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Ciencias técnicas y aplicadas

Artículo de investigación

Loom as an innovative tool to enhance english speaking skills through the creation of e-portfolios

Loom como una herramienta innovadora para mejorar las habilidades de habla inglesa a través de la creación de portafolios electrónicos

Loom como uma ferramenta inovadora para aprimorar as habilidades de língua inglesa por meio da criação de e-portfólios

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Abstract

Technology is becoming essential in both the daily and complex tasks of humanity. Education is also being benefited by technological advances at the service of the teacher as is the case of the e-portfolio. This article presents the case study of the use of e-portfolios in English subjects in a University of Babahoyo; the objective is to reflect on students' perception regarding their use, complemented by the Loom tool. The literature review section discusses the current status of the e-portfolio from a technological and educational perspective. Typologies and characteristics of e-portfolios are commented on, and finally case studies of researchers and the conclusions they have reached are cited. The methodology in this article has a descriptive approach through a questionnaire taken from 54 students. The results mention that the respondents showed their acceptance for the realization of the e- portfolio as an aid to their teaching process - learning English and in their technological skills. In addition, the importance of teacher mentoring and accompaniment in this process is recognized. It also highlights how challenging it was to learn and apply the web tool Loom for the development of the e-portfolio, but there is a promising future at the professional level by learning this type of Tics tools. It is concluded that the e-portfolios promise direct benefits to the students in an academic and professional way, without forgetting that the availability to these tools would facilitate to the teacher as to the student its application.

Keywords: E-portfolios; ICTs; Loom; English.

Resumen

La tecnología está siendo esencial en las tareas diarias y complejas de la humanidad. La educación también se está beneficiando de los avances tecnológicos al servicio de los profesores, como la cartera electrónica. En este artículo se presenta el caso de estudio del uso de las e-carteras en las asignaturas de inglés en una universidad situada en Babahoyo; el objetivo es reflexionar sobre la percepción de los estudiantes respecto a su uso, complementado con la herramienta del telar. En la sección de revisión de la literatura, se analiza la actual cartera electrónica desde una perspectiva tecnológica y educativa. Se comentan las tipologías y características de las carteras electrónicas, para finalmente citar casos prácticos de investigadores y las conclusiones a las que han llegado. La metodología de este artículo tiene un enfoque descriptivo a través de un cuestionario llevado a 54 estudiantes. Los resultados mencionan que los encuestados mostraron su aceptación para la

realización de la cartera electrónica como una ayuda en su proceso de enseñanza - aprendiendo inglés y en sus habilidades tecnológicas. Además, se reconoce la importancia de orientar y acompañar al profesor en este proceso. Tambien se destaca el reto que supuso el aprendizaje y la aplicación de la herramienta web Loom para el desarrollo de la cartera electrónica, pero se prevé un futuro prometedor a nivel profesional para el aprendizaje de este tipo de herramientas de TIC. Se concluye que las carteras electrónicas prometen beneficios directos a los estudiantes de manera académica y profesional, sin olvidar que la disponibilidad de estas herramientas facilitaría su aplicación al profesor y al estudiante.

Palabras clave: Portafolios electrónicos; TICs; Loom; idioma inglés.

Resumo

A tecnologia está sendo essencial nas tarefas diárias e complexas da humanidade. A educação também se beneficia dos avanços tecnológicos a serviço dos professores, como o e-portfólio. Este artigo apresenta o estudo de caso do uso de e-portfolios em disciplinas de inglês em uma Universidade localizada em Babahoyo; O objetivo é refletir sobre a percepção dos alunos quanto ao seu uso, complementado pela ferramenta Loom. Na seção de revisão da literatura, o atual e-portfólio é discutido de uma perspectiva tecnológica e educacional. Comenta-se as tipologias e características dos portfólios eletrônicos, para finalmente citar casos práticos de pesquisadores e as conclusões a que chegaram. A metodologia deste artigo tem abordagem descritiva por meio de questionário aplicado a 54 alunos. Os resultados apontam que os respondentes demonstraram aceitação para a realização do e-portifólio como auxiliar no seu processo de ensino - aprendizagem do inglês e nas suas competências tecnológicas. Além disso, é reconhecida a importância da orientação e do acompanhamento do professor nesse processo. É também realçado o quão desafiante foi aprender e aplicar a ferramenta web Loom para o desenvolvimento do portfólio e, mas prevê-se um futuro promissor a nível profissional para a aprendizagem deste tipo de ferramentas TIC. Conclui-se que os portfólios eletrônicos prometem benefícios diretos aos alunos de forma acadêmica e profissional, sem esquecer que a disponibilização dessas ferramentas facilitaria sua aplicação ao professor e ao aluno.

Palavras-chave: E-portfolio; TIC; Loom; english language.

Introduction

It is interesting to analyze how technology is increasingly becoming an essential part of the complex daily tasks of humanity. Education is also being affected by technological advances such

as new tools at the service of teachers or tools that have simply adopted a digital version, as is the case of the e-portfolio.

The present article shows the case study on the use of e-portfolios in the subject of English in a University of Babahoyo. The objective is to reflect on the students' perception of their use during a semester complemented by the Loom tool.

The specific research questions that this study sought to address are

1. What benefits and challenges do students face with the use of electronic portfolios in their curriculum?
2. What are students' perceptions about the use of the web application Loom for the development of electronic portfolios in their programs?
3. What are students' perceptions of teacher accompaniment and mentoring during the development of electronic portfolios in their curriculum?

