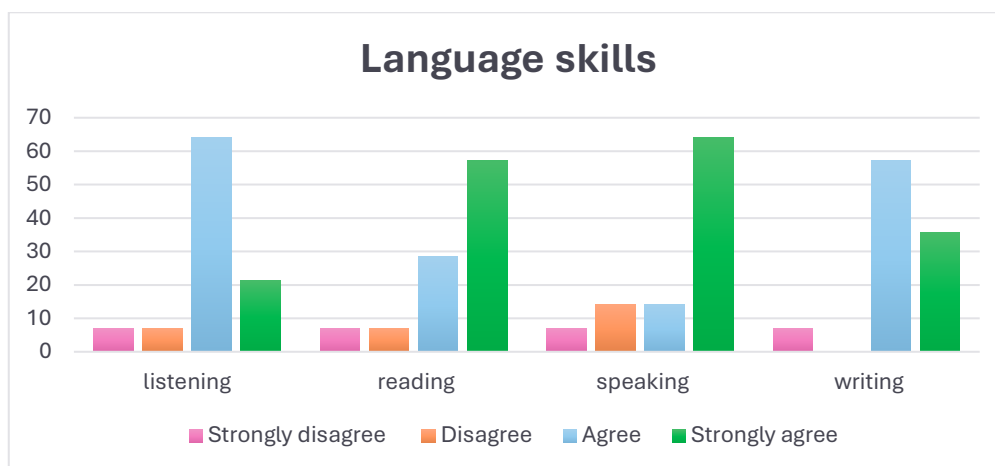


Figure 2: Learners' preferred language skills

Doing homework was the most prevalent option with zero negative votes, while English videos and games were also opted by the majority of participants for their learning. A fluctuation of views regarding the use of computers in learning has been revealed. However, as far as feedback is concerned, the participants expressed their disagreement regarding the usefulness of peer feedback, showing a preference for teacher generated feedback. Regarding topics of interest, “travel” was unanimously voted as the most popular topic with thirteen votes, with “animals” and “celebrations” following with twelve votes, as presented in Figure 3.

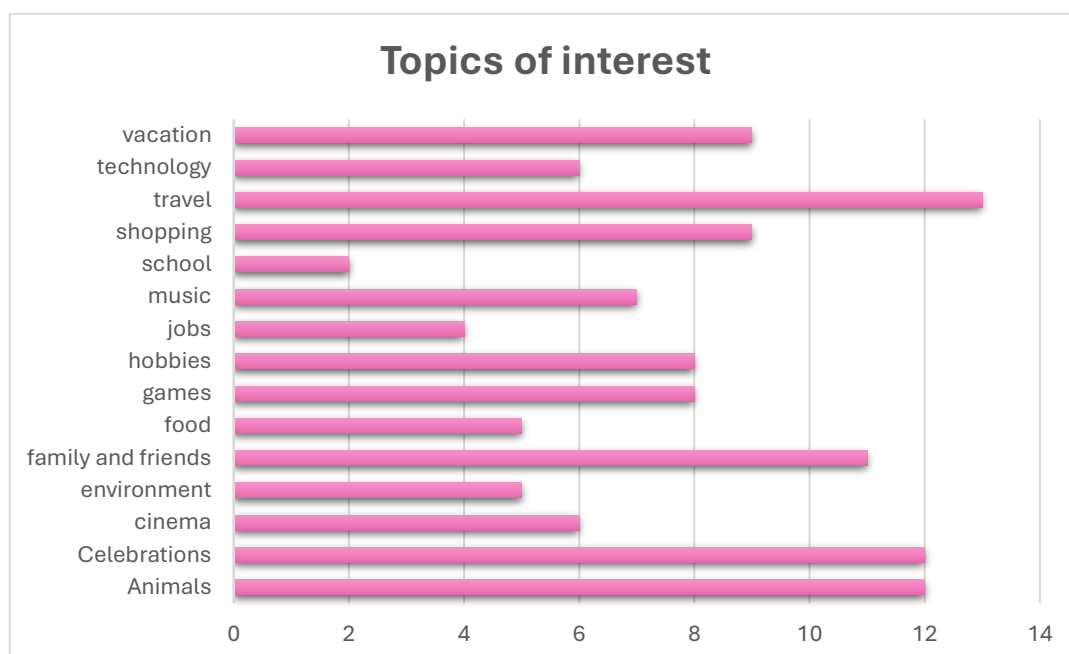


Figure 3: Topics of interest

Moving on to the results of the final section, which concerns the use of technology, twelve out of the thirteen participants were found to own a technological device with internet access. Moreover, the more than half of the participants answered that they have accounts on social media (64%), chat (71%) and write online (64%) or use the internet for their homework (57%), revealing their knowledge of technology, which can further facilitate the implementation of the research. However, even though more than two thirds of the participants confirmed their familiarity with technology, only two participants had knowledge of what a wiki is, while only one had heard of Grammarly and Quillbot before. Finally, the participants expressed their willingness to write online (64%) and their positive perception towards the use of the internet for their language improvement (79%).

4.1.2. Cycle 2

The second cycle of the research includes the first teaching session followed by a post-session questionnaire completed by the participants and a behavioral observation checklist completed by the teacher-researcher after the session. The first writing lesson revolved around the topic of “Animals” which, based upon the needs analysis questionnaire results, was the second most preferred topic voted by twelve of the participants and consequently, it was expected for them to enjoy it. This topic was chosen to serve as a less demanding starting point for learners to work independently and become acclimated to using technological tools.

The participants approached the lesson with enthusiasm as it was the first time that they were offered the opportunity to practice writing digitally from their own devices. The pre-writing stage was composed of two tasks; the first was a warm-up speaking activity in which learners discuss two pictures of animals aiming to activate their content schemata about the topic and arouse their interest and in the second one, they engage in an oral conversation to revise comparison forms and vocabulary related to animal descriptions. The integration of speaking in the lesson was chosen based on the participants' preferences for speaking tasks emerging from the needs analysis questionnaire. The participants expressed their excitement for the tasks with smiles and positive comments while actively answering the teachers' questions.

The planning stage involved two tasks; first, the learners were asked to research certain websites for information and complete a fact file about their favorite animal (task 3) and

then a grammar activity regarding the comparative and superlative form was introduced for learners to revise key grammatical structures for their writing (task 4). Initially, the participants seemed puzzled and reluctant when asked to search the given internet sources for information, as they have never done something similar in the past, but through extensive guidance they managed to complete the task. The creation of the first draft followed (task 5) and learners, using their personal devices, wrote a report individually on the wiki page created by the teacher-researcher. During the drafting phase, all participants appeared fully concentrated and paid attention to their writing without getting distracted.

Then, peer-evaluation took place so as to engage them in different forms of assessment that promote collaboration and autonomy. The participants displayed some reluctance to fully share their views on their peers' drafts which may be caused by lack of confidence in their writing and evaluation abilities. Thus, the peer-evaluation commentary included more positive reinforcement comments than critical evaluative ones. Nevertheless, these comments boosted the participants' self-esteem, which became apparent from their positive reactions to the task. Next, they were asked to consider the comments made on their draft and make changes focusing on meaning (task 6). The AI writing tools were introduced at this point and learners were guided to use the Quillbot tool in order to rephrase problematic areas and improve the meaning of their writing (task 7). Finally, to produce their final draft learners were encouraged to visit Grammarly and correct their grammatical mistakes before submitting their work (task 8). The participants took more time than expected to utilize Quillbot's suggestions effectively, whereas Grammarly was efficiently used without trouble.

At this point, it should be stressed that prior to using the AI writing tools and the wiki, the teacher-researcher provided the participants with explicit instruction regarding their use and applicability and guided them by modelling the steps that should be followed considering the young age of the participants, aiming to preserve the natural flow of the research. What is more, the researcher assisted the participants to deal with possible connection issues due to the large number of people using the same connection simultaneously by providing an alternative portable internet connection when necessary.

According to the post-session questionnaire results (Appendix H), it became evident that all the participants unanimously enjoyed the lesson (item 1), participated willingly in the process (item 7) and found it interesting (item 2). Additionally, the majority enjoyed writing

in the wiki (item 3) and liked the tasks included in the lesson (item 6) stating that they explicitly liked expressing their opinion in the comments (item 10). As far as the AI writing tools are concerned, more than two thirds of the participants agreed on the efficiency of Grammarly and Quillbot (items 4-5) while only 15% disagreed on their utility. Finally, 70% of the participants did not face difficulty in using the wiki platform (item 8), confirming the results of the needs analysis questionnaire regarding their computer competences, and the majority (85%) expressed that they did not get bored through the lesson (item 9).

The results of the post-session questionnaire were in alignment with the results of the observation checklist (Appendix J). The participants received an average of 4.4 out of 5 points in participation and 4.5 points for their cooperation as they willingly communicated with each other, exchanged ideas, and praised one another creating a positive atmosphere. Additionally, they received an average of 4.1 points for their overall engagement as they approached each task with persistence and enthusiasm, which was evident from their facial expressions and positive attitude. All the participants paid great attention to the teacher's instruction and expressed their understanding through eye-contact, nods, and questions for clarifications and received 4.3 points. In terms of language use, they received a mean score of 3.8 out of five points as they sometimes tended to use Greek to express themselves. Concerning task completion and time management, they managed to complete the majority of the lesson's tasks in the given time, however information planning, peer evaluation and editing took more time than expected which delayed the process, and consequently scored an average of 3.8 points in both categories. In the end, the participants were awarded with 4.2 points in use of technology which comes in accordance with the data derived from the post-session questionnaire regarding their knowledge of web-based tools.

4.1.3. Cycle 3

The third cycle included the second teaching session accompanied by a post-session questionnaire and an observation checklist completed by the researcher. This session was based on the topic of "travel" which was the most popular topic chosen by all the participants in the needs analysis questionnaire. The lesson's objective was to revise vocabulary regarding the subject of travelling and engage learners in group writing following a process writing paradigm.

The participants expressed their enthusiasm both before and during the lesson as they obtained positive feelings about the process from the previous session. The pre-writing stage began with a warm-up task where the four European capitals of Paris, Rome, London, and Barcelona were introduced with pictures for learners to activate their content schemata and take notes on the attractions of each place (task 1). The second task was a speaking activity in which learners engaged in a whole-class discussion regarding the aforementioned places. The participants approached the two tasks with excitement and even more timid learners did not hesitate to participate. In the planning stage learners were introduced to their writing topic, got separated into pairs and chose a city of the ones discussed previously (task 3). Their enthusiasm was escalated at this point as they did not have experienced pair writing prior to the intervention lessons. The fourth task aimed at activating learners' "formal schemata" about the particular writing genre and the structure to be followed and generate ideas (Carrell & Eisterhold, 1988, p. 79). They remained attentive throughout the planning stage and as they had already spent the previous session getting acquainted with the internet, they had no trouble using it to find information. However, the creation of their first draft (task 5) took more time than expected, due to the fact that the participants were not familiar with pair-work and sometimes got distracted talking with their peers.

The revising phase began with the sixth task which introduced a coherence activity where learners were asked to identify problems in sentences and use Quillbot to rephrase certain parts and improve the overall meaning. The task was chosen to familiarize the participants with AI paraphrasers and enhance their critical thinking skills by identifying ways that meaning can be properly promoted to make a text coherent. In the following task, learners were asked to evaluate another pair's draft focusing on coherence and meaning (task 7). Then, they were prompted to return to their draft and revise it using Quillbot (task 8). Their performance was improved in comparison to the previous session, and they became more confident in reviewing their classmates' drafts providing them with more constructive feedback. Finally, the learners edited their second draft focusing on structural and grammatical elements using Grammarly when needed and submitted their final draft on the wiki platform (task 9).

The post-session questionnaire findings (Appendix H) have revealed that all the participants liked the lesson and the tasks included (items 1,6), found it interesting (item 2) and participated willingly in the process (item 7). Furthermore, the vast majority of the

participants expressed their satisfaction regarding writing in the wiki platform (item 3) and nobody found its operation difficult (item 8), while fewer than 10% reported that they considered the lesson dull. Concerning the AI writing tools used, namely Grammarly and Quillbot, more than four-fifths acknowledged the benefits of the tools for their writing improvement (items 4-5).

According to the observation checklist results (Appendix J), the participants scored an average of 4.3 points in participation, 4.2 for engagement and 4 for their attention to the overall process displaying their interest through gestures, smiles, and eye-contact with the teacher. Regarding cooperation, the participants exhibited great signs of communication and collaboration, receiving 4.1 points out of 5. In terms of task completion, they displayed some difficulty in planning and organizing their drafts which could possibly have occurred considering that it was their first attempt at group-working, thus they gathered 3.7 points. As for time management, they managed to complete a lot of tasks in the given time, however they used more time than expected to plan and complete their draft receiving an average of 3.1 points. This may have occurred due to learners' lack of group-writing experience, as they are not acquainted with discussing ideas and writing with a partner. What is more, the participants used the English language more than the previous session to communicate with their partners and the teacher and acquired 4 points. Finally, all the participants familiarized themselves with the wiki platform and the AI tools for their writing, scoring an average of 4.1 points.

4.1.4. Cycle 4

The fourth and final cycle encompasses the third teaching session, a post-session questionnaire, an observation checklist and ends with the post-research questionnaire which was administered to the participants two days after the final session. The writing lesson is inspired by the topic of celebrations, which was the second most popular topic along with animals in the needs analysis questionnaire and was also chosen due to the Easter holiday break that was the week after the last session. It aims at practicing vocabulary related to celebrations and writing using the Present Simple.

This session aroused the participants' interest, and no difficulty was observed upon the completion of the tasks, enabling them to stick to the time limit and successfully complete all the activities included. The pre-writing stage began with a warm-up speaking activity

related to the two most popular celebrations, namely Christmas and Easter, and a class discussion was initiated while participants took notes (task 1). In the second task learners were asked to write down sentences and ideas imagining their favorite celebration in a time limit of three minutes. This “quick-writing” method was incorporated to enable them to overcome their writer’s block which may occur due to lack of confidence and generate original ideas focusing on content which can be further developed in their writing (Jacobs, 1986). Their eagerness to engage in the process was especially evident through this task as it was approached with great attention and perseverance.

In the planning stage, learners got separated into groups and categorized the ideas generated in the previous activity in a table (task 3). Next, they wrote their first draft in the wiki platform in groups (task 4). The revising stage began with a cohesion activity, where the participants read a passage and identify problems in meaning. They were prompted to improve the passage using their own ideas and the Quillbot writing tool when needed (task 5). Subsequently, they visited each other’s drafts and tried to identify mistakes in meaning and leave comments for improvement (task 6), which got considered by the participants for improvement of their own draft in the seventh task. Lastly, in the editing stage each pair used Grammarly to identify and correct errors on form, change fonts and colors and submit their final draft on the wiki (task 8).

In the post-session questionnaire (Appendix H), all the participants expressed that they enjoyed the lesson (item 1) and the tasks included (item 6), they willingly participated in the process (item 5) and their interest was aroused (item 2). In addition, the vast majority agreed that they liked writing in the wiki and found its use simple, however some learners expressed that they found typing in the computer rather challenging (7%). The AI writing tools were considered helpful for 85% of the participants (items 4-5) and only one out of the thirteen participants reported that the lesson was dull.

Similarly, the observation checklist (Appendix J) confirmed these results showing that the participants were more engaged in the process and participated with enthusiasm in the tasks receiving 4.6 points in both categories. Moreover, their cooperation with their fellow classmates has increased and they were able to communicate and work together effectively, scoring an average of 4.5 points. Furthermore, the teacher-researcher observed that the participants became more accustomed to the whole process and successfully completed the tasks while being attentive to the lesson, hence they were awarded with 4.5 points for

attention and 4.4 for task-completion. As for time management, they managed to complete the majority of the tasks in the given time with a small deviation of 1-2 minutes per task and got a mean score of 4.2 points. The same score was given for their use of language, as they were able to identify errors made in the previous session and use proper and more sophisticated language both during the lesson and in their writing drafts. In terms of technology use, all the participants used the web tools efficiently without facing any problems during the session, gathering 4.6 points.

