



E-PORTFOLIO AS A SUPPORT FOR TEACHING PRACTICE AT THE UNIVERSITY OF GUAYAQUIL

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ABSTRACT

This project seeks to highlight the benefits of the implementation and management of the teaching digital portfolio. In today's world full of technology and tools that facilitate daily activities, education and its various processes must also embrace the digital tools available and make them the basis for any innovation and improvement process. The teaching portfolio in physics has long been the means by which teachers have organized the processes, evidence, and other results of educational work. Nowadays, all that range of evidence and productions, which signify the achievement and advances in each group of students, has been able to be integrated into technology.

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1. Introduction

The evolution of education and its constant evolution has impacted societies around the world in social, economic, cultural and even environmental aspects. Nowadays, education is at another point in this long evolutionary process: virtualization. A large number of processes that until 10 years ago were developed using paper and ink as the medium, today are carried out through a computer and an Internet connection. Digital portfolios are a technological tool that has become an attractive alternative for the teaching process in higher education. In recent years, a significant amount of research has been conducted on the use of digital portfolios in the classroom, and multiple benefits have been identified for students, teachers and for the teaching and learning process itself.

First, digital portfolios allow students to document and showcase their progress and learning more effectively. According to Bolliger and Shepherd (2018), digital portfolios allow students to reflect on their learning, select and organize their work, and present their accomplishments to others. In this way, students can demonstrate their understanding and skills more effectively, and this gives them a greater sense of accomplishment and self-confidence.

In addition, the use of digital portfolios can foster students' active participation in their own learning. According to Ceballos et al. (2021), digital portfolios can help students develop self-regulation skills and become more responsible for their own learning process. By allowing students to be involved in the selection and organization of their work, digital portfolios can foster student autonomy and more informed decision making.

Likewise, digital portfolios can be a useful tool for students' digital skills development. According to Johnson et al. (2018), the use of digital portfolios can help students develop technology skills, such as digital content creation, graphic design, and video editing. These skills are increasingly valuable in the job market and can help students stand out in their job search.

On the other hand, digital portfolios can facilitate feedback and assessment of student learning. According to Kitchener and Kitchener (2019), digital portfolios can provide a platform for teachers and students to communicate about the learning process. Teachers can provide real-time feedback on student work and students can respond quickly and effectively. This allows for more detailed feedback and fairer, more transparent assessment.

In addition, digital portfolios can be a useful tool for developing critical thinking skills. According to Chen and Chang (2018), digital portfolios can help students analyze and reflect on their own learning, and assess their own strengths and weaknesses. This can help students develop critical thinking skills and become more aware of their own learning strategies.

In 2023, students will be able to hand in an assignment, review a text, prepare a presentation and take an exam without having to leave their homes, only with the support of Information and Communication Technologies (ICT). The evolutionary process in education has allowed technological tools to be included as inputs and an important part of the development of educational activities.

In the University of Guayaquil, one of the most representative of the country, with 155 years of work, faced the mandatory educational evolution of the last almost 3 years, so that it transformed into a technological university, with academic processes framed in ICT and with the precept of continuing to include technology as a good institutional practice. For teachers, the implementation of technology in their administrative and academic processes meant a challenge that included new learning and development of deeper digital competencies. Finally, the above mentioned allows strengthening the premise of the use of digital portfolios as a tool to foster collaboration and peer learning.

2. Research development

Everything mentioned in previous lines, propitiated the development and implementation of digital educational resources, such as the teaching portfolio, with greater impact, better elaborated and of significant contribution in the teaching-learning processes. Each teacher is able to build his Virtual Learning Environments and include elements that help him to transform the way in which his students generate new knowledge, during and after the sessions.