Literature review

E-portfolios as a digital teaching and learning tool

There is no doubt that the 21st century is characterized by radical and accelerated changes in economic, political, environmental terms but also in relation to technology transfer mainly facilitated by information and communication technologies (ICTs), contributing to education and research (Mirķe et al., 2019). This is reflected in the fact that more and more students are turning to the use of mobile devices and also computers that allow them to be part of formal online learning. So much so that authors such as Malekian, Bailey & Kennedy (2020) claim that online learning environments are ubiquitous in higher education. In the same way, Prensky (2001) maintains that the speed with which technologies have expanded in the world has had a great impact on students and the way of teaching. Thus, new tools benefit both teachers and students by facilitating the education process, as is currently the case with the use of e- portfolios in education (Khoo et al., 2011).

Certainly, the use of electronic portfolios is becoming increasingly popular in education programs (Ntuli et al., 2009). However, portfolios are not a new concept since traditional ones represent powerful tools for both teachers and students, but they have been improved to meet current demands and changes, so technology has turned them into e-portfolios, also known as electronic

portfolios, digital portfolios or Web-folios and according to the authors Moreno-Fernandez and Moreno Crespol (2017) represent a collection of electronic evidence created and managed by a user through the Web, allowing evidence and reflection on the process of teaching - learning.

The e-portfolio represents for the teacher a space of critical and propositive reflection that seeks to facilitate the development of educational environments more in line with their practice in the classroom. On the other hand, for the student it represents "a collection of digital artifacts that articulate their experiences, performances and learning" and is presented in an integrated construction that involves different activities of reflection and self-evaluation with the intention of improving educational performance. In addition, for future employers or job interviews, they allow the prospective employee to present their practices and make themselves known in a more professional manner; likewise, it facilitates the employer's selection process. In summary, the advantages are shown for both the teacher and the student who have a tool that allows them to test different educational skills necessary for good academic development today.

The authors generally establish two types of e-portfolios: the e-portfolio used as an assessment tool and the e-portfolio that is intended to assist in student reflection (Roberts et al. 2014). The assessment e-portfolio is being used extensively as a tool to assist in the process of evaluating progress according to previously established teacher criteria (Driessen, 2017; Konsky & Oliver, 2012). On the other hand, authors such as Barrett (2006) and Roberts et al. (2016) have been suggesting to take advantage of portfolios mainly as a tool for learning and reflection; that is, the student is asked to write or use digital elements in order to show and share his/her reflection on learning and aspects of his/her interest.

Hartnell-Young and Morris (1999) argue that e-portfolios can be used for 3 purposes: as learning systems for professional development, formative and summative assessment, and employment portfolios. Abrami and Barrett (2005) summarize three main types of e- portfolios, one focused on the learning process, where the student can interact with fellow students, reflect on what he or she has learned, and receive feedback from the teacher. The second type of portfolio is where the focus is on showing the product and achievements and the third one is evaluative, i.e. to assign a grade.

The future of the E-Portfolio

This is a new era where e-portfolio opportunities are arising, so it is essential to analyze factors that will allow to obtain the greatest advantage (Watson et al., 2016). Thus, authors such as Driessen (2017), a researcher in the area of medical education, reflect on the future of portfolios, since according to their research students consider e-portfolios as not very advantageous and merely a process to obtain a grade. In addition, he emphasizes the importance of mentoring and accompanying teachers in the process of teaching and developing e-portfolios as an educational mechanism. Authors such as Sultana, Lim, Liang (2020) add to this the need for physical elements and support for the correct implementation of e-portfolios in higher education.

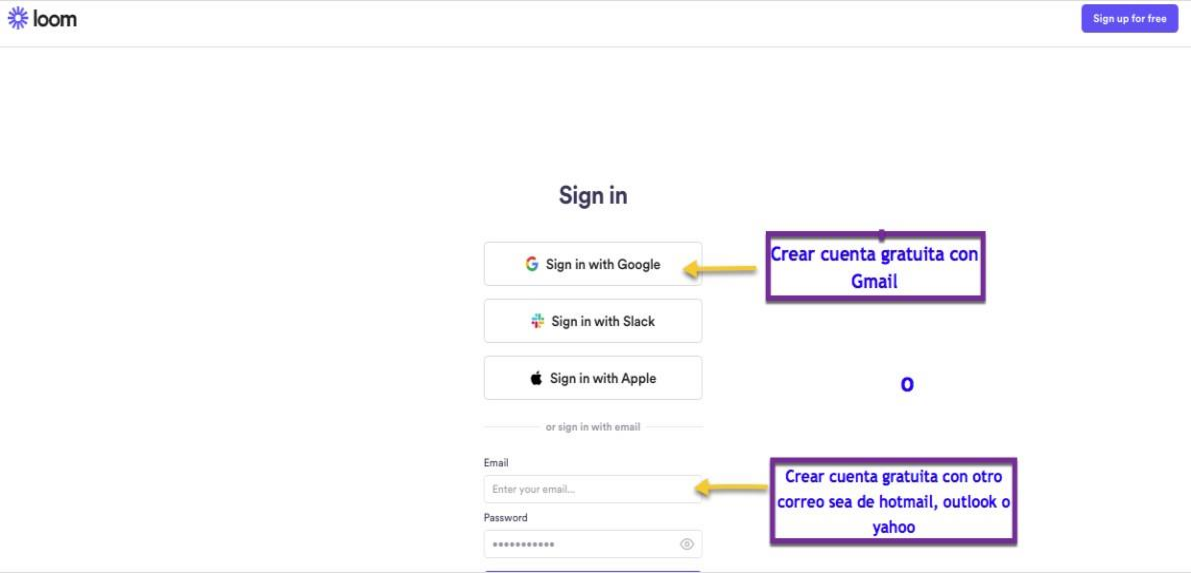
In the same way, Ntuli et al. (2009) comment on the findings of their research, the fact that certainly educators recognize the importance of electronic portfolios and bet on their use but in practice both they and students lack sufficient training for their correct application. On the other hand, not everything is discouraging, since according to Habeeb & Ebrahim (2019) in their research they comment that the application of these virtual tools can give a promising result at an academic level and facilitate self-learning by the students, likewise superior authorities of the institutions are motivated and confident in their benefit at an educational level.