4.1.5. Post-research questionnaire feedback

Two days after the completion of the last cycle, a post-research questionnaire was administered to the participants to gather more information about their views on the intervention followed (Appendix F). Based on the findings (Appendix I), the participants unanimously reported that they liked the intervention lessons (item 1) and found them interesting (item 2). What is more, twelve out of the thirteen participants stated that they enjoyed the use of wiki (items 3-4), found it motivating (item 5) and expressed their desire to use it again in the future (item 6). The same proportion of participants stated that their computer skills have been improved through the intervention (item 9). As per the AI writing tools of Grammarly and Quillbot, the vast majority agreed that the tools contributed to their writing improvement whereas only 8 and 15 percent of the participants disagreed on these statements accordingly (items 7-8). Additionally, (69%) of the participants stated that they found writing easier after the intervention writing lessons (item 10), while more than 90% admitted that they do not still consider writing as boring as before the intervention (item 11). A fluctuation of views was reported in item 12, where the three-fifths expressed that they participated in the specific writing lessons just as much as in the traditional ones, with the rest two-fifths stating that the intervention lessons increased their participation.

In terms of cooperation and peer-evaluation, all the participants agreed that they enjoyed cooperating with each other (item 13), with the majority expressing that they liked commenting on their classmates' drafts (76%), and reading the comments made on their work (92%), while 69% found the peer-evaluation comments helpful (items 14-16). Concerning the process writing methodology followed, over three-quarters of the participants agreed that editing and revising practices helped them improve their writing skills (item 17) and 85% verified that the lessons' tasks and methodology improved their

performance and made them more motivated to write (item 18-19). As for item 20, with five votes apiece, the first and the second lesson were the most prevalent ones (Figure 4).

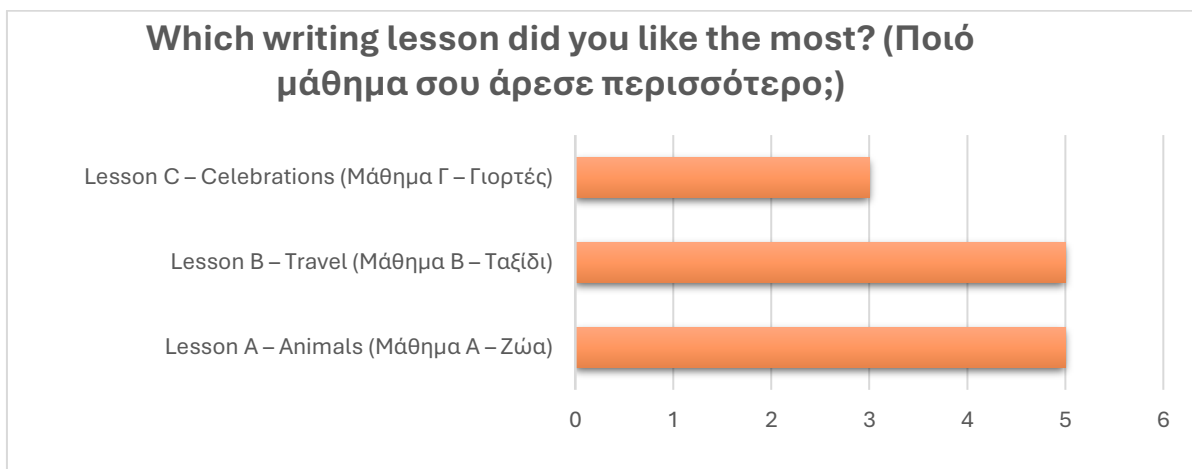


Figure 4: Learners' favorite session

Regarding the use of wiki (item 21), the majority of the participants supported the idea that it made the lesson more interesting, motivating, less tiring and improved their writing experience. Figure 5 illustrates the results of item 21.

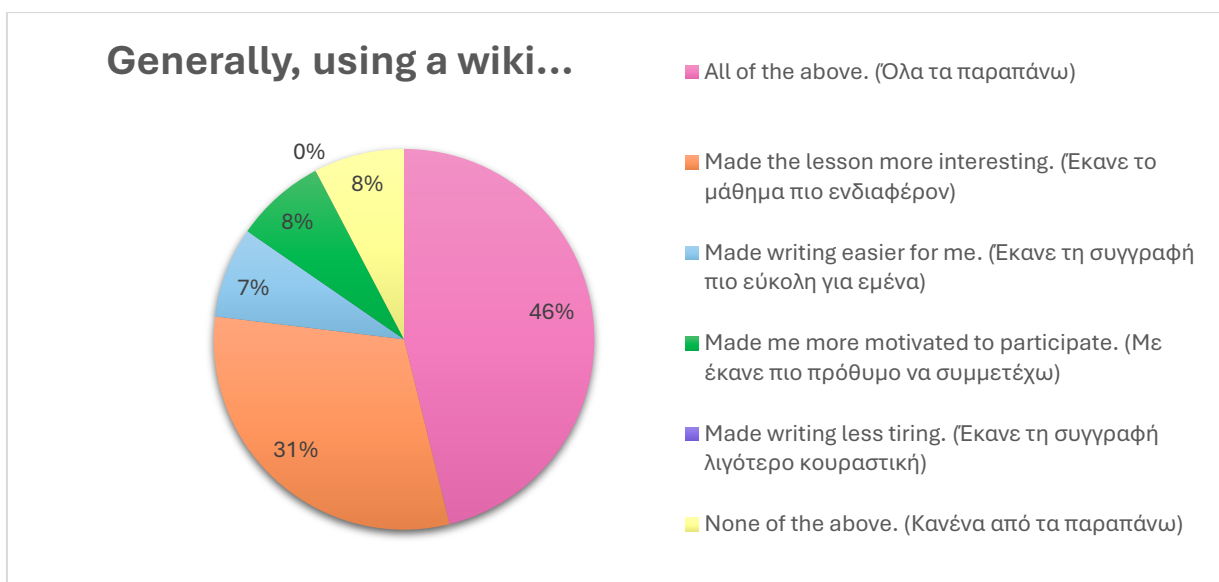


Figure 5: Learners' views on the use of wiki (item 21)

Moreover, twelve out of the thirteen participants claimed that they would like to participate in wiki-based writing lessons again, one participant expressed his uncertainty regarding wiki writing, while there were no negative responses regarding its use (item 22). Overall, the results have shown the positive attitude of the participants towards the intervention lessons

which is further reinforced by their responses in the last open-ended item (Appendix I, item 23).

4.2. Discussion

4.2.1. Enhancing learners' engagement

Through close examination of the footage of learners' behavior throughout the lessons and based on the results of the observation checklist and their answers to the post-session and post-research questionnaire it becomes apparent that the participants' engagement was increased through the intervention lessons, and they were actively involved in the tasks. Even though they initially appeared to be negatively disposed towards writing as revealed by the NA questionnaire findings (Appendix G), the game-like nature of wikis and the use of technological tools aroused their interest and increased their participation, confirming the finding of similar research (e.g. Koufadi, 2014). What is more, the participants' technological competence combined with the simple operation of Wikis and AI tools boosted their confidence and increased their enthusiasm and willingness to take part in the tasks, enabling them to properly engage in a meaningful creation of texts as distraction due to challenges of use were minimized, which comes in accordance with findings from previous research (Cunningham, 2002; Kirkpatrick, 2006; Lamb, 2004). Accordingly, the vast majority agreed that the wiki assisted in the improvement of their digital literacies, as presented on the post-research questionnaire answers.

Additionally, in line with previous studies (Godwin-Jones, 2003) the cooperative quality of the wiki through which the participants were introduced to group, and pair-writing was another factor that had a positive impact on their engagement in the process. Following the results of the post-research questionnaire, all the participants agreed that they enjoyed collaborating with their peers, revealing that teamwork and cooperation can increase participation and engagement in writing. Through collaboration and peer evaluation the participants were given a real audience to address which enabled them to express their thoughts to an authentic reader, thus they gained a real purpose for writing which increased their attention and participation. The results of the post-research questionnaire come to validate these observations in which the participants expressed their enjoyment for the lessons while twelve out of the thirteen participants stated that they would like to participate in more wiki-based writing lessons (Appendix I). These findings are further reinforced by

the observation checklist results (Appendix J). The following figure displays the participants involvement, attention, and engagement through each session.

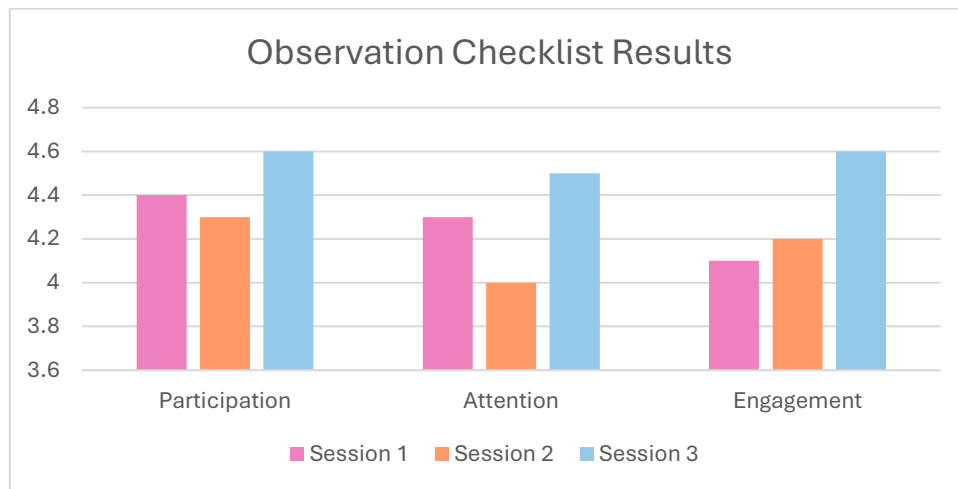


Figure 6: Behavioral observation checklist results for participation, attention, and engagement

4.2.2. Foresting learners' critical thinking

The participants' critical thinking skills were evaluated by the researcher through the written drafts submitted on the wiki platform, the learners' comments to their fellow classmates' drafts and their reactions to the comments and suggestions made on their own drafts either by their peers or the AI tools. During the second Cycle (see Section 4.1.2) the participants were asked to browse for information from certain internet sources to use in their drafts. Through appearing puzzled at first, they successfully managed to evaluate the content of the information and use only relevant facts to their drafts, avoiding direct copy of sentences and chunks of words from the sources. What is more, in the peer-evaluation phase (Appendix L), despite the fact that a lot of comments included solely positive reinforcement utterances due to the participants' lack of confidence in their evaluation abilities, there were many instances where the participants critically evaluated each other's drafts, offering their real views and suggestions for improvement to their peers. This finding is consistent with previous studies that found a positive impact on learners' autonomy and critical evaluation skills using a wiki (Koufadi, 2014).

In addition, similarly to previous research (Kourtis-Kazoullis & Vlachos, 2014), during the second and the third cycle the participants displayed their ability to skim the internet sources provided and appropriately extract relevant information for the purposes of their writing topic. Moreover, as they became more accustomed to the whole process, they engaged more

actively in the evaluator role further reinforcing the results of previous studies (e.g. Kontogeorgi, 2014). In the last two sessions, their peer-evaluation comments included more instances of critical reflection, and they were able to use the prompt questions in the sixth tasks in the second lesson, and the seventh task in the third lesson effectively in their evaluation of their peers' drafts. It is also worth mentioning that some learners critically evaluated the comments made on their draft orally during the sessions and expressed their agreement or disagreement to their classmates. As far as the AI writing tools are concerned, contrary to the findings of preceding research (Iskender, 2023; Johinke et al., 2023), the participants managed to avoid being overly relied on the tools' suggestions. Instead, they displayed the ability to critically evaluate the proposed improvements from both Quillbot and Grammarly and used the ones that were both comprehensible to them and suitable for the context of their writing.

4.2.3. Arousing learners' motivation

In the first Cycle of the research, the needs analysis questionnaire assisted to obtain the participant's attitudes on the writing skill. In fact, more than half of the participants expressed that they do not like writing, stating that they follow the textbook's model when writing their own text (Appendix G). However, the researchers' observations along with the post-session and post-research questionnaire results contrast the participants' initial statement. As observed during the sessions, the participants expressed their positive attitude through smiles, eye contact and positive comments regarding both the topic and the tasks included, indicating that they enjoyed expressing themselves in both their writings and the comments through the wiki. Following the findings of Kontogeorgi (2014) and Koufadi (2014), this data reveal that the participants' motivation is aroused through more process-oriented practices that do not restrain their imagination and ideas which often occurs to more structured based traditional writing models as the ones proposed by coursebooks. Less critical peer-evaluation and AI generated feedback processes increased learners' participation in the evaluation process and motivated them to improve their writings verifying claims from previous research (Godwin-Jones, 2018). As revealed by the post-researched questionnaire feedback, the vast majority clearly stated they enjoyed reading and writing comments on the wiki while finding the AI feedback useful (Appendix I).

Based on the post-session and the post-research questionnaire answers, all participants agreed that they liked the writing lessons as they aroused their interest. In addition, the vast

majority expressed that they liked the tasks and found them motivating, stating that writing is considered less boring for them after the sessions (Appendix I). Also, eleven out of the thirteen participants confirmed that they feel more motivated to write after the sessions, while twelve out of the thirteen agreed that they would like to keep using the wiki in their future writing lessons (Appendix I). Finally, though their writing performance is not examined in this research, it worth mentioning that great improvement was observed in the participants' writings (Appendix K), as they paid great focus while conducting their drafts, and tried to improve it through the revising and editing phase resulting in improvements both in the structure and the vocabulary used to promote their meaning. This finding confirms that the use of wikis and process writing positively affect the writing performance as stated in preceding literature (Lamb, 2004; Park & Chao, 2007). This can be related to the participants' increase in motivation, as they were given a real audience to address (Alexander, 2006) and an opportunity to express themselves on topics of their own interests during the process.

4.3. Answering the research questions

After the presentation and discussion of all the relevant data in the two previous sections, the research questions can be answered.

1) How do Wikis with the use of AI writing tools impact learners' engagement in the writing process?

The participants' engagement with writing appears to be positively affected by the use of AI and wikis in the learning process. As discussed in section 4.2.1 above, the participants interest was aroused by the use of technology and even learners that expressed their dislike for writing revealed their enthusiasm for the method followed in the intervention lessons, which became apparent from their positive reactions to the tasks and their active involvement throughout each lesson. These claims are strongly supported by the results of the observation checklist regarding their participation, attention and engagement presented in Figure 6, and from their answers to the post-session questionnaires. More precisely, in all three post-session questionnaires, learners were straightforwardly asked to evaluate their participation in each lesson, with all of them revealing that they willingly participated in all the tasks included in each session. Thus, it can be concluded that the use of a wiki combined with AI writing tools had a positive impact on learners' engagement in the writing process.

2) *To what extent can young learners develop their critical thinking skills when using wikis with AI writing tools?*

Through close examination of the observations and writing input gathered in each session, namely the learners' written texts on the wiki, their comments on the platform and their oral responses during each session, it becomes evident that the lessons had an impact on their critical thinking skills and the development of their autonomy. Even though at the beginning learners found it challenging to effectively categorize the newly acquired information from the internet sources and the AI tools and extract only the relevant ones, through the stages of revising and editing they managed to efficiently accomplish that task using their higher order thinking skills. What is more, they did not hesitate to critically evaluate both their peers' drafts and write comments, as well as their own drafts to create improved texts for the purpose of each writing topic. Hence, it can be stated that the use of wiki with AI writing tools assisted learners develop their critical thinking skills and become more autonomous in their learning since they displayed the ability to make their own decisions, express their minds and critically evaluate themselves and their classmates without the constant guidance of the teacher.