The University of Guayaquil, based on the impact of the pandemic in 2020, implemented the Presence, Outreach, Training, Interaction and E-learning (PACIE) model. This model is defined as follows:

The PACIE methodology applied in a virtual learning environment contributes to achieving the objectives of the teaching-learning process through the incorporation of ICT in a gradual and reflective manner, aspects considered key in online training, as it requires commitment, responsibility, willingness and a strong disposition for self-learning. (Basantes, Naranjo and Ojeda, 2018, p. 37)

This methodology allows, using Moodle, to build Virtual Learning Environments (VLE) suitable for teaching processes. These environments allowed the relationship of the members of the educational community to interact and promote meaningful learning. The blocks that make up the PACIE method (Block 0, Academic Block, Closing Block) allow a more orderly management of the academic and administrative processes of the teacher.

Regarding virtual learning environments and their main function Oyola (2019) states that: "Virtual learning environments allow promoting learning, depending on the configuration and orientation that we give to each of the actions proposed for the achievement of the competence." (p. 7). As mentioned, the maximum usefulness of this tool depends on the expertise and the sense that each teacher applies in the construction of the VLE. If other pedagogical tools are added to the properly structured VPA, the rate of effective results in a learning process will be higher. This is the case of the digital portfolio, some authors indicate the following:

The digital portfolio is a widely used didactic and evaluative strategy, whose advantages include the possibility of promoting self-regulation and autonomy. Given the current healthcare context and the implementation of emergency remote education, such personal resources become highly relevant, especially in the first year (González, Veas, Covarrubias, 2021, p. 273).

In the current context, having more pedagogical tools and resources allow the teacher to adapt or contextualize the process to the student. The e-portfolio or digital portfolio is the digital space that allows the student to have feedback on each of the inputs that have been developed within the teaching and learning processes. Likewise, it allows the teacher to collect real evidence of the academic progress of their students, likewise, the academic authority will have a tool that serves as a guide and support for the management of teacher evaluation.

The E-portfolio is defined as follows:

The E-Portfolios represent an innovative strategy for the organization, control and creativity of students, through which the teacher can access the materials in real time and share them so that the whole class has access to the relevant information of the subject and thus obtain the desired learning. (Figuerola and Navarro, 2022, p. 9)

Based on the digital skills that teachers developed during the last 3 years, the development of e-portfolios is possible, through digital platforms such as Wix, WordPress or Jindo. Among many of the existing platforms, such as those mentioned above, Google Site stands out for its features such as its simple interface, ease of file management, file availability, easy customization of the sites created, among others.

Regarding the emergence of Google Site, the following conceptualization is presented: In this context, Google Sites (GS) emerged as a free online application created in 2008 by the U.S. company Google. This platform facilitates the reception of activities, the production of texts, the dissemination of tasks and learning products, as well as the incorporation of different work rhythms and individualization in the review of tasks and comments to these. (Dávila and Gutiérrez, 2019, p. 36)

The E-Portfolio is a pedagogical tool that, in addition to fulfilling certain characteristics of a repository, helps the teacher with the development and fulfillment of the curricular planning, allowing control at the moment of the execution of the programmed, the fulfillment of objectives, as well as the development of the students' competencies.

Creating, managing and administering their own digital spaces helps teachers to have a high level of digital empowerment, to be constantly aware of the progress of each of their students and at the same time this valuable data can be shared with the authorities and also become a reference battery for the students themselves.

Bastidas, C. B. (2019) the E-Portfolio allows the teacher to share the interests and progress of the students, framed in the institutional context, but at the same time allows coverage or impact on the educational community outside the University of Guayaquil, generating spaces for feedback from other teachers or students interested in the theme of the portfolio generated.

3. Results

Upon consulting the teachers of the University of Guayaquil, it was determined that 86% of them used or currently use digital media and resources for the development of their teaching processes, 95% agreed with the implementation of virtual portfolios as a tool for continuous use in their teaching processes through virtual classrooms. Below is a detail of the aforementioned values:

Table 1: Use or have used in the last 2 years and media digital resources.