Methodology

The methodology used in this article has a simple descriptive study because it relates the reality found through the questionnaire taken from the students. In addition, it has a quantitative approach because the results are going to be expressed in quantities or percentages; from there, they will be analyzed and will provide answers to the proposed objectives. Through the survey about e-portfolios as a didactic tool in students, we want to know the experience they had at the time of its creation along with the use of the web application named Loom.

In order to create an e-portfolio, students basically followed the following steps, which have their different graphics and descriptions.

Figure 1: Free account creation

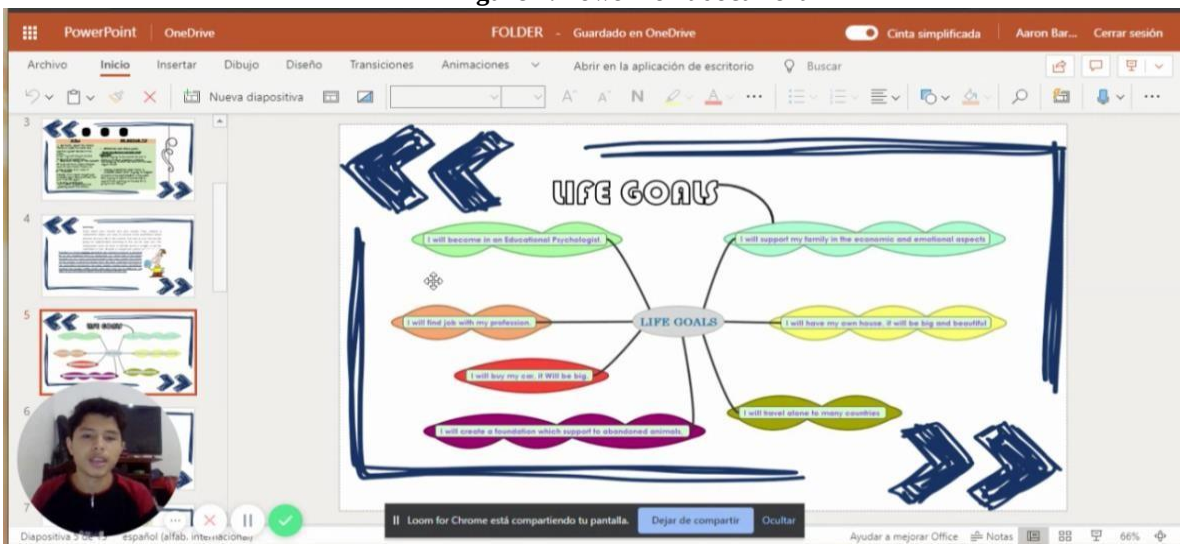


Source: Author's elaboration

In figure 1, you have the visual environment of the official Loom website, which allows people to create a free account in the application either using emails such as: Gmail, Hotmail, Outlook or Yahoo.

Then, they proceed to compile all the class experiences, specific topics, exercises, grammar and vocabulary that most impacted them.

