

# **Electronic portfolio – a must have for students in the digital age**

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Constantina Catalano <sup>a\*</sup>

<sup>a</sup> Faculty of Psychology and Educational Sciences, Babes-Bolyai University, 7 Sindicatelor Street, 400029, Cluj-Napoca, Romania

\*Corresponding author: [constantina.catalano@ubbcluj.ro](mailto:constantina.catalano@ubbcluj.ro)

## Abstract

In this paper we aim to capture the trends of using the digital portfolio as a form of learning and evaluation of students. The portfolio, as a modern approach to teaching assessment strategies, has gained popularity in the activity of higher education. As expected, postmodern accents of digitization lead to the transfer of the classic, printed portfolio into the electronic portfolio (also known as e-Folio, e-portfolio, E-Folio, or online portfolio).

In order to validate the students' willingness to work with digital portfolios, we asked a short online questionnaire, with 4 questions that focused mainly on the working experience of students on these portfolios, either classic or digital. A number of 310 students in their second and third year of study answered the questionnaire. The respondents are currently students of several faculties at Babes-Bolyai University. We believe that the openness of students to whatever involves using technology and devices is very large and we should take advantage of it.

### Keywords:

talented electronic portfolio, higher education, e-learning.

## Zusammenfassung

Diesen Artikel versucht die Trends von der Verwendung eines digitalen Portfolios als Lern- und Bewertungsform von Schülern zu erfassen. Das Portfolio als moderner Ansatz zur Vermittlung von Bewertungsstrategien nimmt in der Hochschultätigkeit einen wichtigen Platz ein. Die postmodernen Akzenten der Digitalisierung haben dazu geführt, dass das klassische Portfolio von den elektronischen Portfolio (auch als e-Folio, e-Portfolio, e-Folio oder Online-Portfolio bekannt) ersetzt wurde.

Zu bestätigen, dass die Schüler vorbereitet sind, mit einem digitalen Portfolio zu arbeiten, haben wir einen kurzen Online-Fragebogen mit 4 Fragen zu den Arbeitserfahrungen der Schüler mit Portfolios (klassisch oder digital) gestellt. Eine Anzahl von 310 Studenten, in ihren zweiten und dritten Studienjahr, haben die Fragen beantwortet, die sind jetzt alle Studenten an verschiedenen Abteilungen der Babes-Bolyai-Universität. Wir glauben, dass die Studenten sehr offen sind, wenn es um den Einsatz und Arbeit mit digitalen Medien geht, deswegen sollen wir es (ausnutzen und) ermutigen.

### Schlüsselworte:

Elektronisches Portfolio, Hochschulbildung, Online-Lernen, e-learning.

## 1. Introduction

In recent years, the current didactic activities frequently integrate the specific means of information and communication technology (ICT) and NICT (New Information and Communication Technologies) in the strategies chosen for various school disciplines, not only for those that are based exclusively on this component.

Initially, the computer was used only at computer hours, or sometimes, in other disciplines. Nowadays, any classroom has at least one such device. The generation of digital natives has the openness to use these tools extensively and efficiently, which greatly facilitates the educational process. Thus, the computer or its substitutes (laptop, phone, tablet) equipped with Internet are an integral part of the usual teaching activity. The use of these means in the classroom is often implicit and less declarative as it was until recently.

The ICT-assisted teaching activities involve both teaching-learning and assessment. The design of the teaching activities sometimes starts from this current strategic component because the lesson may involve the use of an educational software, a specific platform or a specific application. These can replace the classical lesson itself or serve as a didactic approach or methodology complementary to the traditional ones.

The current approaches delimit new areas of technology for education beyond the E-learning area by expanding the ICT domain to M-learning. Mobile learning is "a new paradigm, which creates a new educational environment, through which educators have access to course supports, instructions and applications anytime, from anywhere" (Cucuș, 2006, p. 144). In addition, we would say, it represents a repositioning of the E-learning in the mobility area due to the massive increase in the number of users of mobile phones and tablets, but

also the decrease of the age of users (most of the students from high school or gymnasium having such a device). M-learning is easy to integrate into various activities, in formal or non-formal education, thanks to the available applications, the frequent improvement of the existing versions of these applications, but also through the emergence of various social networks, group communication platforms etc.

