

## Contributions of the digital portfolio for the evaluative praxis in higher education

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**Abstract.** This article presents a qualitative research of the exploratory type carried out with 21 masters students who work in different levels of education and in different areas of knowledge – always having as background, the investigation of possible ways for a critical, reflexive and transformative pedagogical practice and aimed to analyze the contributions of a lived experience with the digital portfolio as an evaluation strategy with Masters students in Professional and Technological Education in Network of a Professional and Technological Education Institution in Curitiba given in the first half of 2018. The data were collected from a questionnaire that allowed to perform the Content Analysis from the perspective of Bardin (2011). It is concluded that the Digital Portfolio promoted the opportunity for the development of an innovative practice for evaluation of learning, based on the construction, reflection and self-evaluation of the process, in fostering creativity, in establishing a partnership between students and researchers and in development of the autonomy of teaching and learning among all involved.

**Keywords:** digital portfolio; evaluative praxis; higher education.

### [es] Contribuciones del portafolio digital para la praxis evaluativa en la enseñanza superior

**Resumen.** Este artículo presenta una investigación de enfoque cualitativo del tipo exploratoria realizada con 21 estudiantes de maestría que actúan en diferentes niveles de enseñanza y en diferentes áreas del conocimiento – teniendo siempre como telón de fondo, la investigación de los posibles caminos hacia una práctica pedagógica crítica, reflexiva y transformadora y tuvo como objetivo analizar las contribuciones de una experiencia con el empleo del portafolio digital como estrategia de evaluación con los estudiantes de la Maestría en Educación Profesional y Tecnológica en Red, de una Institución de Educación Profesional y Tecnológica de Curitiba ministrada en el Imer semestre de 2018. Los datos han sido colectados a partir de un cuestionario que permitió realizar el Análisis de Contenido en la perspectiva de Bardin (2011). Se concluye que el Portafolio Digital promovió la oportunidad para el desarrollo de una práctica innovadora en la evaluación del aprendizaje, pautado en la construcción, reflexión y autoevaluación del proceso, en el fomento de la creatividad, en establecer acuerdos de asociación entre los alumnos y los investigadores y en el desarrollo de la autonomía del enseñar y aprender entre todos los involucrados.

**Palabras clave:** portafolio digital; praxis evaluativa, enseñanza superior.

**Summary.** 1. Introduction. 2. The portfolio: from paper to digital. 3. Research methodology. 4. Digital portfolio as an evaluation instrument: analysis and discussion of data. 5. Final considerations. 6. Bibliographic references.

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### 1. Introduction

The uncontrolled expansion of information has directed education to extremely complex changes characterized by the unceasing search for knowledge and the necessary confrontation of these great transformations. These transformations submerge from the process of globalization, a paradigm shift in science, the demand of an education that values lifelong learning, the accumulation of information and the confrontation of the pre-eminence between science and technology.

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Thus, the teaching learning process is seen as a dynamic action, in which the student assumes the role of subject, builds internal representations from their previous knowledge, solves significant and real problems and with this, starts to explore possibilities, invent solutions, to cooperate and to (re) signify their learning. The teacher, however, needs to act with a critical view of the formative process and promote “learning to learn” throughout the learning process. The methodology used in the pedagogical action, in turn, must be based on questioning, teamwork, expanding research time, reducing expository classroom spaces and differentiated forms of learning that can provide moments for creating and provoking challenging situations. To do so, the educational space is organized based on dialogue, encouraging a liberating and democratic action, provoking critical reflection (Morin, 2002); (Behrens, 2005;2006) and the formative process is based on pedagogical practices that bring in their guiding axes innovations, mainly in relationship to evaluative praxis. And independent of the historical period, it is one of the great nodes of education, of teaching work and it has been the object of great discussions among the researchers of the area.

However, in assessing student learning, the teacher must understand that it evaluates the educational process offered. That is, “as work develops, evaluation is also done. Learning and evaluation go hand in hand – evaluation is always helping learning” (Villas Boas, 2010, p. 29). However, if there is no expected learning, it means that this process failed to fulfill its purpose.