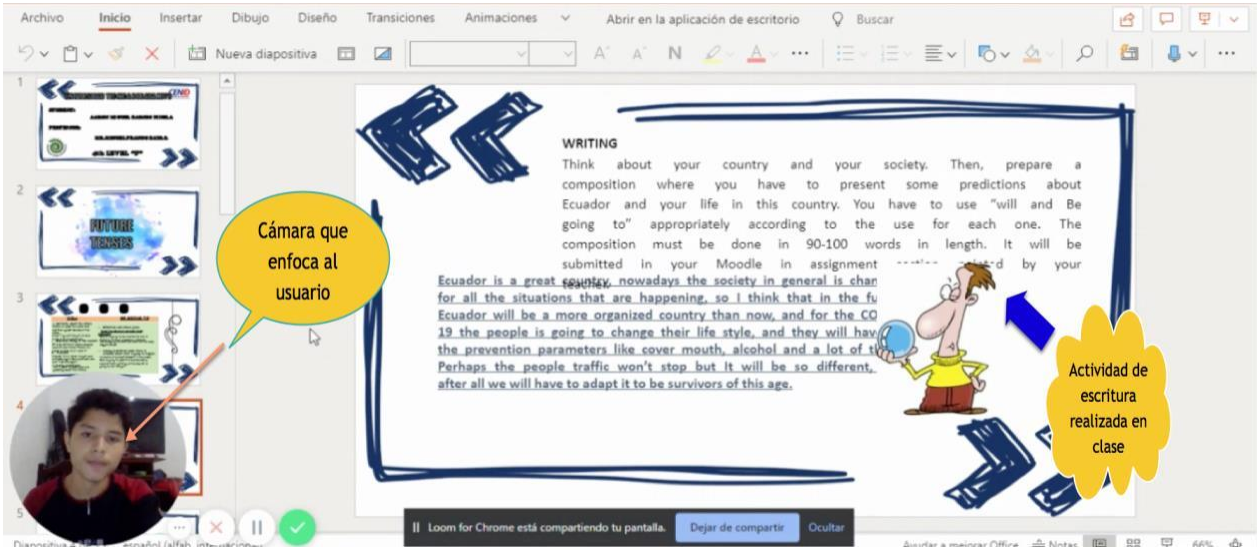
Figure 2: Power Point document



Source: Author's elaboration

In figure 2, the collection of these had to be saved in a file. As you can see, there is a document made in Microsoft Power Point, which collects the experiences and documents seen and made in the corresponding classes.

Figure 3: Loom option focusing on the student along with a developed activity.



Source: Author's elaboration

In figure 3, you can clearly see the camera being enabled to focus on the person who will be making the video recording along with the document being presented.

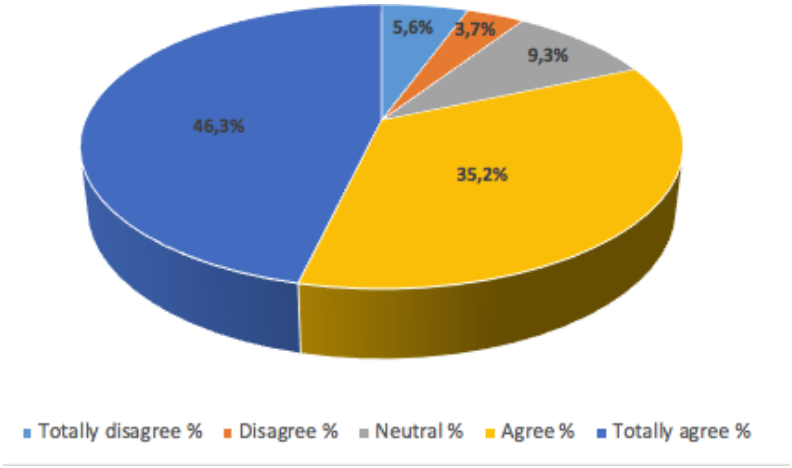
From there, the student will begin the recording by offering a greeting and will talk about his portfolio giving spontaneous explanations of why each topic impacted him during the development of the classes with his teacher. In addition to, mentioning how he applied each topic in a production activity whether it was written or oral.

Finally, you must copy the link generated by Loom and share it through google drive with the teacher through the virtual learning environment Moodle for the corresponding review. 54 students from module 4 corresponding to the cycle May - September (2020) were considered. The instrument was a survey of 14 questions of Likert scale developed in Microsoft Forms, in which their alternatives were: Totally disagree, disagree, neutral, agree and totally agree.

Results

Below are the results found in the 14 questions of the instrument through the different graphs with their corresponding description.

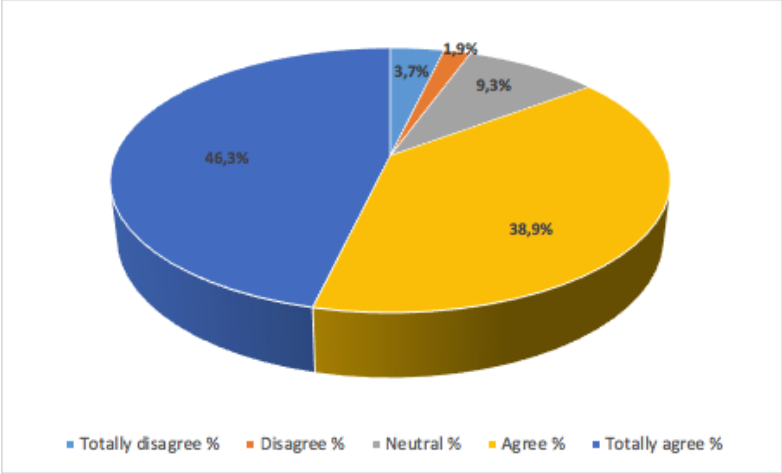
Figure 4: Q1. Did the completion of the e-portfolio help my teaching learning English Level 4 process?



Source: Author's elaboration

As illustrated in figure 4, 46.3% of the respondents mentioned that they totally agreed that the completion of the e-portfolio helped their teaching process - learning English level 4. 35.2% said they agreed. 9.3% showed a neutral position. 3.7% said they disagreed; while 5.6% were in total disagreement.

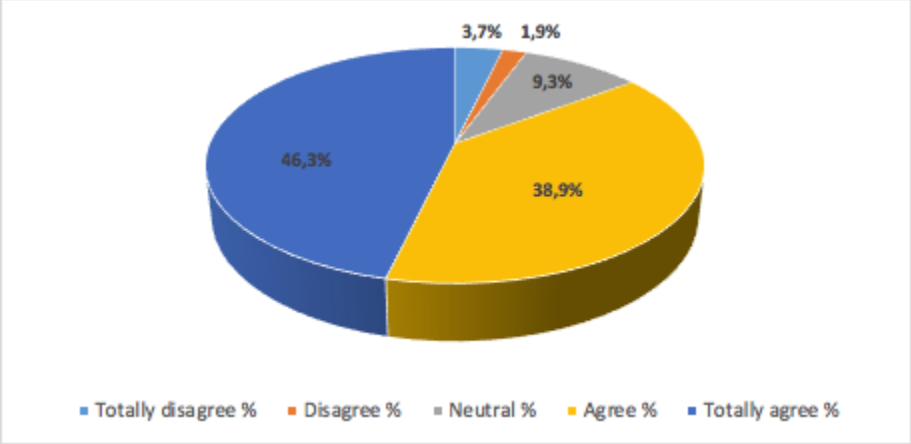
Figure 5: Q2. The e-portfolio enhanced their reflections on learning level 4 English content?