3) *To what extent do Wikis with the integration of AI affect learners' motivation?*

Taking into consideration the participants' answers prior, during and after the end of the research, we can observe that their motivation was positively affected by the intervention writing lessons. Even though in the needs analysis questionnaires more than half of the participants expressed their dislike for writing, in the post-session questionnaires, they stated that their interest was aroused through the lessons, both the topics and the tasks included were enjoyable to them while they demonstrated a positive attitude towards the whole process and actively participated and cooperated with their peers in writing. In addition, they attributed positive statements when describing each session in the open-ended questions (item 10). In the post-research questionnaire, the majority openly confirmed that the tasks were motivating for them (item 5) and that they feel more motivated to write after participating in the intervention lessons (item 19). Moreover, more than half of the learners expressed that the use of wiki aroused their motivation to participate (Figure 5). Ultimately, one can draw the conclusion that the participants' motivation in writing has increased through the use of the Wiki with AI writing tools. The ability to express one's ideas and the

cooperative nature of the tasks allowed learners to express themselves and engage in a meaningful experience which aroused their overall motivation.

Having addressed the three subquestions, we can now answer the main research question.

What are the effects of Wikis with the integration of AI to young learners' writing skills?

As discussed in the above subquestions, the implementation of writing lessons through a wiki platform with the integration of AI can have a positive impact to learners' engagement in writing, their critical thinking skills, and motivation. According to the learners' answers in the questionnaires and the observation checklist results, all the participants were actively engaged in the writing process, collaborating effectively with their peers. They displayed the ability to efficiently analyze information from different sources, and used the AI writing tools suggestions carefully through close evaluation of their proposed improvements which revealed that their critical thinking abilities were able to develop further. Finally, their interest was aroused by the topics and the simple nature of the wiki-based tasks, which positively affected their motivation to participate. Notwithstanding, it should be stressed that their motivation was affected by the choice of the topics and the tasks included in each session, which were based on the interests extracted from their answers on the needs analysis questionnaire.

Conclusion

This chapter provided a presentation of the findings gathered by the data collection tools, followed by a discussion and interpretation of the results. In the end, the research questions were addressed, and answers were provided. The next and final chapter includes a critical overview of the research, its significance, and limitations, along with suggestions for further studies.

5. Significance, limitations, and suggestions for further research

Introduction

The fifth and final chapter of the dissertation entails the pedagogical implications of the particular research. It discusses the limitations of its application and presents some suggestions for research in that context.

5.1. Overview of the findings

The aim of the present research was to investigate the effects of wikis and AI on young learners' writing skills. On the basis of this aim, an action research design was undertaken to conduct the study to thirteen A2 level participants of a private language school. The results of both the post-session and post-research questionnaire indicate a significant increase in the participants' engagement and motivation in which the vast majority clearly stated their willingness to participate in the tasks and the activation of their interest. These findings are aligned to previous research in the field which highlighted that the use of wikis and CMC tools enhanced the motivation and participation of the learners (Kontogoergi 2014; Koufadi, 2014; Lamb 2004;). Likewise, AI tools offered a less intimidating feedback option with aroused learners' interest and enhanced their motivation, which comes in line with previous findings (Ghufron & Rosyida, 2018; Huang et al., 2020; Karyuatry et al., 2018).

Furthermore, in the present research the participants demonstrated the ability to critically evaluate and reflect on information from different sources, and eventually become more selective on the suggestions proposed by the wiki comments and the AI paraphraser and grammar checker and more autonomous too, as they were able to evaluate information on their own without extrinsic guidance. Thus, it can be concluded that wikis and AI had a positive impact on their critical thinking and autonomy. These findings are entirely consistent with the results of previous research that support the cultivation of learners' higher order thinking skills and autonomy using CMC tools (Avgerou & Vlachos, 2016; Koufadi, 2014). Additionally, the fact that learners despite their low level of competence were able to effectively evaluate the AI tools' recommendations contradicts the fear of overreliance in the tools through overcorrection or use of false suggestions that can restrain learners' critical thinking and creativity in writing (Ghufron & Rosyida, 2018; Iskender,

2023; Marzuki et al., 2023;), proving that by developing the ability to utilize AI tools successfully, learners can highly benefit from its numerous prospects.

5.2. Significance of the research and its pedagogical implications

This research has focused on investigating the effects of web 2.0 tools and in particular wikis combined with AI writing tools to the writing skills of young learners. The findings have shown that the use of technology and innovative writing tools can have a positive impact on learners' engagement, motivation, and critical thinking abilities. Following the results of the intervention presented in Chapter 4, we can observe that such frameworks can positively affect even the more reluctant and demotivated learners and activate their interest and engagement in writing. As opposed to traditional writing practices that focus on structural elements and limit learners' imagination, guiding them to a more functional way of writing by following certain patterns, wiki-based writing combines more process-oriented practices and engages learners to a creative process of planning and structuring their own meaning, allowing for self-expression while setting a real purpose for writing which arouses both interest and motivation in learning while activating learners' creativity and higher order thinking skills.

Bearing in mind that the internet has become an integral part of our everyday lives, educators should embrace technological innovations and experiment with the various new tools and approaches, to gradually reform and synchronize their teaching practices and create a stimulating environment for learning. Considering the above, even though the positive results of the present research cannot be generalized to the overall population due to the small size of the sample (Cohen et al., 2007), they can inspire more practitioners to implement wikis and AI to their writings lessons to transform their language teaching and exploit the potential benefits of the new technologies in education.

Overall, incorporating technological tools in the learning process is a necessity in today's era, to equip learners with the necessary 21st century skills that will enable them to stand in society. Thus, it is highly recommended for teachers to incorporate wikis and AI in their lessons to meet the needs of our technological era. The design of stimulating and motivating lessons that aim for the cultivation of critical and creative thinking and learner autonomy should be of prominent importance in teaching in order to increase engagement in learning and create conscious and active learners.

5.3. Limitations of the research

The present research has revealed that the use of wikis with the integration of AI in the EFL classroom can have positive effects on learners' motivation, engagement, and critical thinking. However, since the research was conducted in a private language school using a small sample of participants, which consists of thirteen learners, the results cannot be generalized to the overall population, yet the findings can contribute to the deep analysis of the phenomenon, to cater for similar situations.

Another significant limitation lies in the restricted time available for the implementation of the empirical part and analysis of the findings of the research. More precisely, the empirical part was conducted in April 2024 and lasted for approximately four weeks. Despite the fact that the duration of the empirical part was found to be adequate to produce the necessary findings, if there had been more time available to conduct additional sessions, more detailed information could have been generated in order to further analyze the participants' thoughts and contribute to the validity of the results.

Finally, a significant constraint was the lack of the necessary equipment in the private language school. The facilities offered only one portable computer for each classroom, and as some of them were used by other teachers during the intervention lessons, the researcher should equip the class with more devices and learners were asked to bring their own equipment to complete the lessons, which sometimes caused the internet connection to be unstable. Notwithstanding, the issue did not disrupt the flow of the lessons as the researcher provided learners with an additional portable connection.

5.4. Suggestions for further research

Taking into consideration the aforementioned restrains and limitations, it would be of great benefit to investigate the effects of the proposed framework on a wider scale, with a larger sample and over a more extensive period of time, to allow for more cycles to take place in order to gain a broader and more detailed amount of information and acquire a better understanding of the situation. Additionally, it would be beneficial to implement wikis with AI to the writing lessons of older learners with higher competence in the English language. In this way, older learners could engage in the production of written texts that do not follow the traditional writing model suggested by the various English certificate guidelines and activate their imagination and higher order thinking skills through multiple drafting and

peer-assessment through a wiki which could potentially have a positively effect on their motivation and engagement as well. Finally, regarding the use of AI, the particular writing tools were selected due to the participants' young age as they are simple in use and offer both easier and more complex writing suggestions for the learners to utilize. However, it would be interesting to employ more complex AI tools to older groups of participants in writing such as Chat-GPT to explore the benefits of more advanced and innovative AI for the cultivation of writing along with the other skills too.

Conclusion

The last chapter has discussed the implications of the present research for education, learners, and teachers as well. The limitations of the study were presented and suggestions for future research on the particular framework were recommended.

Concluding remarks

The present dissertation attempted to investigate the effects of Wikis and AI on young learners' writing skills. An action research design was implemented to gather qualitative data from thirteen participants of the A2 level which took part in three writing sessions through a wiki platform. Each writing session incorporated various tasks following a process writing paradigm to promote interaction and collaboration among the participants and develop their autonomy, critical thinking, and reflective skills. The analysis of the research findings has revealed the positive impact of wikis and AI on the participants' engagement, motivation, and critical thinking in writing. A shift from traditional writing models and practices with the combination of wiki and AI technology has increased learners' interest and participation in the lesson, while the creation of a real purpose for writing increased their motivation and enhanced their engagement in their process. The process writing framework of multiple drafting through revising and editing combined with AI writing tools aimed at the activation of learners' higher order thinking skills and has proven their ability to consciously analyze information from different sources and offer constructive feedback to their peers in the evaluation stage, which positively affected their communication, increased their cooperation, and assisted to the development of their overall writing performance.

Nonetheless, the limitations should not be ignored. Wiki writing is a process that requires certain time for its efficient implementation and as mentioned by some of the participants, in contrast to traditional paper-based writing lessons, wiki-based writing may prove to be challenging for some learners that are not accustomed to digital writing. Therefore, it is of paramount importance for educators to guide and assist learners to overcome these issues and benefit from the positive effects of more innovative writing practices to their overall development. It is highly recommended for educators to incorporate the new media along with more innovative practices to their lessons, to create a stimulating environment for the learners and provide them with the opportunity to gain autonomy and improve their digital literacy, critical thinking and reflective skills which has become a prerequisite in our constantly developing society. Overall, wikis and AI tools should be incorporated in education to synchronize and transform the learning experience through the creation of interesting, motivating, and engaging lessons that are aligned with the demands of our era.

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Appendix A: Consent form

Έντυπο ενημέρωσης και συγκατάθεσης γονέων για συμμετοχή ανηλίκου σε έρευνα

Αγαπητοί γονείς,

Με το παρόν έγγραφο θα ήθελα να ζητήσω τη συγκατάθεση σας για τη συμμετοχή του παιδιού σας σε εκπαιδευτικές εργασίες οι οποίες θα πραγματοποιηθούν με τη χρήση της τεχνολογίας Wiki με σκοπό την καλλιέργεια των δεξιοτήτων των μαθητών στο γραπτό λόγο και την εξοικείωση τους όσον αφορά τις νέες τεχνολογίες στην εκπαίδευση. Η έρευνα διαδραματίζεται στο πλαίσιο του μεταπτυχιακού προγράμματος «Διδακτική της Αγγλικής ως Ξένης/Διεθνούς γλώσσας» του Ελληνικού Ανοικτού Πανεπιστημίου. Σκοπός της παρούσας έρευνας είναι να διερευνηθεί η επίδραση της τεχνολογίας Wiki στην καλλιέργεια του γραπτού λόγου των μαθητών, στα κίνητρα και την κριτική σκέψη τους κατά τη διάρκεια της διαδικασίας. Εκτός από την μεγάλη βοήθεια που θα μου προσφέρετε για την ολοκλήρωση της διπλωματικής μου εργασίας, το παιδί σας θα έχει την ευκαιρία να ανακαλύψει νέους σύγχρονους τρόπους για την εξάσκηση των γραπτών δεξιοτήτων του στην Αγγλική γλώσσα με τη βοήθεια της τεχνολογίας και ενδεχομένως την καλλιέργεια του κινήτρου και της δημιουργικότητας του.

Τέλος, θα ήθελα να σας διαβεβαιώσω ότι όλα τα προσωπικά δεδομένα των μαθητών θα διαφυλαχθούν και κανένας εκτός από εμένα δεν θα έχει πρόσβαση σε αυτά.

Για οποιαδήποτε διευκρίνιση είμαι στη διάθεση σας.

Με εκτίμηση,

Βασιλάκη Σταυρούλα

Απόφοιτος τμήματος Αγγλικής Γλώσσας και Φιλολογίας, ΑΠΘ

Μεταπτυχιακή φοιτήτρια, ΕΑΠ

Υπογραφή Γονέα,

Appendix B: Lesson plans and worksheets

Worksheet 1: 'Animals'

Animals

1. Look at the animals in the pictures. How are they different?



2. Answer the questions.
 - Which animal is smaller?
 - Which animal is stronger?
 - Where do they live?
 - What do they eat?
 - What's your favorite animal?
3. Complete the fact file with information about your favorite animal.
Follow the links in our wiki page to search the internet for information.

Favorite animal:	
Type:	
Description:	
Habitat:	
Food:	
It can:	
It can't:	

Interesting facts:	
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4. Let's remember how to compare animals.

- An elephant is _____ a zebra. (**big**)
- The giraffe is _____ animal in the world. (**tall**)
- A snake is _____ a monkey. (**long**)
- A cat is _____ a dog. (**small**)
- The whale is the _____ animal. (**big**)
- A tiger is _____ than a cat. (**dangerous**)

5. Use the information from the fact file and write a report about your favorite animal. Go to our **wiki page** <http://stavroulasclass.pbworks.com> and start writing your report. You have **10 minutes!**

6. Now visit your partners page and read their draft. **Underline** the parts that need changes and add a comment with your opinion. Use the following questions to help you.

- Is there a title?
- Is the message clear? Do you understand the ideas?
- Is it interesting?
- Is it formal or informal?
- Is the language easy for you to understand?

7. Look at your partner's comments and click the "edit" button to make changes to your draft. Use **Quillbot** to help you express your ideas. You have **5 minutes.**

8. Let's write our final drafts! This time you need to focus on grammar and vocabulary too. Use **Grammarly** to help you find your mistakes. You have **10 minutes.** You can do this!