Option	Absolute frequency	Relative frequency
Yes	18	85.7 %
No	3	14.3
Total	21	100%

Note: Information taken from direct research.

Table 2: How useful the E-portfolio within the virtual classroom.

Option	Absolute frequency	Relative frequency
Very useful	20	95.2 %
Something useful	1	4.8 %
A little useful	0	0.0 %
Nothing useful	0	0.0 %
Total	21	100%

Note: Information taken from direct research

The implementation of digital portfolios in education has been the subject of research in recent years due to the multiple benefits it offers both students and teachers and the teaching and learning process in general. This research highlights the results obtained from the implementation of e-portfolios at the University of Guayaquil, showing the acceptance and usefulness of this tool by teachers.

The introduction to the research points out that the evolution of education has led to the virtualization of many processes that used to be done on paper and ink, now carried out through computers and the Internet. In this context, digital portfolios are presented as an attractive alternative in higher education.

The authors highlight that digital portfolios allow students to document and show their progress and learning effectively, which gives them a greater sense of achievement and self-confidence. In addition, they encourage students' active participation in their own learning, the development of digital skills, feedback and assessment of learning, and the development of critical thinking skills.

Considering the opinion of the teachers, and that the digital portfolio has been an element that is part of the educational task in higher education. Among the results obtained, the predisposition to the use or management of digital media and resources stands out. The positive result shows a technological adaptation and development of digital competencies in teachers.

In the fiscal education system, the institutions that govern it have implemented different tools that allow teachers to have greater control and organization of the teaching processes and the inputs that are derived from them, before this constant search, the institutions of Higher Education, and specifically the University of Guayaquil implemented the use of the portfolio as a mandatory tool in the different subjects. This led to the fact that this input was also considered as an element to be considered in the teaching.

Regarding the methods used in the study, the PACIE model (Presence, Outreach, Training, Interaction and E-learning) implemented by the University of Guayaquil is described as a framework for the construction of Virtual Learning Environments (VLE). The importance of the gradual and reflective methodology in the incorporation of ICTs in online training is highlighted. It is also mentioned that VLEs,

combined with the use of digital platforms such as Google Sites, allow the orderly management of academic and administrative processes of the teacher.

Decisions such as the one mentioned above, generated that this tool is developed in a deeper way, that its features are adapted to improve parts of the teaching process and that teachers have a space where they can show their progress. Based on the data provided by the Academic Staff Management of the University of Guayaquil, 80% consider that the implementation of this tool generated a greater awareness of the type of teaching provided and thus generate a projection of the impact (positive or negative) in the processes of comprehensive training.

In relation to the materials used, the concept of e-portfolio is described as a pedagogical tool that fulfills the characteristics of a repository and helps the teacher in curricular planning, the control of the fulfillment of objectives and the development of student competencies. It is mentioned that the use of digital platforms such as Wix, WordPress and Google Sites facilitates the creation, management and administration of digital spaces for e-portfolios. It is emphasized that the e-portfolio not only benefits the teacher and students, but also allows sharing interests and progress with the external educational community, generating spaces for feedback.

The results obtained show that 86% of the teachers at the University of Guayaquil have used or currently use digital media and resources in their teaching processes, which demonstrates a significant adoption of technologies in the educational field. In addition, 95% of teachers consider the e-portfolio to be very useful in the virtual classroom, which shows the acceptance and recognition of this tool as a valuable resource for teaching and learning.

During the period in which the University of Guayaquil turned its academic processes to virtuality, as a result of the pandemic, teachers found themselves in need of acquiring new knowledge that would allow them to face virtuality and fulfill the development of competencies in their students.

Based on these results, it can be concluded that the implementation of e-portfolios at the University of Guayaquil has been successful and has provided significant benefits for both teachers and students. The integration of digital technologies in the teaching processes has improved the documentation, reflection and presentation of student learning, fostered their active participation and responsibility in the learning process, developed digital and critical thinking skills, facilitated feedback and evaluation, and strengthened collaboration and peer learning. In addition, a high acceptance and usefulness of the e-portfolio by teachers has been observed, indicating its potential as a pedagogical tool in the current educational context.