This way, every learning situation is realized through two situations that are in a vertical and horizontal continuum, in which students need to be led to learn to think about what they are doing. The intention is not only to lead the student to solve a certain problem, but to get him to explain how he came to the solution and, through critical reflection, to argue about the chosen path. Reaching this level of cognitive maturity, the student needs to try experiences that help this student to develop more elaborate and more complex thinking skills.

In this context, the digital portfolio presents itself as an evaluating strategy with potential for critical reflection on pedagogical practice, by students and teachers. It specifically leads the teacher to reflect about what is most important in student learning, as well as their teaching approaches and strategies. In this perspective, this paper analyzes the contributions of a lived experience with the digital portfolio as an evaluation strategy with the students from Master’s Degree in Professional and Technological Education in Network, from an Institution of Professional and Technological Education in Curitiba – Brazil – ministered in the 1<sup>st</sup> semester of 2018.

## 1. The portfolio: from paper to digital

The term portfolio, according to Torres (2008) originates from the word “*portafoglio*” (a folder that holds loose sheets – not necessarily loose). It derives from the Latin verb “*portare*” (transport) and from the noun “*foglio*” (sheet) and it designates the folder that contains drawings, photos, texts, music charts, reports, tests, etc., from different professionals or students. Originally its conception came from the world of arts, extending to journalism, architecture, with the sense of collection from significant works from these professionals (Torres, 2008).

The portfolio, according to studies by Salazar & Arévalo (2019): i) begins to be used in the 1970s in the United States, where it is assumed by the North American educational community as a tool for methodologically improving the learning assessment process focused on quantitative and qualitative aspects; ii) it was initially used in English-speaking countries, such as the United States, Canada, United Kingdom and later on in Spain, which allowed its use to be extended across all continents; iii) in the 1990s the elementary school began to be implemented to address the deficits in standardized assessments applied to students from minority groups who learned English as a second language; iv) it has been implemented in high school and higher education as a tool to collect student/teacher work to document classroom teaching experience; and v) currently, it has been the object of research in the university environment.

It is defined as a purposeful collection of student work that tells the story of one’s efforts, progress or performance in a given area (Arter; Spandel, 1992) and as an evaluation procedure that allows students to participate in the formulation of the learning objectives and to evaluate their progress, being active participants of the evaluation. (Villas Boas, 2010).

Based on these concepts, we understand that the portfolio links the evaluative proposal to the pedagogical work, where the student becomes a participant of the educational process, making decisions, making choices, not only complying with didactic rites established unilaterally, corroborating with the proposal of a significant learning.

The portfolio proposition, according to Behrens (2006) has two interconnected purposes, to procedurally evaluate and register the methodological process, in which when choosing the portfolio, the teacher has the possibility to evaluate throughout the entire process, give feedback and to compose the final production retaking the parts in a whole.

However, the option to evaluate through the portfolio requires well-defined pedagogical strategies and it can initially be characterized as a difficult, complex and very time-consuming task, as it should benefit any type of student – the uninhibited, the shy, the one who likes to work in group and the one who does not like it; the one more or less motivated, the one who likes to write and the one who does not like it (Villa Boas, 2010). That is, it should encourage and be flexible enough to allow all students to develop the proposed activities and that they do not learn

equally, so that they do not have the same prerequisites that would enable an equal and measured learning through the same criteria.

In this perspective, it is perceived that the portfolio is much more than a collection or physical grouping of the activities carried out by the students during the pedagogical process and more than a folder where their works are archived, since the construction of a portfolio requires the selection of the works performed through critical and careful self-evaluation, which involves judging the production quality and the learning strategies used. (Villas Boas, 2010).

Each portfolio, for Barton and Collins (1997) is a unique creation because the student selects the learning evidences and it includes reflections on the developed process, in which requires the understanding of the proposed content and in an explicit way, self-expression and the self-evaluation of the author.