Lesson plan 1: 'Animals'

<p>Aim: Practice writing through the integration of AI writing tools using a wiki platform. Age: 10-13 Level: A2 Time: 55 minutes Materials & teaching aids: Computers, smartphones, tablets & tasksheet</p>			
Procedure	Objectives	Interaction	Time
<p>Pre-writing stage</p> <p>1. Warm – up activity. The T introduces the topic to the Ls. The Ls are asked to compare the animals in the provided pictures.</p>	<p>To arouse interest in the topic.</p> <p>To activate the relevant schemata in the learners' mind.</p>	T – Ls	3'
<p>2. The Ls answer the questions orally and engage in a class conversation about animals.</p>	<p>To activate background knowledge.</p> <p>To revise comparative and superlative form.</p> <p>To generate information about the topic.</p>	T – Ls	5'
<p>Planning – structuring ideas</p> <p>3. Ls are asked to complete the fact file in the worksheet about their favorite animal. The T helps them find information on the internet. The T encourages Ls to ask their classmates for information and help each other.</p>	<p>To arouse interest</p> <p>To prepare Ls for the writing part.</p> <p>To practise notetaking.</p> <p>To enhance cooperation and teamwork.</p> <p>To brainstorm.</p> <p>To focus on content and meaning.</p>	<p>T – Ls</p> <p>Ls – Ls</p>	7'
<p>4. The T asks learners to complete the grammar activity using the comparative and</p>	<p>To revise previously learnt grammatical structures.</p> <p>To focus on grammatical elements.</p>	<p>T – Ls</p> <p>Ls – Ls</p>	3'

superlative form of the adjectives.			
<p>First draft</p> <p>5. The T provides the topic of the writing and provides a time limit for Ls to compose their first draft. The T guides them on the wiki page and provides help when needed.</p>	<p>To set a purpose for writing.</p> <p>To practise digital writing.</p> <p>To structure ideas.</p>	T – Ls	10'
<p>6. The T guides Ls to visit each other's page and edit their partner's draft by underlining the parts that need correction. Ls are asked to evaluate each other's draft by writing a comment.</p>	<p>To engage Ls to peer-assessment processes.</p> <p>To promote autonomy.</p> <p>To provide real-time feedback.</p> <p>To enhance collaboration between Ls.</p>	<p>T – Ls</p> <p>Ls – Ls</p>	5'
<p>Revising – Second draft</p> <p>7. Ls are asked to review their partner's comments and make changes to produce their second draft. They are invited to use the Quillbot writing tool to make corrections on their draft regarding the meaning.</p>	<p>To promote learner autonomy.</p> <p>To enhance self-evaluation skills.</p> <p>To assess structure and content in writing.</p> <p>To familiarize Ls with AI writing tools.</p> <p>To improve writing using AI.</p>	T – Ls	7'
<p>Editing – Final draft</p> <p>8. The T advises Ls to take care of the form of their writing and asks them to produce their final draft. The Ls are prompted to consider the questions in task 6 to evaluate their work. The T urges them to</p>	<p>To embark Ls in meaningful writing production focusing on both form and content.</p> <p>To familiarize Ls with AI writing tools.</p> <p>To promote authenticity.</p>	T – Ls	10'

use the Grammarly writing tool to help them identify errors regarding grammar and vocabulary. They are invited to use pictures from the internet to accompany their final drafts.	<p>To improve drafts using AI.</p> <p>To arouse Ls motivation.</p>		
9. The T prompts Ls to read each other's reports and leave comments under the wiki posts.	<p>To provide peer-feedback.</p> <p>To increase Ls confidence.</p> <p>To promote communication and cooperation.</p>	<p>T – Ls</p> <p>Ls – Ls</p>	5'

Worksheet 2: 'Travel'

Travel

1. Look at the pictures. Do you know these places?



- ✚ In which city are these attractions?
 - ✚ Which city is your favorite?
 - ✚ What's your favorite attraction?
 - ✚ Which places would you like to visit in your favorite city?
2. You want to **invite your friend** to a 3-day trip with you to your favorite city. Choose a place from the pictures above and write an **e-mail** to your friend to discuss all the things and activities that you can do there together.
3. But first, let's find more information about these beautiful cities. In groups of three, open our class wiki page and follow the links about the city of your choice to fill in the table.

Days	Places to visit & things to do:	Food to try:
Day 1		
Day 2		
Day 3		

4. Before writing, think about the following.

- Who are you writing to? _____
- What language do you need to use? _____
- What is the purpose of your e-mail? _____
- How should you start your e-mail? _____
- How should you finish your e-mail? _____

5. Go to our wiki page and **write your first draft in groups**. You can use the language chart at the end of the task sheet. For any questions, your teacher is here to help you. You have **10 minutes**.

6. Look at the following sentences. Can you identify any problems?

✚ In Paris, we can visit the Eiffel Tower. Also, we can visit the Louvre Museum and also, we can go to Disneyland!

✚ We can visit the Tower of London and the London eye, the Buckingham Palace and the British museum.

Now use **Quillbot** and find ways to improve the content of these sentences.

7. Visit the other pair's draft and read their work. Use the questions below to evaluate it. Leave a comment under their draft about your opinion and underline parts that need correction.

- + Do you understand the message? Is it interesting?
- + Is there an introduction, paragraphs, and a conclusion?
- + Is it formal or informal?
- + Are there any points that you don't understand? Underline them.

8. Read the comments on your draft and click the "edit" button to make changes and create your second draft. Use **Quillbot** to help you express your ideas. You have **7 minutes**.
9. Let's write our final drafts! This time you need to focus on grammar and vocabulary too. Use **Grammarly** to help you. You have **10 minutes**. Let's go!

Lesson plan 2: 'Travel'

<p>Aim: Practice writing through the integration of AI writing tools using a wiki platform. Age: 10-13 Level: A2 Time: 60 minutes Materials & teaching aids: Computers, smartphones, tablets & tasksheet</p>			
Procedure	Objectives	Interaction	Time
<p>Pre-writing stage</p> <p>1. Warm – up activity. The T introduces the topic to the Ls. The Ls are asked to describe the pictures and the attractions they see.</p>	<p>To arouse interest in the topic.</p> <p>To activate the relevant content schemata in the learners' mind.</p> <p>To enhance motivation.</p>	T – Ls	3'
<p>2. The Ls answer the questions about the pictures orally and engage in a class conversation about travelling. They are prompted to take notes on their tasksheet.</p>	<p>To activate background knowledge.</p> <p>To revise vocabulary and adjectives about travel.</p> <p>To generate information about the topic.</p>	T – Ls	4'
<p>Planning – structuring ideas</p> <p>3. Ls are introduced to the topic of their writing. They are asked to choose their favorite place from the pictures to write their e-mail.</p>	<p>To introduce the topic of writing.</p> <p>To arouse interest and engagement in the process.</p> <p>To increase motivation.</p>	<p>T – Ls</p> <p>Ls – Ls</p>	2'
<p>4. Ls are separated in pairs and are asked to complete the table in the worksheet about their favorite place. The T helps them find information on the internet by following the links provided on the wiki platform.</p>	<p>To plan ideas for the writing part.</p> <p>To practise notetaking.</p> <p>To structure ideas.</p> <p>To enhance cooperation and teamwork.</p> <p>To brainstorm.</p>	<p>T – Ls</p> <p>Ls – Ls</p>	8'

5. Ls are asked to think about the form and structure of an e-mail and make notes in task 4.	<p>To focus on structure and form.</p> <p>To familiarize Ls with genre.</p> <p>To activate formal schemata.</p>	T – Ls	3'
<p>First draft</p> <p>6. The T gives a time limit for Ls to compose their first draft in pairs. The T guides them on the wiki page and provides help when needed.</p>	<p>To set a purpose for writing.</p> <p>To practise digital writing.</p> <p>To enhance teamwork.</p> <p>To practise group-writing.</p> <p>To promote collaboration between Ls.</p>	T – Ls	10'
7. Ls are asked identify errors on the given sentences. They are prompted to use Quillbot and rephrase the sentences to improve their meaning.	<p>To practice cohesive devices.</p> <p>To familiarize Ls with AI writing tools.</p> <p>To promote critical thinking and problem-solving skills.</p>	T – Ls Ls – Ls	3'
8. The T asks Ls to visit another pair's draft and underline the parts that they don't understand and need correction. Ls are asked to evaluate the content of each other's draft based on the questions provided in the table and leave a comment.	<p>To engage Ls to peer-assessment process.</p> <p>To promote autonomy and critical thinking.</p> <p>To provide real-time feedback.</p> <p>To enhance communication between Ls.</p>	T – Ls Ls – Ls	5'

<p>Revising – Second draft</p> <p>9. Ls read the comments made on their work and make changes to produce their second draft. They are prompted to use the Quillbot writing tool to make corrections on their draft regarding the meaning to clarify misunderstandings.</p>	<p>To promote learner autonomy.</p> <p>To focus on structure and content in writing.</p> <p>To foster critical thinking.</p> <p>To improve meaning using AI.</p> <p>To develop Ls writing skills.</p>	T – Ls	8'
<p>Editing – Final draft</p> <p>10. The T advises Ls to take care of the form of their writing and asks them to produce their final draft. The Ls are prompted to consider the questions in task 6 to evaluate their work. The T urges them to use the Grammarly writing tool to help them identify errors on grammar and vocabulary. They are invited to use pictures from the internet to accompany their final drafts and change fonts and colors.</p>	<p>To familiarize Ls with AI writing tools.</p> <p>To promote writing authenticity.</p> <p>To arouse Ls motivation and interest.</p> <p>To promote writing production focusing on both form and content.</p> <p>To enhance teamwork.</p> <p>To improve Ls drafts using AI.</p>	T – Ls	10'
<p>11. The T prompts Ls to read each other's reports and leave comments under the wiki posts.</p>	<p>To enhance collaboration and communication.</p> <p>To increase Ls self-esteem.</p> <p>To provide peer-feedback.</p>	T – Ls Ls – Ls	4'

Worksheet 3: 'Celebrations'

Celebrations




1. Which celebrations are presented in the pictures?



- ❖ How do you celebrate Christmas in your country?
- ❖ How do you celebrate Easter in your country?
- ❖ What other celebrations do you know about?
- ❖ Which is your favorite celebration? Why?

2. Write whatever comes to you mind while thinking about your favorite celebration. Don't worry about making mistakes at this point. You have **3 minutes!**

3. Your task is to write about your favorite celebration. Fill in the table below in pairs to plan your ideas.

Favorite celebration:	
Activities: 	
Food: 	
Customs: 	

4. In pairs, write about your favorite celebration in your country. Open our wiki page and start writing your first draft. You have **10 minutes!** Consider the following:

- ❖ What activities do you do?
- ❖ What food do you eat?
- ❖ Are there any special customs?

5. Look at the following passage. Can you identify any mistakes?

Holy Week begins with religious celebrations. Families dye easter eggs red and decorate them. Then, the epitaph is decorated with flowers. Then, families go to church to celebrate the resurrection on Saturday night. Then, Easter Sunday feasts start with roasted lamb and other traditional dishes.

- ❖ Use **Quillbot** to rephrase the parts you don't understand and improve the passage.

6. Visit another pair's draft, read it, and write comments to evaluate it. Use the questions in the table below to help you.

- ❖ Do you understand it?
- ❖ Are the ideas interesting?
- ❖ Are there clear paragraphs?
- ❖ Is it formal or informal?
- ❖ Are the events organized correctly?
- ❖ Underline the points that need changes.

7. Go back to your draft, read the comments, and make changes to make your text clearer. Focus on meaning! Use **Quillbot** to help you express your ideas!

8. It's time to write your final drafts! This time it is important to focus on grammar and vocabulary too! Use **Grammarly** to help you find your mistakes. Use the table in task 5 to help you revise your work.

- ❖ You can always add pictures and change the font on your writing! You have **10 minutes**. Let's go!

Lesson plan 3: 'Celebrations'

<p>Aim: Practice writing through the integration of AI writing tools using a wiki platform. Age: 10-13 Level: A2 Time: 60 minutes Materials & teaching aids: Computers, smartphones, tablets & tasksheet</p>			
Procedure	Objectives	Interaction	Time
<p>Pre-writing stage</p> <p>1. Warm – up activity. The T introduces the topic to the Ls. The Ls are asked to describe the pictures and identify the particular celebrations.</p>	<p>To arouse interest in the topic.</p> <p>To activate the relevant content schemata in the learners' mind.</p>	T – Ls	3'
<p>2. The Ls answer the questions about the pictures orally and engage in a class conversation about celebrations. They are prompted to take notes on their tasksheet.</p>	<p>To activate background knowledge.</p> <p>To revise vocabulary on the topic.</p> <p>To brainstorm information about the topic.</p>	T – Ls	3'
<p>Planning – structuring ideas</p> <p>3. Ls are asked to think and write down as many things as possible in a time limit regarding their favorite celebration. The T reassures them that mistakes do not matter at this point.</p>	<p>To practise quick writing.</p> <p>To brainstorm for relevant information.</p> <p>To promote fluency and content over form.</p>	T – Ls	4'
<p>4. Ls are separated in groups and are asked to complete the table in the worksheet about their favorite celebration. The T works as a facilitator</p>	<p>To prepare for the writing part.</p> <p>To practise notetaking.</p> <p>To structure ideas.</p> <p>To brainstorm.</p> <p>To enhance teamwork.</p>	<p>T – Ls</p> <p>Ls – Ls</p>	6'

and provided help when needed.			
<p>First draft</p> <p>5. The T informs Ls about the topic and gives a time limit for them to compose their first draft in pairs. They are advised to include the information presented in the questions. The T guides them on the wiki page and provides help when needed.</p>	<p>To set a purpose for writing.</p> <p>To enhance teamwork.</p> <p>To practise writing focusing on content.</p> <p>To promote collaboration and communication between Ls.</p> <p>To practise digital writing.</p>	T – Ls	10'
<p>6. Ls are asked to find errors on the given passage regarding its coherence and cohesion. They are guided to use Quillbot and rephrase the problematic parts to improve the meaning.</p>	<p>To promote focus on meaning.</p> <p>To emphasize the importance of cohesive devices.</p> <p>To familiarize Ls with AI writing tools.</p> <p>To foster critical thinking.</p>	<p>T – Ls</p> <p>Ls – Ls</p>	4'
<p>7. The T asks Ls to visit another group's draft and use the questions in the table to evaluate it. They are advised to underline the parts that they do not understand, and which need correction.</p>	<p>To engage Ls to peer-assessment processes.</p> <p>To promote critical thinking.</p> <p>To provide real-time feedback.</p> <p>To enhance collaboration.</p>	<p>T – Ls</p> <p>Ls – Ls</p>	7'
<p>Revising – Second draft</p> <p>8. Ls read the comments on their draft and make changes to produce their second draft focusing on meaning. They are prompted to use the Quillbot</p>	<p>To promote learner autonomy.</p> <p>To focus on content and meaning.</p> <p>To develop critical thinking.</p>	<p>T – Ls</p> <p>Ls – Ls</p>	8'






writing tool to make corrections on their draft and rephrase parts that need correction.	<p>To familiarize Ls with AI writing tools.</p> <p>To develop Ls writing skills.</p>		
<p>Editing – Final draft</p> <p>9. The T prompts Ls to take care of the form of their writing and asks them to produce their final draft. The Ls are advised to consider the questions in task 6 to evaluate their work. They are urged to use the Grammarly writing tool to identify errors in grammar and vocabulary. They are invited to use pictures to accompany their final drafts and change colors.</p>	<p>To familiarize Ls with AI writing tools.</p> <p>To arouse motivation and interest.</p> <p>To provide an authentic purpose for writing.</p> <p>To improve Ls draft using AI</p> <p>To embark Ls in meaningful writing production focusing on both form and content.</p> <p>To enhance teamwork and cooperation.</p>	<p>T – Ls</p> <p>Ls – Ls</p>	10'
<p>10. The T prompts Ls to read each other's reports and leave comments under the wiki posts.</p>	<p>To enhance collaboration.</p> <p>To increase Ls confidence.</p> <p>To promote communication between Ls.</p> <p>To provide peer-feedback.</p>	<p>T – Ls</p> <p>Ls – Ls</p>	5'

Appendix C: Needs analysis questionnaire

Αγαπητοί μαθητές,

Το παρακάτω ερωτηματολόγιο έχει ως σκοπό να διερευνήσει τις γνώσεις, τις προτιμήσεις και τις απόψεις σας σχετικά με την Αγγλική γλώσσα καθώς και τη σχέση σας με την τεχνολογία. Θα το εκτιμούσαμε αν αφιερώνετε λίγο χρόνο για να απαντήσετε στις ακόλουθες ερωτήσεις σε αυτό το ερωτηματολόγιο. Οι απαντήσεις σας είναι σημαντικές για να σας κατανοήσουμε καλύτερα και να δημιουργήσουμε μαθήματα προσαρμοσμένα στα ενδιαφέροντα και τις απαιτήσεις σας. Θα ήθελα να απαντήσετε με ειλικρίνεια στις παρακάτω ερωτήσεις. Να θυμάστε: Δεν υπάρχουν σωστές ή λανθασμένες απαντήσεις.

Παρακαλούμε, δώστε προσοχή στις ακόλουθες οδηγίες.