## 2. Theoretical foundation

The challenges of the students of the third millennium increase year by year. The amount of information to be assimilated is constantly growing, the time allocated to the initial training has decreased in most of the specializations from four to three years of study and the range of skills needed for professionalization is increasing and so on. The consequence of these continuous challenges on students and university teachers translates to the current university practice in approaching new strategies of training and education, in diversifying working methods, in promoting virtual educational environments.

The intellectual activation of the students is a priority in the context of the new approach, but also the initiative of the teachers to ensure didactic strategies according to the context is a desired one, according to the demands of the post-modern education (Catalano, 2019).

The academic education has some special characteristics, which differentiate it from the profile of the pre-university one. The features that are highlighted in this context are those regarding the specificity of the forms of organization of the teaching activity (course, seminar, practical work, laboratories, etc.) at the level of the specific education methods (the lecture, exposition, conversation and so on) or at the level of the evaluation (semester written works, oral examinations, partial verifications, micro research projects, portfolios etc.).

The portfolio, as a modern approach to teaching assessment strategies, has gained popularity in the activity of higher education. As expected, postmodern accents of digitization lead to the transfer of the classic, printed portfolio into the electronic portfolio (also known as e-Folio, e-portfolio, E-Folio, or online portfolio).

"An e-Portfolio (electronic portfolio) is an electronic collection of evidence that shows your learning journey over time. Portfolios may relate to specific academic

fields or your lifelong learning. Evidence may include writing samples, photos, videos and research projects, observations by mentors and peers and/ or reflective thinking. The key aspect of an e-portfolio is your reflection on the evidence, such as why it was chosen and what you learned from the process of developing your e-portfolio." (Barrett, 2010, p. 6). Such electronic evidence may include input text, electronic files, images, multimedia, blog entries and hyperlinks.

An electronic portfolio is not a specific software package, but rather a combination of process (workplace) and product (showcase). Presentation portfolios can be created using a variety of tools, both static, desktop and online (Barrett, 2010).

E-portfolio is seen by H. Barrett as Storage space – collection updated regularly – (weekly/ monthly) with focus on contents & digital conversion, as Workspace/ Process with focus on process and documentation of learning and also as Showcase/ Product - selection/ reflection, direction, presentation (each semester/ end of year) with focus on product & documentation of achievement (Barrett, 2010).

Benefits of e-portfolio for students as process (Barrett, 2011): the students can discover a valuable exercise in self-assessment through the reflection process; learning can take on a new depth through the reflection process; self-esteem and self-confidence of the students will be enhanced as they take control of their learning; assessment of their learning may become more student centered because the learner is involved and authorized to make decisions about will be evaluated.

Benefits as the product (Barrett, 2011): students will have a tool for personal development and a personal learning record; they may receive credit for informal and non-formal learning as well as formal learning; students will have a tool for feedback from teachers and peers.

Self-evaluation is a dimension present as well in the evaluation process of digital portfolios due to the fact that the continuous monitoring, validation or improvement of the selected contents is implicit, until the moment of its delivery.

Another dimension of the benefits that e-portfolios may provide refers to metacognition through periodic reflections which help students to exercise those qualities that involve critical thinking or decision making. Also,

this strategy helps learners to build personal and academic identities as they complete projects and facilitate the integration of learning. Students have the chance to connect learning over a time period, to develop some abilities and to plan their own academic direction as they come to see what they know and what they still need to learn or exercise (Miller & Morgaine, 2009).

Apart from the benefits we already listed, the portfolio has some recommendations for use and has some limitations that keep it away from some students or teachers. These refer to some tendencies to limit access to mobile devices for young people, to resurrect the reading of books, to study in physical libraries etc. We believe that these do not exclude the use of the digital portfolio, but we should keep in mind to offer the possibility for the students to access various sources and increase the attention in the composition of this category of portfolio.