In this sense, the portfolio is presented as a consensual evaluation proposal, where both student and teacher are benefited by its construction process, being possible to identify difficulties, achievements, needs to retrieve previously seen contents and, mainly, the student's view about the pedagogical process and its social function. Thus, the student is motivated to try to understand that there are gaps between the proposals of strategies and actions of the teaching-learning process. However, it is up to him to critically reflect on his abilities and capacities in acting effectively and resolutely. In this way, the portfolio can be characterized as a guiding axis of a way of learning to learn and allows the student to investigate the knowledge construction process continuously.

The portfolio, according to Andrade Filho (2011), allows five actions for the pedagogical work, being: i) to organize the pedagogical work in a non-fragmented way; ii) to think about the pedagogical work, that is, reflect collectively on the action; iii) to plan and propose interventions based on what is visualized in the portfolio, of what was selected and cataloged; iv) to reflect on the proposed interventions, from: reflection on action, on action and reflection on reflection in action and; v) to reorient the pedagogical work based on the education theory, change what has been observed or to continue a process of change through observation and reflection.

There are many benefits in using the portfolio, especially in regard to the critical reflection processes in and of the educational context. Besides providing, according to Goes (2014), a longitudinal comprehension – which allows to analyze the evolution of facts – and multidimensional – which allows to observe the different dimensions of the pedagogical practice –, the portfolio, through an appropriation richer and more detailed of reality, allows that reflection is not restricted only to the end of the teaching-learning process, on the contrary, the reflection on action and the reflection on reflection in action (Schön, 2000) – favors a continuous thinking about the practice and, consequently, a constant intervention about it.

However, with the new interaction spaces and the constructed knowledge that emerged from the technological evolution and the advent of the Internet, the social relationships, the educational practices and the pedagogical strategies have been re-signified through these online interfaces. By transposing the benefits of the paper portfolio for the current context of the technological transformations, the Digital Portfolio emerges as an alternative that gives greater agility and visibility to the strategies of registry and reflection on educational practices.

The terms “digital portfolio”, “electronic portfolio” and “e-portfolio” are different expressions currently used in the educational context to refer to the portfolio prepared in the digital space and that represent a selection of papers, developed both by students as well as products derived from their education and by teachers to share their reflections and experiences on the educational act (Cortés; Pinto; Ines, 2015).

The Digital Portfolio surpasses the geographical limits of the classroom and allows that the student mixes in its construction the different formats through all the available resources in the network and they become dialogical spaces periodically fed by shared information and knowledge constructed collectively, constituting in a potential democratic universe of learning and reflection. With this, it is related to the communication and convergence of the media, combining the texts already characteristic to images, videos and audios that help and make learning more enjoyable. This convergence of media enables the interlocution of authors with readers assigned to the digital Portfolio, dynamism and interaction that allows it to exceed the limits imposed by the current educational process and proposes a more active and relational learning space.

In general, the Digital Portfolio has helped students to become critical thinkers, helping in the development of their writing and communication skills and according to Quiroz et al (2018) it promotes students' assertiveness in decision making, critical participation, action awareness, active collaboration through different activities, teamwork, communication, management, bonding and social responsibility. Also, according to the authors, this tool allows the teacher to project, monitor and evaluate the level of learning achieved by the student, who, in turn, when performing their evaluative activities can self-evaluate oneself (Quiroz et al, 2018).

In comparison to the portfolio, the Digital Portfolio gains a prominence, according to Goes (2014) for being more:

- Inviting, interactive and dynamic: because the digital format and the multimedia resources offer new configurations for the visualization of texts and images and for the interaction with the conveyed content;
- Economical: since it replaces the paper and printings used in the portfolios;
- Affordable: since it allows access at any time and place – different from the paper portfolio that usually only has one printed copy available at the end of the process;

- Informational: since the hyper-textual possibility and the wealth of information available in the web of these interfaces, it enables the contact with the information, as well as the crossing of information from the Digital Portfolio with those available in the Internet;
- Democratic: since it allows the access to posted content that derives the process of evaluation not only to the teacher, but also to all participants from the pedagogical process. The expression of opinions and the contributions given to the posted content, through these resources, allows the interlocution of different voices, as well as the participation of a greater number of people in these interactions;
- Relational: since the construction of knowledge in the process of building the Digital Portfolio is more relational, when it relies in the effervescence of dialogues and conversations present in online environments.