In summary, the study conducted at the University of Guayaquil supports the implementation of e-portfolios as a support in teaching practice, highlighting its benefits and usefulness in the teaching and learning process. These results contribute to research and promotion of good practices in education, especially in the integration of digital technologies to improve the quality of education. The implementation of e-portfolios opens new opportunities for the development of digital competencies, the personalization of learning and the creation of more interactive and meaningful virtual learning environments.

4. Conclusions

The study conducted at the University of Guayaquil on the implementation of e-portfolios as a support in teaching practice has revealed significant results that support the usefulness and benefits of this tool in the teaching and learning process. Through the integration of digital technologies in the educational environment, it has been possible to improve the documentation, reflection and presentation of student learning, encourage their active participation and responsibility in the learning process, develop digital and critical thinking skills, facilitate feedback and evaluation, and strengthen collaboration and peer learning. The evolution of education and its adaptation to technological advances have transformed the way in which teaching processes are developed. Virtualization has allowed a large number of activities that used to be done on paper and ink to be carried out through computers and the Internet. In this context, digital portfolios have emerged as an attractive alternative in higher education, providing multiple benefits for both students and teachers. E-portfolios allow students to document and showcase their progress and learning more effectively. Through reflection, selection and organization of their work, students can demonstrate their understanding and skills more clearly, giving them a greater sense of

accomplishment and self-confidence. In addition, the use of e-portfolios encourages students' active participation in their own learning. By being involved in the selection and organization of their work, students develop self-regulation and informed decision-making skills, which makes them more responsible for their learning process.

E-portfolios also play a key role in the development of students' digital skills. Through their use, students have the opportunity to acquire relevant technology skills, such as digital content creation, graphic design and video editing. These skills are increasingly valued in the job market and can help students stand out in their job search. On the other hand, e-portfolios facilitate feedback and assessment of student learning. By providing a communication platform between teachers and students, a continuous dialogue is promoted, allowing for more detailed feedback and fairer, more transparent assessment. Teachers can provide real-time feedback on student work, and students can respond quickly and effectively, enriching the assessment process. In addition to their usefulness in documenting and assessing learning, e-portfolios also contribute to the development of critical thinking skills. By analyzing and reflecting on their own learning, students can assess their strengths and weaknesses, allowing them to develop critical thinking skills and become more aware of their learning strategies. In the specific context of the University of Guayaquil, the PACIE model (Presence, Outreach, Empowerment, Interaction and Elearning) has been implemented as a framework for the construction of Virtual Learning Environments (VLE). This methodology has allowed the gradual and reflexive incorporation of ICT in online training, promoting commitment, responsibility, willingness and disposition for self-learning.

Regarding the materials used, the importance of the e-portfolio is highlighted as a pedagogical tool that fulfills the characteristics of a repository and facilitates the development and fulfillment of curricular planning. Digital platforms such as Google Sites have been used for the creation, management and administration of digital spaces where e-portfolios are hosted.

The results obtained from the direct research conducted with teachers at the University of Guayaquil reveal a high adoption of digital media and resources in the teaching process, with 86% of teachers using or having used these resources in the last two years. Likewise, 95% of teachers consider the e-portfolio to be very useful in the virtual classroom, which demonstrates its acceptance and recognition as a valuable tool. In conclusion, the implementation of e-portfolios as a support for teaching practice at the University of Guayaquil has been successful, providing significant benefits for both teachers and students. The use of e-portfolios has improved documentation, reflection and presentation of learning, fostered active student participation, developed digital and critical thinking skills, facilitated feedback and assessment, and strengthened collaboration and peer learning. These results support the integration of digital technologies in the teaching process and highlight the potential of the e-portfolio as an effective pedagogical tool in the current educational context.

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