### 3. Research methodology

We consider that it very important to introduce technology in the complex process of teaching-learning-evaluation in higher education, which is why we want to find out if the digital portfolios are already being used by our students and which is the trend of giving up the classic, printed portfolios, in the future. So, we wanted to make a preview about the issues concerned: the tendencies for digital portfolio versus classic portfolio.

In order to validate the students' willingness to work with digital portfolios, we asked a short online questionnaire, with 4 questions that focused on the working experience of students on these portfolios, either classic or digital. The student questionnaire was developed using Google Forms. Also, the answers were collected and processed on it.

#### 1. Have you used the digital or classical portfolios so far for various disciplines?

**Table no 1.** Regarding the answers of the question number 1

<i>Answer</i>	Digital Portfolio- DP	Classic Portfolio- CP
<i>Number/percentage of students</i>	81 (25.8%)	229 (74.2%)

As expected, most students experienced the classic portfolio. So to this question there were 81 (25.8%) answers in favor of the Digital Portfolio (DP) and 229 (74.2%) for the Classic Portfolio (CP).

It is observed that although many of the contents presented in the portfolios are tasks of research

A number of 310 students in their second and third year of study answered the questionnaire. The respondents are currently students of several faculties at Babes-Bolyai University (FPSE, FIF, FSEGA, and FSPAC). All of the respondents are preparing to become teachers, because they are students either in the specialization of the pedagogy of primary and preschool education or they are enrolled in the pedagogical module. The students from first year were not included because at the beginning of the university studies (first semester) they have not experienced yet many approaches such as assessment or learning strategies.

The survey included 4 questions. Depending on the answer given to the first question, it was divided into two subdivisions: the Digital Portfolio and the Classic Portfolio. The answers with most respondents were highlighted.

### 4. Results

During the faculty it is a common practice for students to make portfolios for the purpose of assessment, or during the semester as a form of learning.

Most often the content of the portfolio dedicated to a particular discipline is established by the teacher at the beginning of the activity or set as a form of final evaluation or a current one.

Sometimes the portfolio is made by the student on his own initiative as a collection of information, materials, presentations etc. for one or more disciplines.

The first question concerned students' experience with portfolios in general.

documents, presentations or other topics that involve the use of the computer, in the end it is required to put them together to make that printed portfolio.

Another issue addressed by us in this questionnaire refers to the stated purpose of the portfolio, whether it is classic or digital.

That is, whether it is used for learning or evaluation. In the first instance, the portfolio is valued for evaluation, formally appearing as a form of evaluation. "The portfolio is a form of complex, longitudinal evaluation, designed in a long sequence of time, which offers the possibility to issue a value judgment, based on a set of results." (Cucoş, 2008, p. 140).

But in the perspective of digitalization of the process, we find a refined opinion on this aspect. Hence, electronic

### 2. Was the digital/classic portfolio used as a form of learning or assessment?

The answers were as follows:

<i>Answer</i>	Section 1- DP (81 students)	Section 2- CP (229 students)
<i>Evaluation</i>	31 (38.3%)	<b>167 (72.9%)</b>
<i>Learning</i>	<b>48 (59.3%)</b>	56 (24.5%)
<i>Other (both-evaluation &amp; learning)</i>	2 (2.5%)	6 (2.6%)

**Table no 2.** Regarding the answers of the question number 2

In higher education, portfolios are used primarily for evaluation purposes, but the dimension that they have is much more complex, because the development of a portfolio requires active involvement in the learning activity and especially in the selection of information and information sources.