-  Απαντήστε σε **όλες** τις ερωτήσεις.
-  Απαντήστε με **ειλικρίνεια** στις ερωτήσεις.
-  **Μην** γράψετε το όνομά σας σε αυτό το έντυπο. Οι απαντήσεις πρέπει να παραμείνουν **ανώνυμες**.
-  Δώστε **προσοχή** στις ερωτήσεις.
-  Ελέγξτε ότι απαντήσατε σε **όλες** τις ερωτήσεις.

Background information (Προσωπικές πληροφορίες)

1. Gender (Γένος): ☐ Boy ☐ Girl

2. Age (Ηλικία)? (number) (σε αριθμό)

3. How many years have you been learning English (both school and frontistirio)?
[Πόσα χρόνια μαθαίνεις Αγγλικά (στο σχολείο και το φροντιστήριο)];

- ☐ 1-2 years (1-2 χρόνια)
- ☐ 3-4 years (3-4 χρόνια)
- ☐ 5-6 years (5-6 χρόνια)

SECTION A – learner's attitude towards English (ΕΝΟΤΗΤΑ Α - στάση του μαθητή απέναντι στην αγγλική γλώσσα)

Why are you learning English? (Γιατί μαθαίνεις Αγγλικά;)

Statements – Put a ✓ in the answer that is true for you (Βάλε ένα ✓ στην απάντησεις που ισχύει για εσένα)	Yes 😊	No ☹
1. I want to understand movies in English (Θέλω να καταλαβαίνω ταινίες στα αγγλικά)		
2. I want to understand the lyrics of my favorite songs (Θέλω να καταλαβαίνω τους στίχους των αγαπημένων μου τραγουδιών)		

3. I want to use the internet platforms easily (Θέλω να χρησιμοποιώ εύκολα τις διαδικτυακές πλατφόρμες)		
4. I want to understand better the content of web pages (Θέλω να καταλαβαίνω καλύτερα το περιεχόμενο των ιστοσελίδων)		
5. I want to understand the content of video games (Θέλω να κατανοήσω το περιεχόμενο των βιντεοπαιχνιδιών)		
6. I want to communicate with other children in online games (Θέλω να επικοινωνώ με άλλα παιδιά σε διαδικτυακά παιχνίδια)		
7. I want to communicate with online friends through social media (Θέλω να επικοινωνώ με διαδικτυακούς φίλους μέσω των social media)		
8. I want to travel to other countries (Θέλω να ταξιδέψω σε άλλες χώρες)		
9. I want to speak with foreign people (Θέλω να μιλήσω με ξένους ανθρώπους)		
10. English is an international language (Τα αγγλικά είναι διεθνής γλώσσα)		
11. I like the English language (Μου αρέσουν τα Αγγλικά)		
12. Most jobs need you to know English (Τα περισσότερα επαγγέλματα απαιτούν γνώση της αγγλικής γλώσσας)		
13. I want to get a certificate in English exams (Θέλω να πάρω πτυχίο στα Αγγλικά)		
14. I want to study in a university abroad (Θέλω να σπουδάσω στο εξωτερικό)		
15. I want to learn about England (Θέλω να μάθω για την Αγγλία)		

16. I want to read English books (Θέλω να διαβάσω Αγγλικά βιβλία)		
17. I want to make friends from other countries (Θέλω να κάνω φίλους από άλλες χώρες)		
18. My parents want me to learn English (Οι γονείς μου θέλουν να μάθω αγγλικά)		
19. My friends started learning English (Οι φίλοι μου άρχισαν να μαθαίνουν αγγλικά)		
20. I don't know (Δεν ξέρω)		

SECTION B – The writing skill (ΕΝΟΤΗΤΑ Β - Η ικανότητα γραφής)

Statements – Put a ✓ in the answer that is true for you (Βάλε ένα ✓ στην απαντήσεως που ισχύει για εσένα)	Yes ☺	No ☹
1. I like writing. (Μου αρέσει να γράφω)		
2. I find writing easy. (Το γράψιμο μου φαίνεται εύκολο)		
3. I find writing difficult. (Το γράψιμο μου φαίνεται δύσκολο)		
4. I like writing alone. (Μου αρέσει να γράφω μόνος/η μου)		
5. I like writing in pairs. (Μου αρέσει να γράφουμε σε ζευγάρια)		
6. I like writing in groups. (Μου αρέσει να γράφουμε σε ομάδες)		
7. Before writing, I plan my ideas. (Πριν γράψω, σχεδιάζω τις ιδέες μου)		
8. I follow the book's model text when I write. (Ακολουθώ το υπόδειγμα κειμένου του βιβλίου όταν γράφω.)		
9. After I write my text, I read it again to correct my mistakes. (Αφού γράψω το κείμενό μου, το ξαναδιαβάζω για να διορθώσω τα λάθη μου.)		

10. I use my teacher's feedback to become better at writing. (Χρησιμοποιώ τα σχόλια του δασκάλου μου για να γίνω καλύτερος στο γράψιμο.)		
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SECTION C – Learning styles and preferences (ΕΝΟΤΗΤΑ Γ - Μαθησιακά στυλ και προτιμήσεις)

1. Modes of work (Τρόποι εργασίας)

Choose <u>ONE</u> answer that suits you best. (Επέλεξε τη <u>ΜΙΑ</u> απάντηση που σου ταιριάζει καλύτερα.)	
I like working alone. (Μου αρέσει να δουλεύω μόνος μου.)	
I like working in pairs. (Μου αρέσει να δουλεύω σε ζευγάρι)	
I like working in groups. (Μου αρέσει να δουλεύω σε ομάδα.)	
I like working as a whole class. (Μου αρέσει να δουλεύουμε ως ολόκληρη τάξη)	

Please rate the following statements. (1=Strongly disagree, 2=Disagree, 3=Agree, 4=Strongly agree) [Αξιολόγησε τις ακόλουθες προτάσεις. (1=Διαφωνώ απόλυτα, 2=Διαφωνώ, 3=Συμφωνώ, 4=Συμφωνώ απόλυτα)]

2. I learn better when I... (Μαθαίνω καλύτερα όταν...)

Statements - Put a ✓ in the answer that is true for you	1 	2 	3 	4 
1. Do listening tasks (Κάνω ακουστικές ασκήσεις)				
2. Do reading tasks (Κάνω ανάγνωση)				
3. Do speaking tasks (Κάνω προφορικά)				
4. Do writing tasks (Κάνω γραπτές ασκήσεις)				
5. Do my homework (Κάνω τα μαθήματα μου)				
6. Watch videos in English (Βλέπω βίντεο στα Αγγλικά)				
7. Play games in English (Παίζω παιχνίδια στα Αγγλικά)				

8. Use the computer and the internet (Χρησιμοποιώ τον υπολογιστή και το διαδίκτυο)				
9. Receive feedback from my classmates (Αξιολογούμαι απο τους συμμαθητές μου)				
10. Receive feedback from my teacher (Αξιολογούμαι απο τη δασκάλα μου)				

3. Topics of interest (Θέματα ενδιαφέροντος)

Choose your favorite topics from the following list. (Επιλέξτε τα αγαπημένα σας θέματα από τον παρακάτω πίνακα.)

Topics - Put a ✓ in the boxes of your preference. (Βάλε ένα ✓ στα κουτιά της επιλογής σου)		
Animals (Ζώα)	Food (Φαγητό)	School (Σχολείο)
Celebrations (Christmas/Easter etc.) (Γιορτές – Χριστούγεννα/Πάσχα κλπ.)	Games (Παιχνίδια)	Shopping (Αγορές)
Cinema (Κινηματογράφος)	Hobbies (Χόμπι)	Travel (Ταξίδια)
Environment (Περιβάλλον)	Jobs (Επαγγέλματα)	Technology (Τεχνολογία)
Family and friends (Οικογένεια και φίλοι)	Music (Μουσική)	Vacation (Διακοπές)
Other (Please specify) [Άλλο (Προσδιορίστε)]: _____		

SECTION D – Technology

Statements – Put a ✓ in the answer that is true for you	Yes 😊	No ☹
1. Have you got a smartphone or a tablet? (Έχεις κινητό ή τάμπλετ;)		
2. Have you got internet access in your device? (Έχεις πρόσβαση στο διαδίκτυο στη συσκευή σου;)		
3. Have you got any social media accounts? (Tik Tok, YouTube, Facebook, etc.) (Έχεις λογαριασμούς στα μέσα κοινωνικής δικτύωσης;)		

4. Do you chat online with your friends? (Συνομιλείς στο διαδίκτυο με τους φίλους σου;)		
5. Do you write online? (Γράφεις στο διαδίκτυο;)		
6. Do you use the internet to do your homework? (Χρησιμοποιείς το διαδίκτυο για να κάνεις τις εργασίες σου;)		
7. Are you familiar with computers and the Internet? (Είσαι εξοικειωμένος/η με τους υπολογιστές και το Διαδίκτυο;)		
8. Do you know what a wiki is? (Ξέρεις τι είναι το wiki;)		
9. Do you know what Grammarly is? (Ξέρεις τι είναι το Grammarly;)		
10. Do you know what Quillbot is? (Ξέρεις τι είναι το Quillbot;)		
11. Would you like to write something you like online? (Θα ήθελες να γράψεις κάτι που σου αρέσει στο διαδίκτυο;)		
12. Do you think that the Internet can help you improve your English? (Πιστεύεις ότι το διαδίκτυο μπορεί να σε βοηθήσει να βελτιώσεις τα Αγγλικά σου;)		

Σας ευχαριστώ για το χρόνο σας!

Η συνεισφορά σας είναι πολύ σημαντική!

Appendix D: Behavioral observation checklist





1: Poor 2: Fair 3: Good 4: Very good 5: Excellent

Student's name	Participation	Cooperation with the other learners	Attention to the lesson	Completion of tasks in class	Use of language	Use of technology	Time management	Engagement in the learning process	Notes
Class 1									
Class 2									

Comments:

Appendix E: Post-session questionnaire

Αγαπητοί μαθητές, παρακαλώ αφιερώστε λίγο χρόνο να απαντήσετε τις παρακάτω ερωτήσεις, οι οποίες αφορούν αυτό το μάθημα. Να θυμάστε, δεν είναι τεστ και δεν βαθμολογείστε. Απαντήστε στις ερωτήσεις με ειλικρίνεια.

Statements – Put a ✓ in the answer that is true for you (Βάλε ✓ στην απάντηση που σου ταιριάζει)	Strongly disagree (Διαφωνώ απόλυτα) 	Disagree (Διαφωνώ) 	Agree (Συμφωνώ) 	Strongly agree (Συμφωνώ απόλυτα) 
1. I liked the lesson (Μου άρεσε το μάθημα)				
2. I found the lesson interesting (Βρήκα το μάθημα ενδιαφέρον)				
3. I enjoyed writing in the wiki (Μου άρεσε να γράφω στο wiki)				
4. I found Grammarly useful (Το Grammarly μου φάνηκε χρήσιμο)				
5. I found Quillbot useful (Το Quillbot μου φάνηκε χρήσιμο)				
6. I liked the tasks included in today's lesson (Μου άρεσαν οι δραστηριότητες του σημερινού μαθήματος)				
7. I participated willingly in the tasks (Συμμετείχα με προθυμία στις δραστηριότητες)				
8. I found using the wiki difficult (Βρήκα δύσκολη τη χρήση του wiki)				
9. I was bored throughout the lesson (Βαριόμουν κατά τη διάρκεια του μαθήματος)				





10. Write a comment about the lesson. (What did you like the most? What would you change?) [Γράψε ένα σχόλιο για το μάθημα. (Τι σου άρεσε περισσότερο; Τι θα άλλαζες;)]

Appendix F: Post-research questionnaire

Αγαπητοί μαθητές,

Παρακαλώ αφιερώστε λίγο χρόνο να συμπληρώσετε το παρακάτω ερωτηματολόγιο το οποίο αφορά όλα τα προηγούμενα μαθήματα μας. . Να θυμάστε, δεν είναι τεστ και δεν βαθμολογείστε. Απαντήστε σε **όλες** ερωτήσεις με **ειλικρίνεια**.

To what extent do you agree with the following statements? (Σε ποιο βαθμό συμφωνείς με τις παρακάτω προτάσεις;)

Statements – Put a ✓ in the answer that is true for you (Βάλε ✓ στην απάντηση που σου ταιριάζει)	Strongly disagree (Διαφωνώ απόλυτα) 	Disagree (Διαφωνώ) 	Agree (Συμφωνώ) 	Strongly agree (Συμφωνώ απόλυτα) 
1. I liked the writing lessons (Μου άρεσαν τα μαθήματα παραγωγής γραπτού λόγου)				
2. I found the writing lessons interesting (Βρήκα τα μαθήματα παραγωγής γραπτού λόγου ενδιαφέρον)				
3. I enjoyed writing in the wiki (Μου άρεσε να γράφω στο wiki)				
4. I did not like using the wiki (Δεν μου άρεσε να χρησιμοποιώ το wiki)				
5. I found the writing tasks motivating (Οι γραπτές δραστηριότητες μου έδωσαν κίνητρο)				
6. I would like to use the wiki again in the future (Θα ήθελα να ξαναχρησιμοποιήσω το wiki στο μέλλον)				
7. Grammarly helped me improve my writing (Το Grammarly με βοήθησε να βελτιώσω τις γραπτές μου δεξιότητες)				
8. Quillbot helped me improve my writing (Το Quillbot με βοήθησε να βελτιώσω τις γραπτές μου δεξιότητες)				
9. Writing on the wiki helped me improve my computer skills. (Το γράψιμο στο wiki με βοήθησε να βελτιώσω τις δεξιότητές μου στον υπολογιστή)				

10. I think writing is easier after our writing lessons (Η παραγωγή γραπτού λόγου μου φαίνεται πιο εύκολη μετά απο αυτά τα μαθήματα)				
11. I find writing less boring after our writing lessons (Βρίσκω λιγότερο βαρετή την παραγωγή γραπτού λόγου μετα απο αυτά τα μαθήματα)				
12. I participated more in these lessons that in traditional writing (Συμμετείχα περισσότερο σε αυτά τα μαθήματα από ότι στα κλασικά μαθήματα συγγραφής)				
13. I enjoyed cooperating with my classmates (Μου άρεσε να συνεργάζομαι με τους συμμαθητές μου)				
14. I liked writing comments on the wiki (Μου άρεσε να γράφω σχόλια στο wiki)				
15. I enjoyed reading my classmates' comments (Μου άρεσε να διαβάζω τα σχόλια των συμμαθητών μου)				
16. I found my classmates' comments useful (Βρήκα τα σχόλια των συμμαθητών μου χρήσιμα)				
17. Editing my draft helped my improve my writing skills. (Η επεξεργασία του κειμένου μου με βοήθησε να βελτιώσω τις συγγραφικές μου δεξιότητες)				
18. The writing lessons helped me improve my writing skills (Τα μαθήματα παραγωγής γραπτού λόγου με βοήθησαν να βελτιώσω τις γραπτές μου δεξιότητες)				
19. I feel more motivated to write after our writing lessons (Νιώθω πιο ενθουσιασμένος με το γράψιμο μετα τα μαθήματα παραγωγής γραπτού λόγου)				

20. Which writing lesson did you like the most? (Ποιό μάθημα σου άρεσε περισσότερο;)
<input type="checkbox"/> Lesson A – Animals (Μάθημα Α – Ζώα) <input type="checkbox"/> Lesson B – Travel (Μάθημα Β – Ταξίδι) <input type="checkbox"/> Lesson C – Celebrations (Μάθημα Γ – Γιορτές) <input type="checkbox"/> None of the above (Κανένα από τα παραπάνω)