For these and other aspects, the Digital Portfolio is presented as a rich strategy for the teacher's evaluating praxis, since it allows the creation of a differentiated educational environment and aligned to the demands originated by the technologies of information and communication. More than this, the incorporation of the Digital Portfolio into its teaching profession favors the continuous movement of critical reflection of its pedagogical practice, in which the exercise of writing, publication of thoughts and sharing of knowledge, brings out the essential aspects about their actions, teaching strategies, content selection and student learning.

Thus, the more individualized and introspective character present in the paper portfolio is partially diluted in the Digital Portfolio, since the partnership in its construction authorship, transforms the writing and its registry in a collaborative and shared process. The echo provoked by "only one voice" has, in the Digital Portfolio, a multiplying effect which allows that this strategy be the result both of the expression of the teacher and the manifestation and interlocution of several voices that, mutually, reflect knowledge and reflection on teaching (Goes, 2014).

For all this, the Digital Portfolio, when used in a meaningful perspective and, therefore, critical, reflexive and autonomous, can be characterized as a space of construction, re-signification and sharing of knowledge.

It is also important to highlight, the ethical dimension of the work with the Digital Portfolio, in which, by the public character of this strategy, there is in the narratives and registries of the authors and co-authors, a personal and private component that must be considered. In narrating their experiences, explaining thoughts, values and visions, the author reveals particularities of its context and of its personal perceptions. Such publicity may conflict with the right that authors and coauthor have to maintain their privacy, to some extent, preserved. In this way, the dichotomy between privacy and publicity is inserted, linked to the work with the Digital Portfolio that, to be overcome, needs prior agreements and the collective definition of the criteria for the publication of information and images with support, including documentary (Goes, 2014). Thus, it is important to continuously discuss the theme so that it does not become something impeding in the work with the Digital Portfolio, mainly, so as not to affect the analysis of the critical-reflective processes of the productions of the authors and their co-authors.

That said, it is important to evaluate to what extent the spontaneity of writing in the Digital Portfolio is being impaired and how it is possible to control the audience so that the pleasure and the disinhibiting of the writing are not affected (Goes, 2014).

We perceive with the reflections made so far, that the use of the Digital Portfolio as an evaluation strategy is a continuous process and the relationship between teacher and student during the teaching and learning process becomes more interactive, collaborative and democratic. Teacher and student, sometimes, exchange roles. The teacher becomes the mediator, the moderator, the facilitator and the student is the reflexive, critical and autonomous apprentice, able to make decisions about his own learning and his forms and learning times.

This new configuration has impacts on the learning of both, in which this partnership, allows those who teach to learn when teaching and those who learn to teach when learning (Freire, 1996). In this relationship which includes multiple facets due to interaction and mediation of learning, which for Machado (2016) demands from the mediator openness to learn and a reflexive attitude to his mediational practice, focusing on the creation and recreation of pedagogical strategies, besides the clarity and intentionality about the educational principles which guide their mediational action.

The implementation of the digital portfolio in the evaluation process allows the teacher to open a strategic gap to project, systematize and to feedback the pedagogical action that is developed in the classroom (Briceño; Gamboa, 2011). In order to make this possible, according to Salazar & Arévalo (2019) there are needs to be an active, dynamic and proactive relationship among teacher, student and education goals they wish to achieve. Also for the authors, only from research processes and the systematization of different pedagogical approaches, it will be possible to recognize the potential of using the digital portfolio for different professional fields and their contributions to the teaching, learning and performance evaluation process of the student (Salazar; Arévalo, 2019).

Thus, from a pedagogical perspective, the digital portfolio is an interesting teaching tool for pedagogical innovation: i) facilitating reflection and knowledge construction, educational task planning, individual responsibility and introspection, collective intelligence and education processes customization by the student (Cabero, López, Llorente, 2012) and ii) it promotes the development of critical and self-reflective judgments by the participants, not only in front of the final product, but also in the construction process and knowledge generation (Cortés, Pinto, Ines, 2015).