Source: Author's elaboration

As illustrated in Figure 5, 46.3% of respondents totally agreed that the e-portfolio enhanced their reflections on learning level 4 English content. 38.9% agreed. A 9.3% showed a neutral position. 1.9% said they disagreed, while 3.7% were in total disagreement.

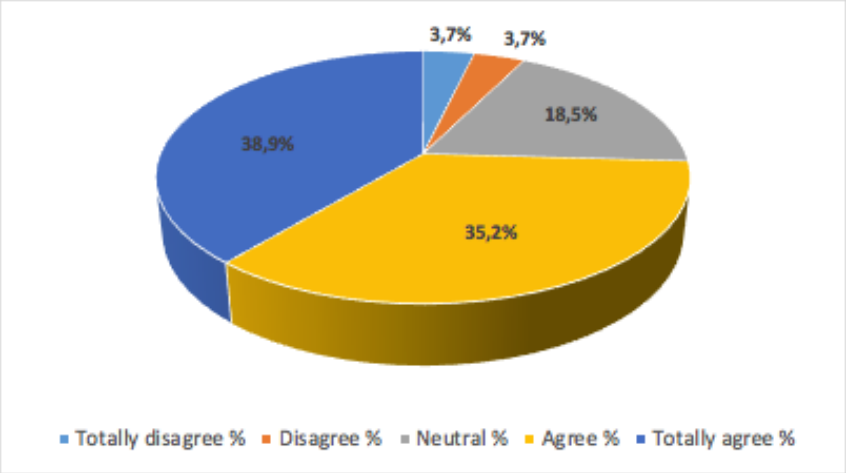
Figure 6: Q3. Through the e-portfolio you were able to show how your level 4 English learning has evolved?



Source: Author's elaboration

As shown in figure 6, 46.3% of the respondents totally agreed that through the e-portfolio they were able to show how their level 4 English learning has evolved. 38.9% said they agreed. 9.3% showed a neutral position. 1.9% said they disagreed, while 3.7% were in total disagreement.

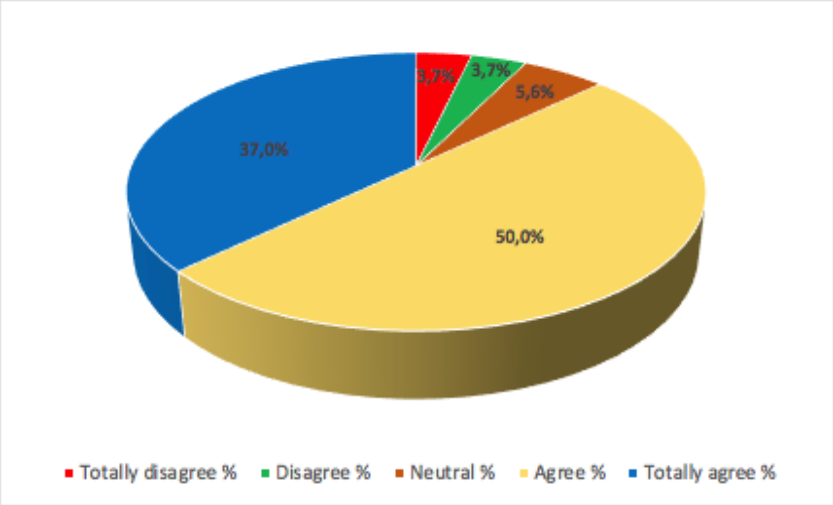
Figure 7: Q4. Did you enjoy the completion of the Level 4 English e-portfolio?



Source: Author's elaboration

As shown in figure 7, 38.9% of those surveyed said they totally agreed that they enjoyed the completion of the level 4 English e-portfolio. 35.2% said they agreed. 18.5% held a neutral position. 3.7% said they disagreed, while the same percentage was in total disagreement.

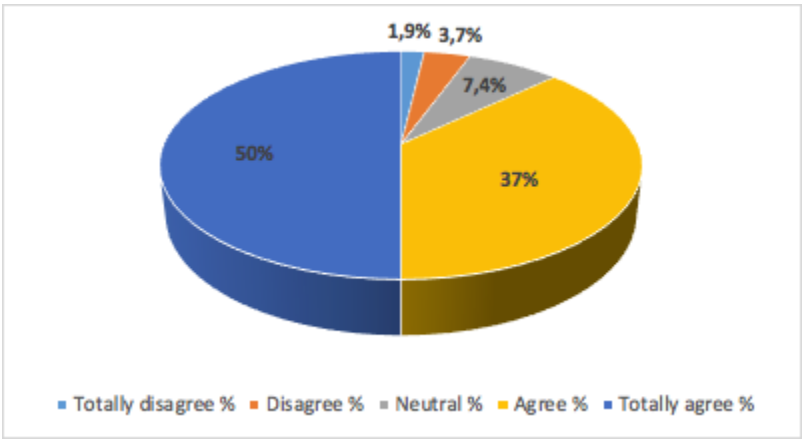
Figure 8: Q5. Did the e-portfolio encourage autonomous learning in you?