We note here that students who worked with classic portfolios developed them for evaluation purposes, and those who used digital portfolios used them as learning tools. Here we observe the nuance that differentiates the

### 3. Do you prefer the digital portfolio to the classic one?

The answers were as follows:

<i>Answer</i>	Section 1- DP (81 students)	Section 2- CP (229 students)
<i>Digital</i>	<b>69 (85.2%)</b>	72 (31.4%)
<i>Classic</i>	12 (14.8%)	<b>157 (68.6%)</b>

**Table no 3.** Regarding the answers of the question number 3

To this question we expect that most of those who worked on the digital portfolio would answer that they would like to work in this way and those who have worked with the classic portfolio would want to work in the classical way. Most have responded this way, indeed. But we find that many (31.4%) of those who worked in the classical way, want to work digitally and that some (14.8%) of those who worked electronically prefer the classic version.

portfolio is a "personal digital collection of information that describes and illustrates knowledge" (Catalano, 2018, p. 114). We see that between the two definitions we have a subtle difference in approach: the classical portfolio generally aims at evaluation and results, and the electronic one supports the construction of knowledge.

The second question was (for both subdivisions):

two approaches of the portfolio. The digital one extends the possibility to personalize the contents and to use multiple ways to build it.

For either, digital or classic portfolio, we have about the same percentage (2.5% - 2.6%) in which students claim to have used the portfolio for both processes, evaluation and learning.

The third question referred to the students' preference for the preferred portfolio category:

We believe that for those who worked in the classic portfolio version, it was easier to stay to what they already knew. Perhaps the challenge of working in the digital is too abrupt for some students. On the other hand, we noticed that at the end of the questionnaire, among those who did not work with digital portfolios until that time, were persons who would try this approach as well in the future.

The last question was:

#### 4. *Would you be willing to make digital portfolios in the future/as well?*

The answers were as follows:

**Table no 4.** *Regarding the answers of the question number 4*

<i>Answer</i>	<b>Section 1- DP (81 students)</b>	<b>Section 2- CP (229 students)</b>
<i>yes</i>	<b>76 (93.8%)</b>	<b>215 (93.9%)</b>
<i>no</i>	5 (6.2%)	14 (6.1%)

At the last question we tried to capture the students' desire to work only with digital portfolios. The majority percentage was favorable to this way of working with the e-portfolio, which is a strategy often used in academic learning and evaluation.

#### 5. Discussions

The good news is that most students, 291 out of 310 (90.2%), total from both sections, regardless of the subdivisions of the questionnaire answered (DP or CP), at the final question answered that they would like to work digitally. We think that it would be important for teachers to give them the chance to work this way. It is also to be noted that everyone who answered the questionnaire is preparing to become teachers, so we outlook that they already have a vision for the future.

We believe that the openness of students to whatever involves using a device is very large and we should take advantage of it.

If we were to identify some limits of our brief investigation, it is the limitation in the selection of the students, their number and the lack of argumentation of their answers. This study that we proposed is only a preview of students' willingness to change a relatively simple and long-term benefit, the transaction from classic to digital portfolio.

But, the big challenge for all the students will be to ask their teachers to accept they will work only digitally for the tasks or assignments that involve the elaboration of a portfolio.

#### 6. Conclusions

The answers to this questionnaire confirmed that the teachers are still working on the traditional model with the majority of the students. The percentage of those who have worked on digital portfolios is small, but existent, which gives us hope that students and their teachers are ready for new challenges.

We have reviewed the numerous benefits of using the portfolio above: making use of the technological part, organizing learning, assessment or both, keeping work in digital format, even saving the trees and so on, but the big challenge for the teachers is to find the magic formula that keeps the interest of the students for their discipline. And one of the greatest attraction of the last years is obviously the use of technology on different devices, networking applications, etc. So, maybe that could be the key to the students' mind and heart: to give them the possibility to make decisions, to choose contents, to search for information or do research online by using the virtual library, learning to select sources correctly, choosing the most suitable working tools, making presentations, videos, blogs, documents or anything that can be included in an online portfolio.

Therefore, the statement is reinforced, we cannot have quality in education without supporting progress and encouraging the use of strategies that include technology.

#### Authors note:

**Constantina Catalano** is Assistant Professor in the Department of Educational Sciences, Faculty of Psychology and Educational Sciences, Babeș-Bolyai University, Ph.D. in Educational Sciences. Her research is in the field of academic learning, focused on collaborative learning strategies, CSCL, alternative education.

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