21. Generally, using a wiki... (Γενικά, η χρήση του wiki...)
<input type="checkbox"/> Made the lesson more interesting. (Έκανε το μάθημα πιο ενδιαφέρον) <input type="checkbox"/> Made me more motivated to participate. (Με έκανε πιο πρόθυμο να συμμετέχω) <input type="checkbox"/> Made writing easier for me. (Έκανε τη συγγραφή πιο εύκολη για εμένα) <input type="checkbox"/> Made writing less tiring. (Έκανε τη συγγραφή λιγότερο κουραστική) <input type="checkbox"/> All of the above. (Όλα τα παραπάνω) <input type="checkbox"/> None of the above. (Κανένα από τα παραπάνω)

22. Would you like to participate in more writing lessons through the wiki? (Θα ήθελα να συμμετέχεις ξανά σε μαθήματα παραγωγής γραπτού λόγου με τη χρήση του wiki?)
<input type="checkbox"/> Yes. (Ναι.) <input type="checkbox"/> No. (Όχι.) <input type="checkbox"/> I'm not sure. (Δεν είμαι σίγουρος/η)

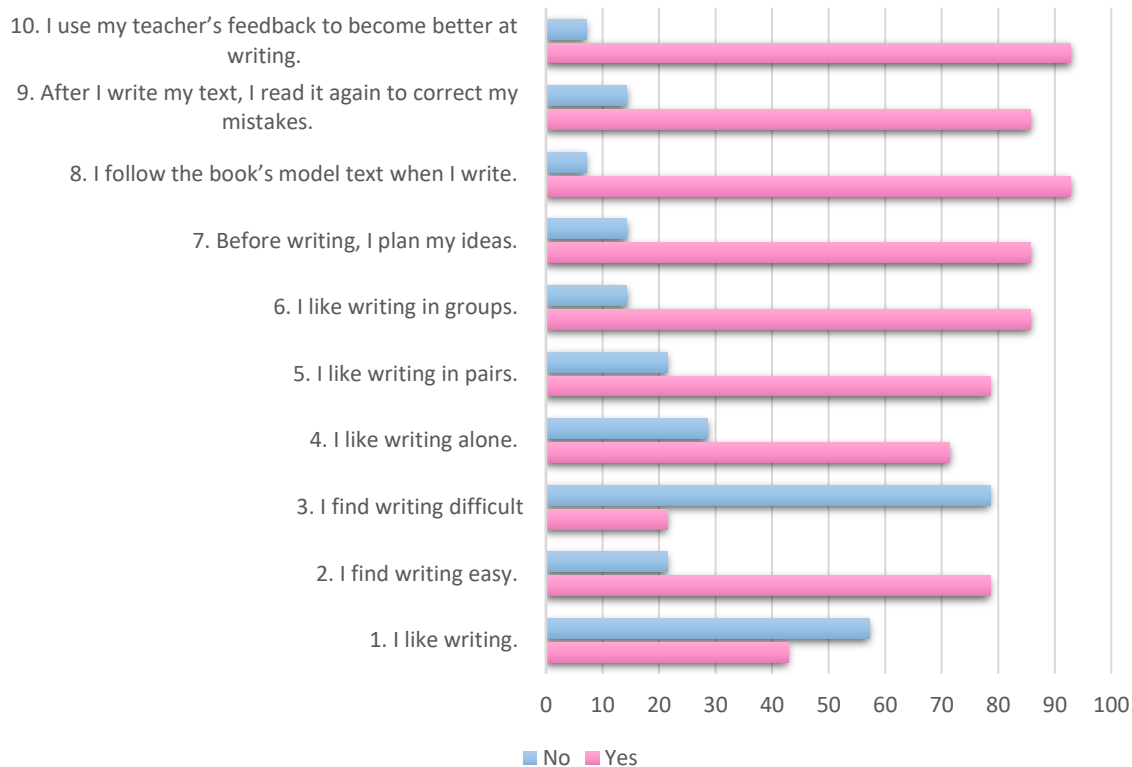
23. Write a few words to describe how you feel about the lessons. (Περιέγραψε με λίγα λόγια πως νιώθεις για τα μαθήματα.)

Thank you for your time and assistance!

Appendix G: Needs analysis questionnaire results

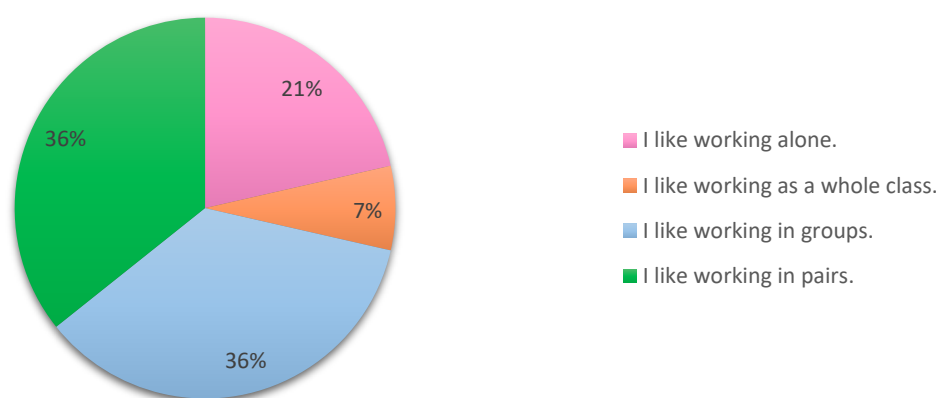


SECTION B - The writing skill



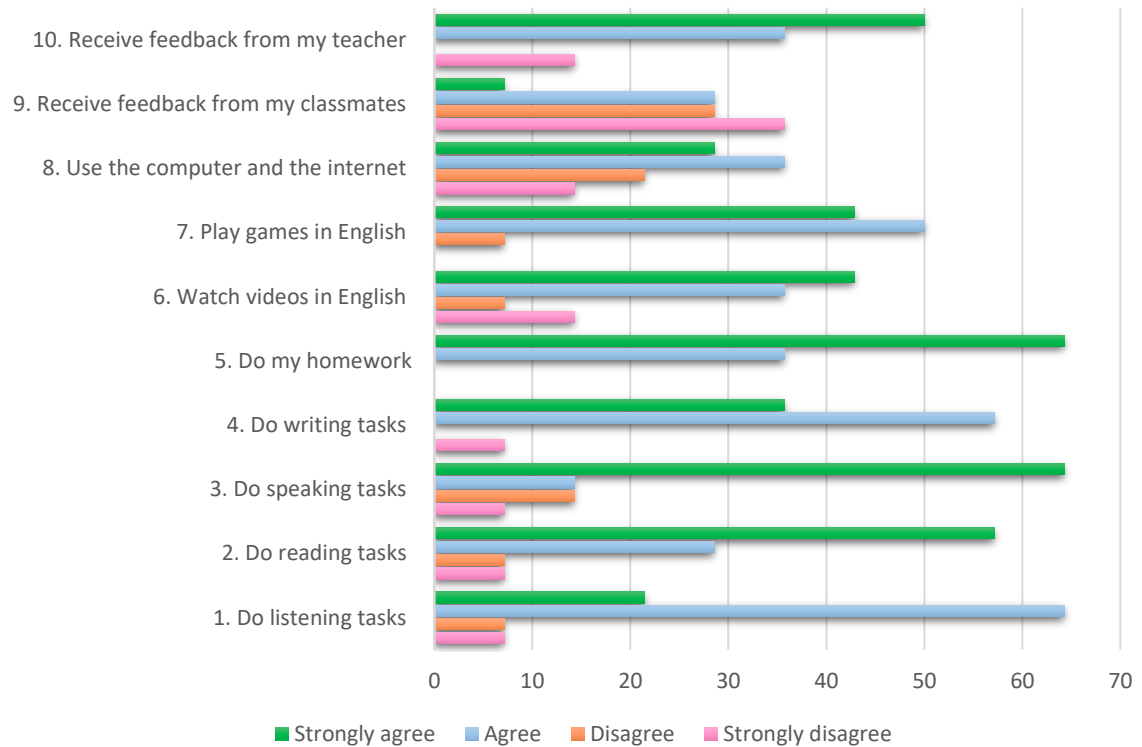
SECTION C – Learning styles and preferences

C1. Modes of work



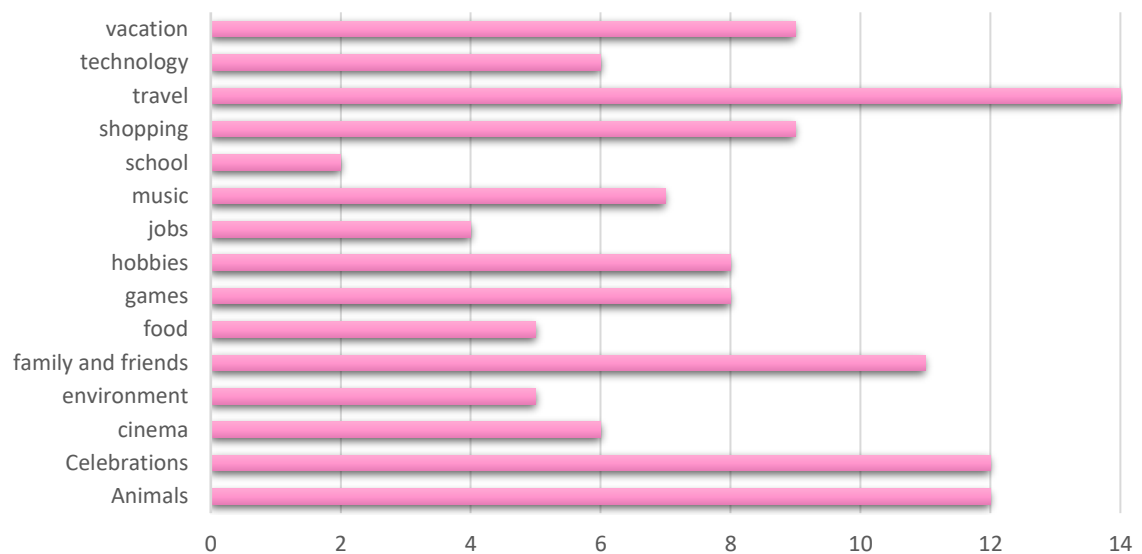
SECTION C - Learning styles and preferences

C2. I learn better when I...