Source: Author's elaboration

As shown in figure 8, 37% of the respondents said they totally agreed that the e-portfolio encouraged autonomous learning in them, while 50% agreed. 5.6% maintained a neutral position. 3.7% said they disagreed and the same percentage said they totally disagreed.

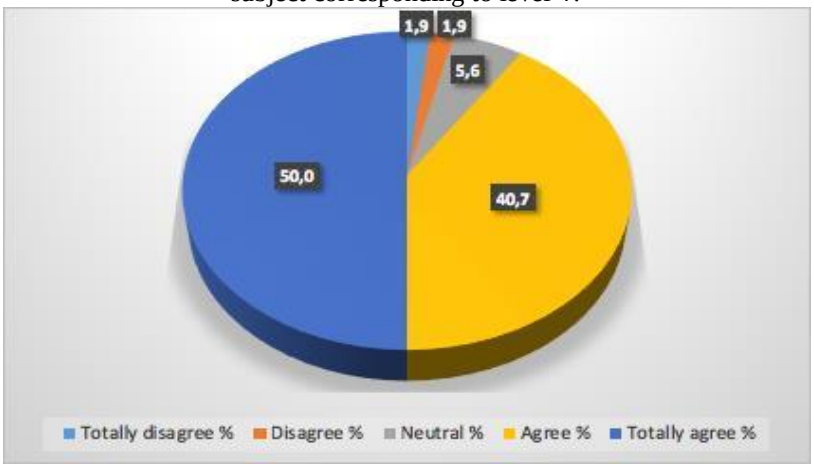
Figure 9: Q6. Will the e-portfolio serve as an aid in compiling your learning and experiences as a future professional?



Source: Author's elaboration

As seen in Figure 9, 50% of the respondents were in full agreement that the e-portfolio will serve as an aid in gathering their learning and experiences as a future professional. 37 % mentioned that they agreed. 7.4% maintained a neutral position. 3.7% said they disagreed, while 1.9% said they totally disagreed.

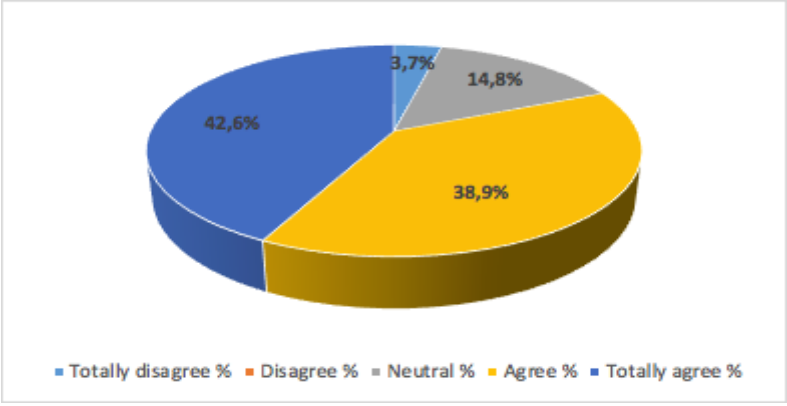
Figure 10: Q.7 In the realization of the e-portfolio, did you focus on the most important aspects of the English subject corresponding to level 4?



Source: Author's elaboration

As illustrated in figure 10, 50% of the respondents mentioned that they totally agreed that in order to carry out the e-portfolio, they focused on the most important aspects of the English subject corresponding to level 4. 40.7% claimed to agree. 5.6% maintained a neutral position. 1.9% said they disagreed and the same percentage said they totally disagreed.

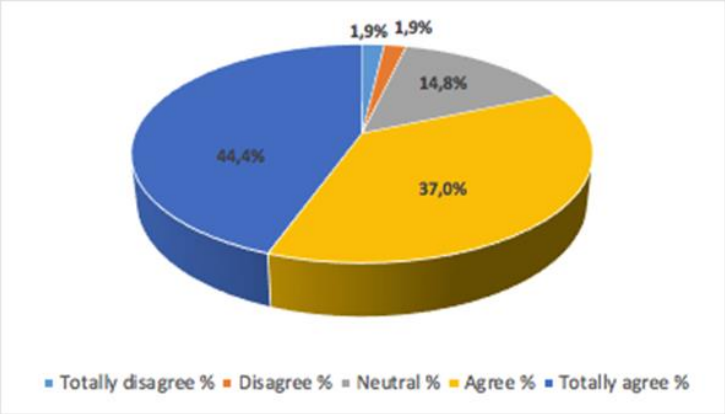
Figure 11: Q8. Was there any organization within the realization of your e-portfolio?



Source: Author's elaboration

As shown in figure 11, 42.6% of the respondents said they totally agreed that there was organization within the realization of their e-portfolio. 38.9% mentioned that they agreed. 14.8% held a neutral position, while 3.7% said they totally disagreed.

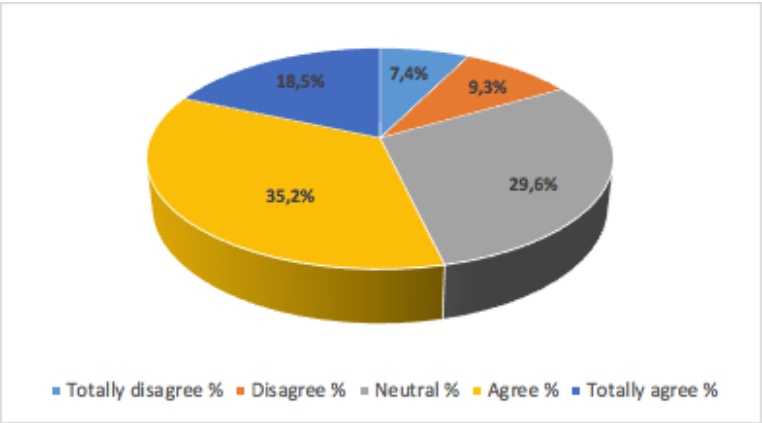
Figure 12: Q9. Did the e-portfolio help to recognize and improve level 4 English language skills?



Source: Author's elaboration

As seen in Figure 12, 44.4% of respondents strongly agreed that the e-portfolio helped to recognize and improve Level 4 English language skills. 37% agreed. 37% percent agreed. 14.8% were neutral, while 1.9% disagreed and the same percentage strongly disagreed.

Figure 13: Q10. Did you find it difficult to realize your e-portfolio with the help of the web application Loom?

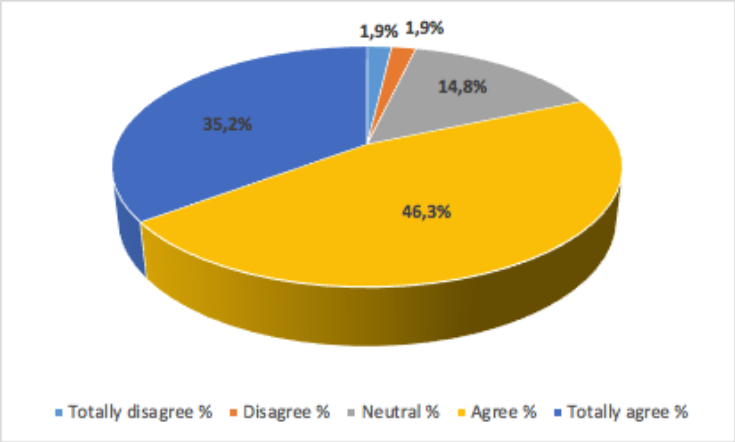


Source: Author's elaboration

As shown in figure 13, 18.5% of the respondents said they totally agreed that it was difficult for them to carry out the e-portfolio with the help of the web application Loom, while 35.2% agreed.

29.6% maintained a neutral position. 9.3% said they disagreed and 7.4% indicated they totally disagreed.

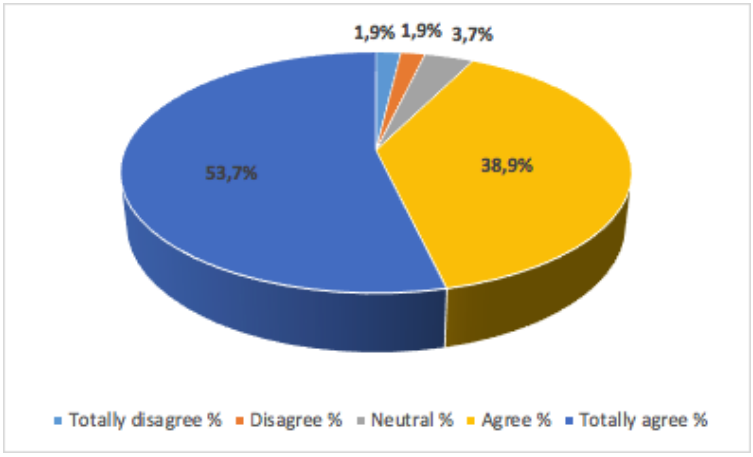
Figure 14: Q11. Did you consider the training you received sufficient for the development of the e-portfolio?



Source: Author's elaboration

As illustrated in figure 14, 35.2% of respondents said they fully agreed with the sufficient training received for the development of the e-portfolio. 46% percent agreed. 14.8% held a neutral position. 1.9% mentioned that they disagreed, while the same percentage mentioned that they totally disagreed.

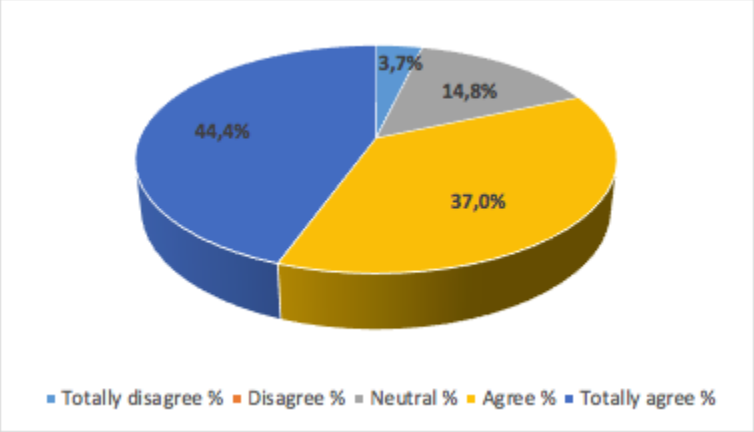
Figure 15: Q12. Do you consider it important to accompany teachers in the process of teaching and developing e-portfolios?