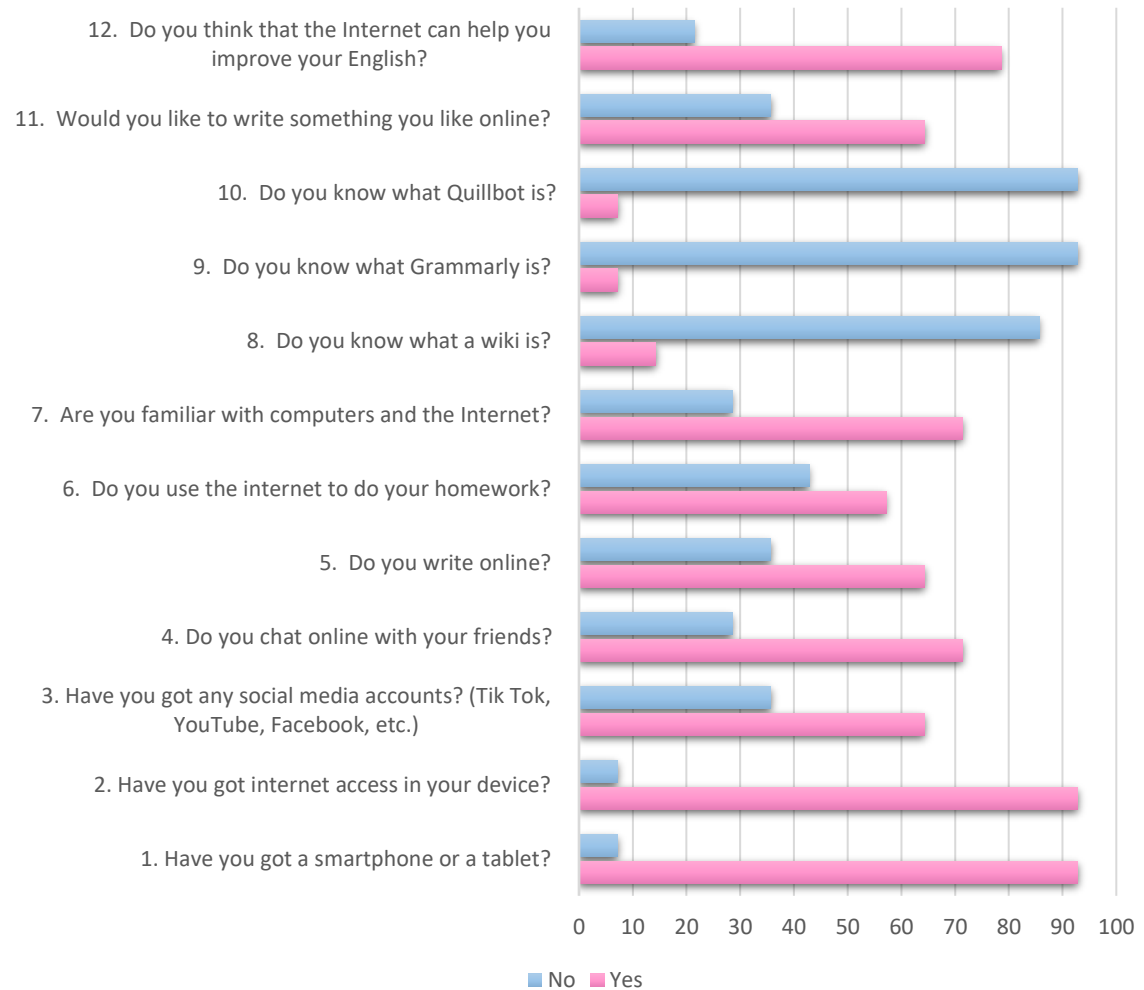


SECTION C - Learning styles and preferences

C3. Topics of interest

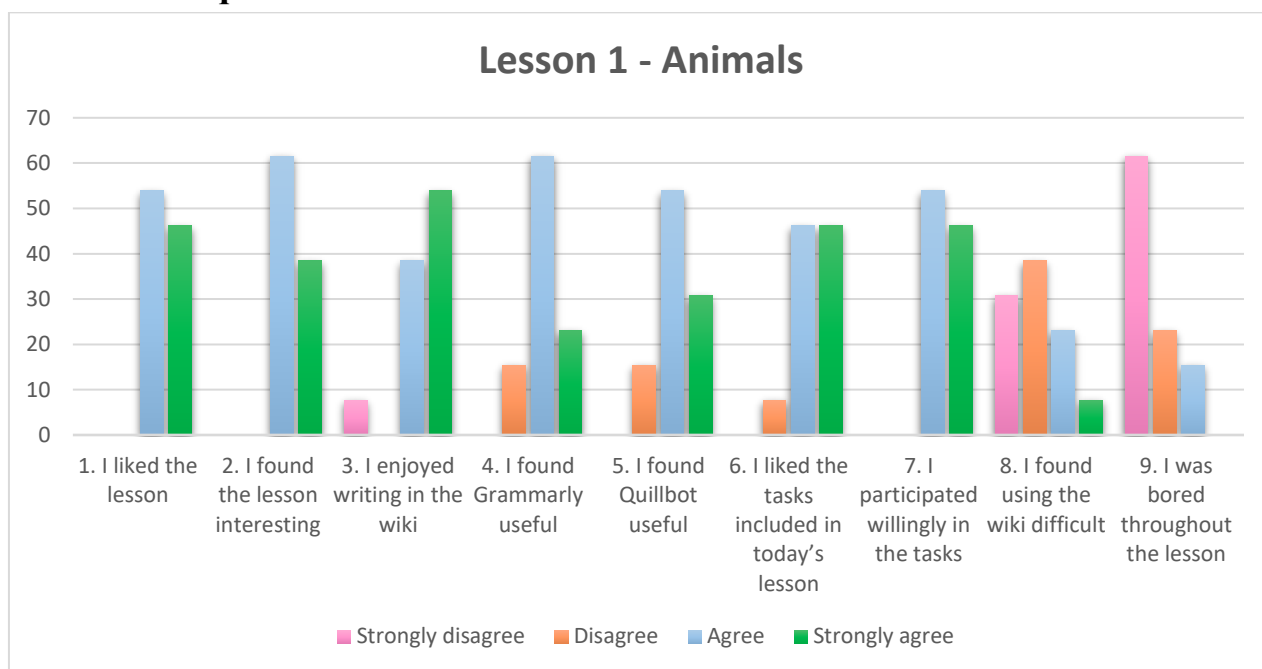


SECTION D - Technology



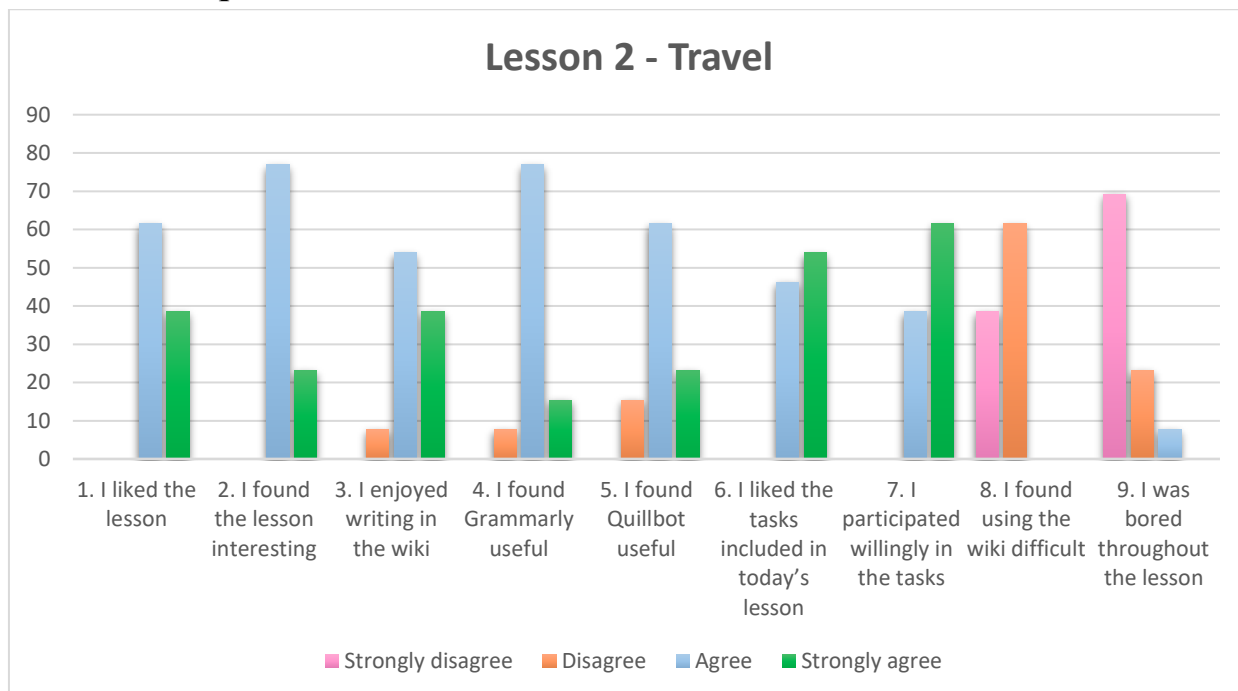
Appendix H: Post-session questionnaire results

Post-session questionnaire lesson 1: 'Animals'



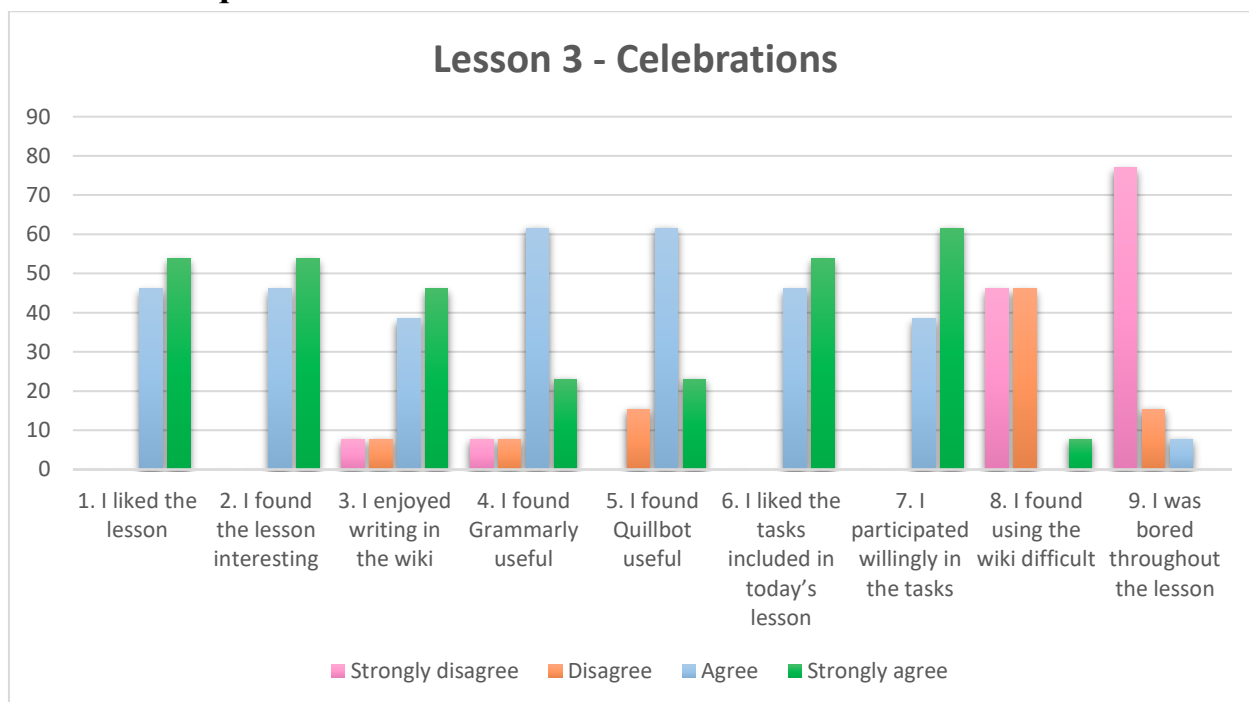
Item 10. Write a comment about the lesson. (What did you like the most? What would you change?)		
I liked writing my own text!	I liked writing my text. I would like the internet not to crash.	I liked writing on the wiki. I would not change anything!
It was really nice.	I really liked the cooperation. I would like to have some more time.	I liked everything!
I liked commenting on the wiki. I wouldn't change anything.	It's fantastic! I would like to do it again with another topic.	I think that the lesson was interesting, and I would like to do it again.
I liked the whole process because it was very interesting. I enjoyed writing in the wiki the most and I wouldn't change anything. It was all very interesting.		I would change the topic, but I really liked writing comments and expressing my opinion.
I really liked the lesson, and I wouldn't change anything.		I liked writing my opinion about my favorite animal. I want to write again on another topic.

Post-session questionnaire lesson 2: 'Travel'



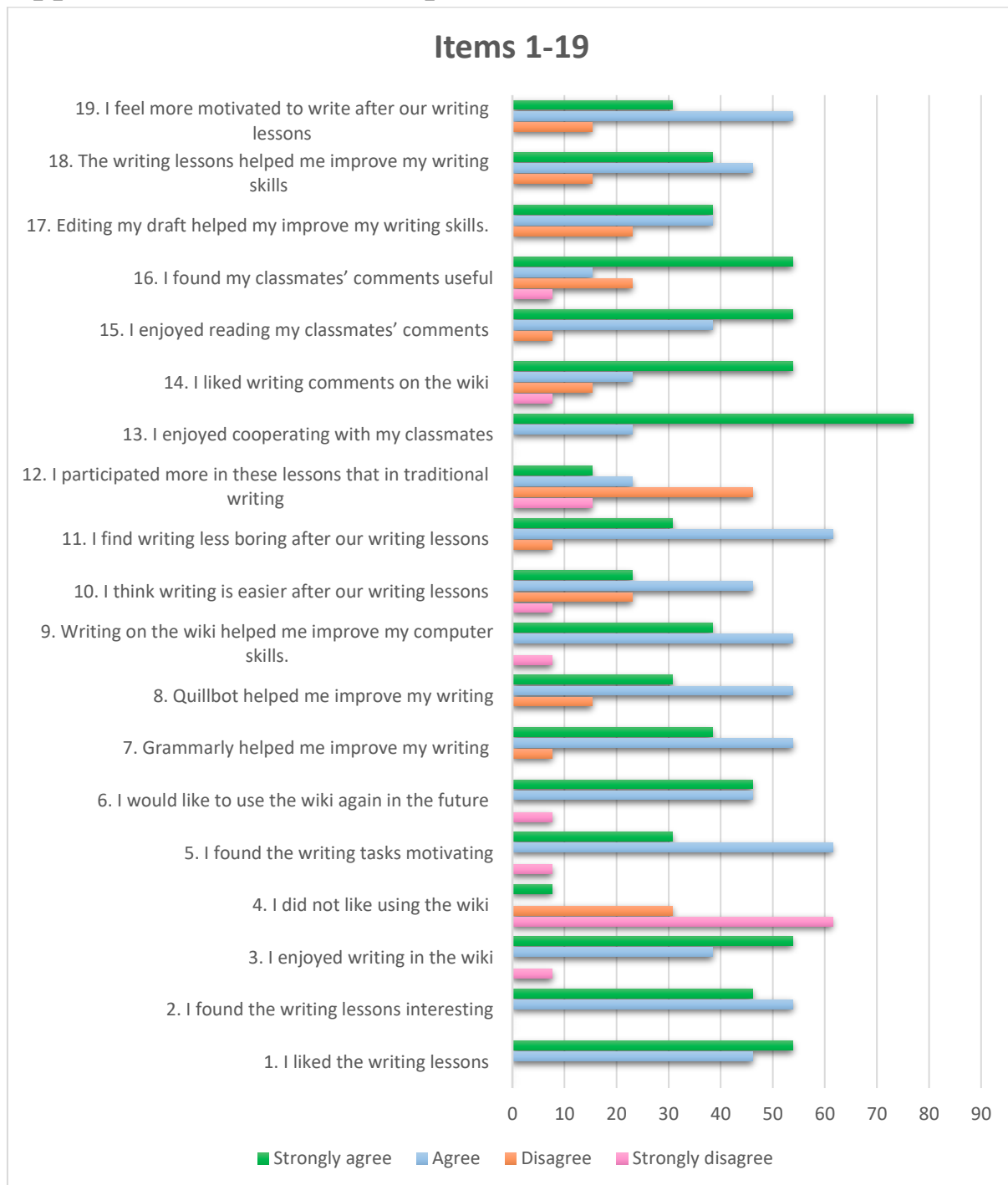
Item 10. Write a comment about the lesson. (What did you like the most? What would you change?)		
I think the lesson is simply enjoyable and I wouldn't change anything.	I liked it really much and I would do it again with another topic.	I liked that we cooperated in groups.
I liked writing our own texts and I wouldn't change anything.	I liked everything and I would not change anything.	I liked writing in groups a lot!
My favorite thing was writing on the wiki. I would not change anything.	I really liked finding information from the internet. I would not change anything, everything was great!	I liked everything.
It's fantastic! My favorite thing was writing about a country that we liked a lot and also, I liked editing our text to make it better.	I really liked writing on the wiki, and I wouldn't change anything.	
I liked finding information and cooperating with my classmates the most. I wouldn't change anything.	Everything was perfect. I liked writing on the wiki using Grammarly the most and I wouldn't change anything.	

Post-session questionnaire lesson 3: 'Celebrations'

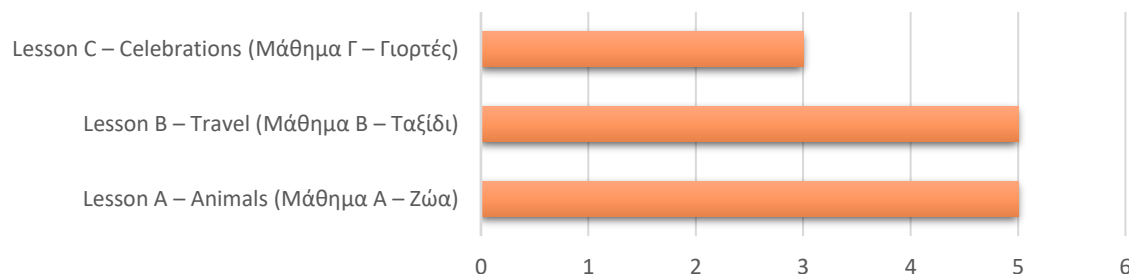


Item 10. Write a comment about the lesson. (What did you like the most? What would you change?)		
I liked everything. I would change the topic only.	I liked everything in the lesson.	I liked pair work. I wouldn't change anything.
I think that the lesson was very interesting, and I would not change anything.	I liked everything, especially working in pairs. I want to try another topic.	I found the topic of the lesson really interesting. I wouldn't change anything!
I liked it and I wouldn't change anything.	I really liked writing in pairs.	I liked writing in the wiki the most and I wouldn't change anything.
I liked the wiki and I found Quillbot very interesting. I would not change anything. Everything was great and fun.	I liked cooperating with my classmates and I want to do it again!	
I loved it! I want to do it again and write about different holidays like New Year's Day, summer holidays and carnival.	I really liked working with my classmates and finding information together. I wouldn't change anything!	

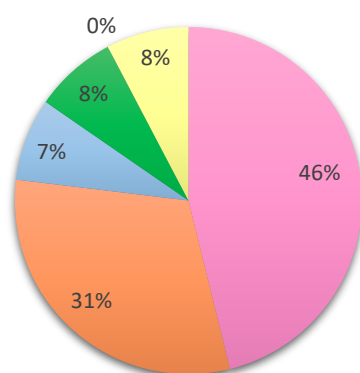
Appendix I: Post-research questionnaire results



Item 20. Which writing lesson did you like the most?

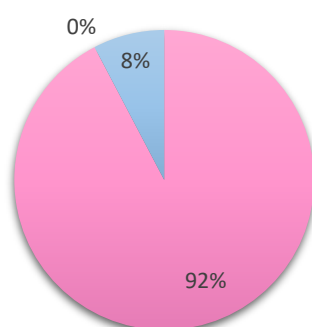


Item 21. Generally, using a wiki...



- All of the above. (Όλα τα παραπάνω)
- Made the lesson more interesting. (Έκανε το μάθημα πιο ενδιαφέρον)
- Made writing easier for me. (Έκανε τη συγγραφή πιο εύκολη για εμένα)
- Made me more motivated to participate. (Με έκανε πιο πρόθυμο να συμμετέχω)
- Made writing less tiring. (Έκανε τη συγγραφή λιγότερο κουραστική)
- None of the above. (Κανένα από τα παραπάνω)

Item 22. Would you like to participate in more writing lessons through the wiki?



- Yes
- No
- I'm not sure

Item 23. Write a few words to describe how you feel about the lessons.				
The lessons were very nice.	The lessons were very interesting and fun but a little tiring.	I liked the lessons but writing in the wiki was tiring for me.	The lessons were very interesting!	
The lessons were good!	Amazing! The lessons were fun and very nice!	I liked the wiki a lot.	Very nice! I would like to do it again.	I feel really good because I learned new things!
I liked the lessons a lot because I could cooperate with my classmates and write interesting things from our devices!	Everything was great and I would like to use wiki again in our lessons.	I really liked cooperating with my classmates and I would like to use wiki again in the future!	These lessons were very nice and fun. I would like to do it again.	