Source: Author's elaboration

As shown in figure 15, 53.7% of those surveyed agreed completely that it is important to accompany teachers in the process of teaching and developing e-portfolios. 38.9% mentioned that they agreed. 3.7% held a neutral position. 1.9% said they disagreed and the same percentage claimed to be in total disagreement.

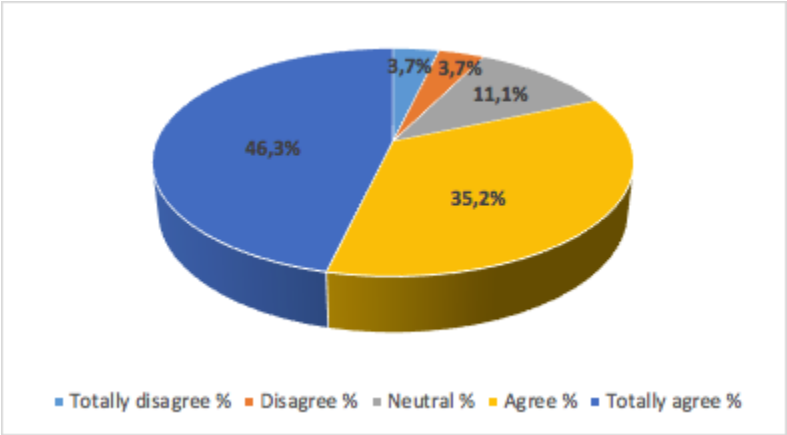
Figure 16: Q13. Did the use of the e-portfolios help you to improve your technological skills?



Source: Author's elaboration

As illustrated in Figure 16, 44.4% of respondents said they totally agreed that the use of e-portfolios helped improve their technological skills. 37% percent agreed. 14.8% held a neutral position, while 3.7% said they totally disagreed.

Figure 15: Q14. Did you face challenges and experience benefits during the development of the e-portfolios along with the use of the web application Loom?



Source: Author's elaboration

As shown in Figure 14, 46.3% of respondents said they totally agreed that they had faced challenges and experienced benefits during the development of the e-portfolios along with the use of the web application Loom. 35.2% mentioned that they agreed. 11.1% held a neutral position. 3.7% claimed to disagree, while the same percentage said they totally disagreed.

Discussion

The existing literature on the topic of research shows that portfolios generally correlate to improved student performance (Habeeb, K. M., & Ebrahim, A. H. 2019), which is also reflected in this paper by the responses given by students to questions 1,2,5,9,13 where students state they recognize that through electronic portfolios their English language skills as well as technology skills have improved. However, Driessen (2017) positions himself differently and mentions that according to his research students consider e-portfolios as not very advantageous and merely a process to obtain a grade, which generates a certain level of analysis to the type of research that is being done around this topic and the opportunity to standardize a survey that can be applied in different subjects and compare results.

With respect to the participation and role of teachers in the development of the e-portfolio, Driessen (2017) highlights the importance of teacher mentoring and accompaniment in the process of teaching and developing e-portfolios as an educational mechanism. This point is of vital importance since in question 12 more than 50% of students recognize the essential help from the professor.

In relation to the difficulties that students face, authors such as Sultana, Lim, Liang (2020) add the need for physical elements and support for the proper implementation of e-portfolios in higher education, which the authors fully agree especially by the fact that students representing this sample are mostly from rural areas and with problems of Internet connectivity. In question 14, about 46.3% of the respondents agreed that they had faced challenges but at the same time had benefited from the development of the e-portfolios and the use of the web application Loom.

Finally, with respect to the contribution that the use of ICT offers in the professional future of students, the authors Habeeb, K. M., and Ebrahim, A. H. (2019) emphasize the importance of the same way in the question 5, near 50% of the students also have reflected and observe to this tool like a great advantage in their professional lives.

Conclusions and recommendations

In a general way the same literature comments the need to provide students with ICT tools to improve their learning and teachers to facilitate and innovate in their teaching.

The present work seeks from the beginning to answer 3 specific research questions, which are developed below:

1. ***What benefits and challenges do students face with the use of electronic portfolios in their curriculum?***

From the academic point of view, students as reflected in the surveys agree with what is mentioned in great part by the literature of the contribution to their academic improvement, both at the level of being able to improve their own English skills and the possibility of reflecting on what they have learned during the course. On the other hand, in relation to their professional life, students recognize the contribution since by the simple fact of improving their level of English or also developing their skills in the handling of new technologies, they can certainly have a competitive advantage in the labor market.

With respect to the challenges that students face revolve around two main aspects: students who come from rural areas with difficulties to Internet connectivity and also the poor knowledge in use of ICT tools as part of their learning process.

2. ***What are students' perceptions about the use of the Web Loom application for the development of electronic portfolios in their programs?***

In general, the students have expressed their satisfaction with the academic semester by applying the electronic portfolio, in addition to recognizing the organization that existed in the preparation by the teacher. Certainly the answers reflect that there were difficulties in the use of Loom but this tool is also recognized as useful.

3. ***What are students' perceptions of teacher accompaniment and mentoring during the development of electronic portfolios in their curriculum?***

53.7 % of those surveyed agreed completely that it is important to accompany teachers in the process of teaching and developing e-portfolios, which allows us to strengthen what the author Driessen (2017) had already commented on the importance of the professor.

Among the recommendations suggested by the authors of the current paper are the following:

1. To develop future studies focused on the perception of e-portfolios and their importance.
2. Carry out constant training in the use of ICT for both teachers and students.
3. To develop longitudinal studies that allow a comparison in different periods.

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