Appendix J: Behavioral observation checklist results

Session 1 - Animals

Student's name	Participation	Cooperation with the other learners	Attention to the lesson	Completion of tasks in class	Use of language	Use of technology	Time management	Engagement in the learning process
Class 1								
Eri	4	4	4	4	3	3	4	4
Villy	5	5	5	5	5	5	5	5
Steven	5	5	5	5	5	5	5	5
Eva	3	4	4	3	2	3	3	3
Danae	5	5	5	4	5	5	5	5
Claudia	3	4	3	3	3	3	3	3
Alesia	5	4	4	5	4	5	5	5
Iro	4	4	5	4	3	3	3	3
Class 2								
Kostas	5	5	5	4	5	5	4	4
Bill	5	4	4	4	4	5	4	4
Nick	5	5	4	3	4	5	3	4
Anna	4	5	4	3	3	4	3	4
Eugenia	4	5	4	3	3	4	3	4
Mean score:	4.4/5	4.5/5	4.3/5	3.8/5	3.8/5	4.2/5	3.8/5	4.1/5

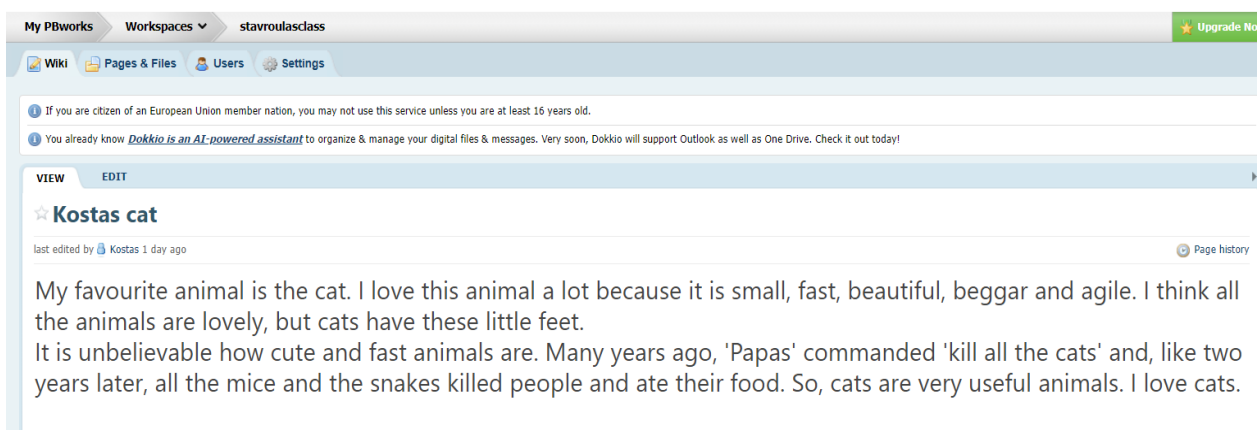
Session B – Travel

Student's name	Participation	Cooperation with the other learners	Attention to the lesson	Completion of tasks in class	Use of language	Use of technology	Time management	Engagement in the learning process
Class 1								
Eri	4	4	3	3	4	4	2	4
Villy	5	5	5	5	5	4	4	5
Steven	5	4	4	4	5	5	4	5
Eva	4	4	4	3	3	3	3	4
Danae	5	4	4	4	4	5	3	5
Claudia	3	4	3	3	2	2	3	3
Alesia	3	4	4	3	4	4	2	4
Iro	4	4	4	3	3	3	2	4
Class 2								
Kostas	5	5	5	4	5	4	4	5
Bill	4	3	3	4	5	5	4	4
Nick	5	4	4	4	4	5	3	4
Anna	5	4	5	4	4	5	3	4
Eugenia	4	4	4	4	4	4	3	4
Mean score:	4.3/5	4.1/5	4/5	3.7/5	4/5	4.1/5	3.1/5	4.2/5

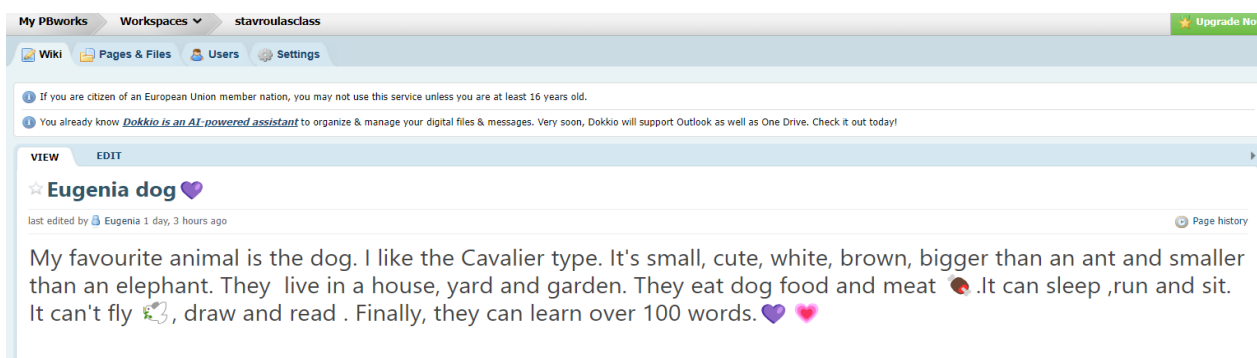
Session C – Celebrations

Student's name	Participation	Cooperation with the other learners	Attention to the lesson	Completion of tasks in class	Use of language	Use of technology	Time management	Engagement in the learning process
Class 1								
Eri	5	5	5	5	5	5	5	5
Villy	5	5	5	5	5	5	4	4
Steven	5	5	5	5	4	5	4	5
Eva	4	4	4	4	3	4	4	4
Danae	4	4	5	4	4	5	5	5
Claudia	4	3	3	4	3	4	3	4
Alesia	5	5	5	5	5	5	4	5
Iro	4	5	4	4	4	4	4	5
Class 2								
Kostas	5	4	4	5	5	5	5	5
Bill	4	4	4	4	4	4	5	3
Nick	5	5	5	4	4	5	4	5
Anna	5	5	5	4	4	5	4	5
Eugenia	5	5	5	4	4	4	4	5
Mean score:	4.6/5	4.5/5	4.5/5	4.4/5	4.2/5	4.6/5	4.2/5	4.6/5

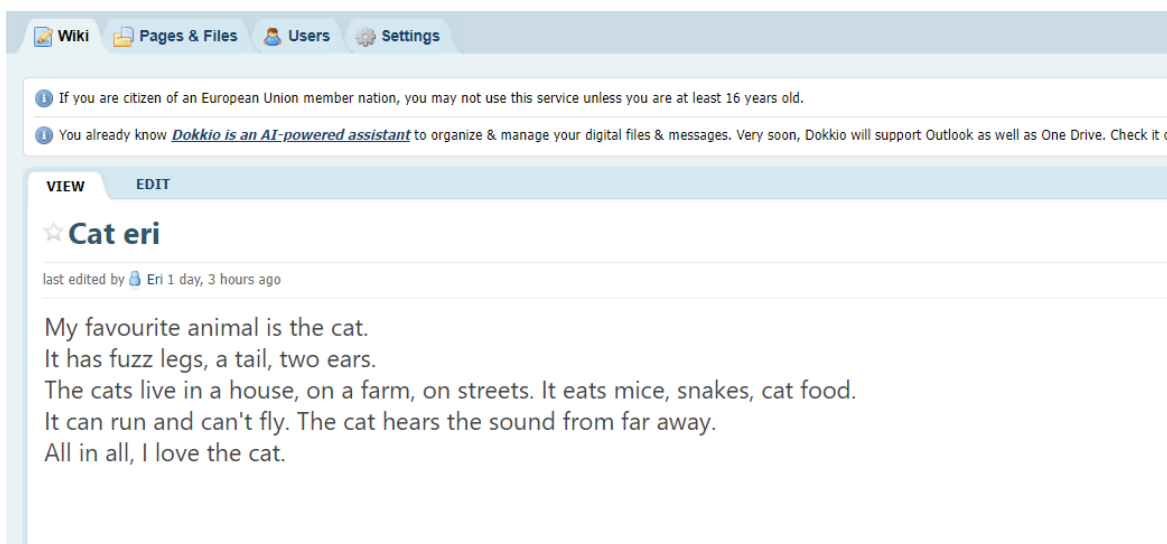
Appendix K: Sample of learners' writing on the wiki



My favourite animal is the cat. I love this animal a lot because it is small, fast, beautiful, beggar and agile. I think all the animals are lovely, but cats have these little feet. It is unbelievable how cute and fast animals are. Many years ago, 'Papas' commanded 'kill all the cats' and, like two years later, all the mice and the snakes killed people and ate their food. So, cats are very useful animals. I love cats.



My favourite animal is the dog. I like the Cavalier type. It's small, cute, white, brown, bigger than an ant and smaller than an elephant. They live in a house, yard and garden. They eat dog food and meat 🍖. It can sleep, run and sit. It can't fly 🦋, draw and read. Finally, they can learn over 100 words. 💜💜



My favourite animal is the cat. It has fuzz legs, a tail, two ears. The cats live in a house, on a farm, on streets. It eats mice, snakes, cat food. It can run and can't fly. The cat hears the sound from far away. All in all, I love the cat.

[Wiki](#) [Pages & Files](#) [Users](#) [Settings](#)

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★ Rome by Kostas and Bill

last edited by [Kostas](#) 1 day, 3 hours ago [Page history](#)

Hi George,

I am writing this email to invite you on a 3-day trip. I want to go to a beautiful city, Rome.

On the first day, we can go to the Colosseum and eat pasta. Then we can go for a walk in the city and stay in a good restaurant to eat pizza.

On day two, we can go to Roman Forum and Palatines. like an hour then we can eat ice cream or tiramisu. At night we can go for running. And eat spaghetti.

Day three is very special because we are leaving a very beautiful city. we can visit the Vatican museum and Cappella Sistina. we can eat bruschetta and ice cream.

I think that trip can be a very special memory.

write me back soon.

xxx

Kostas and Bill.

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★ Rome by Steve and Evangelia

last edited by [Stavroula Vasilaki](#) 1 week, 6 days ago

Dear Evelyn,

Guess what!

I am writing this email to invite you to a 3 day in Rome.

On the first day, we will visit the Colosseum and we eat tasty Rome food pizza and polenta.

On second day, we will visit the Roman forum and palatine and we eat canoli and lasagne.

On third day, we will visit Pantheon and and we eat spaghetti and tiramisou.

Write back soon.

With love from Steve and Evangelia.

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★ Easter by Evgenia, Anna and Nick

last edited by [Eugenia](#) 1 day, 3 hours ago

Easter

My favorite celebration is Easter. In Greece, people do family events, candles, paint red eggs, and take gifts.

They eat red eggs, lamb, and chocolate eggs.

They make Lazarakia, crack red eggs, and tsoureki, and decorate the Epitaph with flowers, fireworks, and shooting.

Also on Saturday night, they go to Church to celebrate the first resurrection. Finally, they make lamb on Easter Sunday.

This is how we celebrate Easter in Greece.

VIEW EDIT

☆ Christmas Villy Steve Ero

last edited by  Stavroula Vasilaki 1 week, 6 days ago

My favorite celebration is Christmas.

In Christmas the activities are:
Santa Claus brings presents, we sing carols, and we see movies.

At Christmas, the food we eat is:
Melomakarona, kourabiedes, and traditional Christmas treats.

At Christmas Customs are:
Decoration of the Christmas tree, Santa Claus brings presents, and some kids leave cookies and some milk in the fireplace.



Appendix L: Sample of learners' comments on the wiki


VIEW
EDIT

☆ Bills Dogs


last edited by Bill 1 day, 3 hours ago
Page history

My favourite animal is the dog my type is kangal and kaucaasian . My dogs are big.Their colours are white and black. The others dogs colour is grey.They live in my yard.They eat meat , dog food and bread.They can bite and they can run and play. They can't fly they can't be invisible. They evolved from wolves. They can learn 100 words and gestures. And I love them so much.

Comments (2) Delete all comments


Kostas said
at 6:22 pm on Apr 12, 2024
[Reply](#) [Delete](#)

At the first sentence you can write 'I have two beautiful dogs'


Kostas said
at 6:22 pm on Apr 12, 2024
[Reply](#) [Delete](#)

It is very good

VIEW
EDIT

☆ Dog villy

last edited by Stavroula Vasilaki 1 week, 6 days ago

Dog

Dogs have 4 legs, 2 eyes, tail, nose...

The dogs live in a house in countryside and streets. They eat dog food, meat and bones.

They can run fast, help and play with people. They can't fly, talk with people...

The interesting fact is that they are best friend with people.

Comments (3) Delete all comments


Iro said
at 6:57 pm on Apr 10, 2024
[Reply](#) [Delete](#)

It's fantastic 🍏


Steven said
at 12:50 pm on Apr 12, 2024
[Reply](#) [Delete](#)



It is very very good


Eri said
at 4:25 pm on Apr 17, 2024
[Reply](#) [Delete](#)

Good


VIEW
EDIT

★ Cat

last edited by  Alesia 2 months ago
 Page hist

My favourite animal is a cat . cat's have got 4 legs and have a tail . Cat's eat meat and cat food.It leaves in the street and citis.. Cat's type is Felidae.Cat's it can climb in the trees and it can't swimming cat's it can hear sounds too faint.


Comments (1)


Villy said
at 9:31 am on Apr 13, 2024
[Reply](#) [Delete](#)

It is good but be careful the spellings

VIEW
EDIT

★ Barcelona by Anna, Eugenia and Nick


last edited by  Anna 1 day, 3 hours ago

Hi Isabela.
We are writing this email to invite you to Barcelona.

On the first day, we will go to Park Guell and Montjuic Magic Fountain. We can eat Churros, Patatas Bravas and Croquetas.
On the second day, we will go shopping in La Rambla and Camp Nou. We can eat Tortillia, Tapas and fried fish.
On the third day, we will go to Barceloneta to swim and walk.Also we will go Sagrada Familia. We can eat churros, croquetas, and tapas.

I hope you can come with me.Write me back soon.
Love,
Anna, Eugenia and Nick.

Comments (1)


Kostas said
at 6:28 pm on Apr 19, 2024
[Reply](#) [Delete](#)

When you start each day you have to make a paragraph.
It is very nice

VIEW
EDIT

★ London by Eri and Alesia

last edited by  Alesia 1 day, 3 hours ago

Dear Evelyn,
I'm writing his email to invite you in London.
On the first day we visit Big Ben we can eat Apple crumble.
On the second day we visit Trafalgar Square and we eat Bangers and mash. It tastes nice.
On the third day we visit London Eye, which is very high and we can eat Cream tea.
Write back soon,
Love, Eri and Alesia.

Comments (3)
Delete all comments



Steven said
at 6:02 pm on Apr 17, 2024
[Reply](#) [Delete](#)

After Big Ben want " and"



Steven said
at 6:03 pm on Apr 17, 2024
[Reply](#) [Delete](#)

It tasty




Steven said
at 6:04 pm on Apr 17, 2024
[Reply](#) [Delete](#)

Tasty or nice

VIEW
EDIT

★ Christmas Villy Steve Ero

last edited by  Stavroula Vasilaki 1 week, 6 days ago

My favorite celebration is Christmas.


In Christmas the activities are:
Santa Claus brings presents, we sing carols, and we see movies.

At Christmas, the food we eat is:
Melomakarona, kourabiedes, and traditional Christmas treats.

At Christmas Customs are:
Decoration of the Christmas tree, Santa Claus brings presents, and some kids leave cookies and some milk in the fireplace.

🌲

Comments (1)



Eri said
at 3:58 pm on Apr 22, 2024
[Reply](#) [Delete](#)

You don't have paragraphs, is formal, you repeat Christmas.

Author's Statement:

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