Finally, the technological evolution has brought alternative forms for the construction of portfolios. However, in educational terms, this is not just an updated or enriched technological version of paper portfolios, nor it is merely a

way out of the limitations associated to the “paper” version, but it provides new possibilities that, up to a long time ago, were not available in more conventional formats and versions for implementation contexts.

## 2. Research methodology

This article analyzes the contributions of a lived experience with the digital portfolio during a research of qualitative approach of the exploratory type carried out during a continuous training, in the meetings of the discipline “Theory and Pedagogical Practice in Teaching and Learning” of the Masters in Professional and Technological Education in Network, from an Institution of Professional and Technological Education in Curitiba given in the first half of 2018.

The process of continuous training was developed – with 21 Masters’ students who work at different levels of education and in different areas of knowledge – always having as background, the investigation of possible paths for a critical, reflexive and transforming pedagogical practice.

For that, theoretical discussions were proposed, based on individual and collective readings from the basic bibliography and search for the theoretical and practical assumptions about: a) knowledge paradigms, educational theories and teaching theories; b) objectives of education and the contemporary world; c) critical pedagogy and the theoretical clash with the contemporary educational theories; d) pedagogical theories, formative processes and their implications in the educational practices, in teacher training and in the organizational management of educational processes in the professional and technological education.

Based on this theoretical framework, the masters’ students, once a week, undertook diversified evaluative activities. After the discussions of the topics proposed in the classroom, they carried out individual and collective productions and made them available to the whole group in an individual and specific folder of Moodle – a management system that enables the administration of online educational activities – made available by the Teaching Institution.

As they developed their productions, the masters’ students, continuously, prepared and organized their digital portfolio. The evaluative activities were pedagogically structured for the weekly delivery, but the students could opt if, this delivery would occur during or at the end of the process.

At the end of the discipline and for its evaluation, it was chosen the application of a training questionnaire since this research methodology has the “purpose of obtaining information about knowledge, beliefs, feelings, values, interests, expectations, aspirations, fears, present or past behavior, etc” (GIL, 2008, p. 121).

This training questionnaire was: i) organized by the discipline’s teacher; ii) an open question prepared: “what are the contributions and pedagogical skills developed by the professor and student in the use of the digital portfolio as an assessment strategy?”; and iii) applied in person at the last meeting of the discipline. Of the ones who answered it, 13 are female and 08 are male working in different knowledge areas, such as: Administration, Psychology, Physical Education, Law, Pedagogy, Liberal Arts, Physiotherapy, Physics, Philosophy, Economics, among others.

In the answers of the 21 questionnaires, the Content Analysis (CA) was performed. CA is defined by Bardin (2011) as the set of methodological instruments applied to diverse contents and it obeyed the following phases: data collection, data preparation, coding, categorization and content analysis.

Data collection was performed by applying the questionnaires. In data preparation, the “floating” reading of all collected was performed and the answers that presented significant contribution to answer the research objective were selected. In coding, it was performed with the creation of codes for further categorization. The analysis categories of this research were the answers to the open question and in order to identify its incidence, each participant received an identification code. The categorization was performed, isolating the elements and separating them according to their messages, through categorical analysis, which consisted of the progressive grouping of the categories: (initial → final) into comparable units of record (words, sentences, paragraphs) and with same semantic content. This categorization went from the whole (initial categories) to the particular (final categories).

In order to perform the content and direct the writing process, the discussion and analysis of collected information, we performed i) the reading of the answers of all the masters students – already grouped by their semantic meaning; ii) reflection on each analysis category and; iii) the search for support or theoretical support for the interpretations to be subsidized and to support the analysis of the masters students’ perceptions regarding pedagogical skills developed in the teacher and the student in the use of the digital portfolio as an assessment strategy.

## 3. Digital portfolio as an evaluation instrument: analysis and discussion of data

The procedures of organizing the questionnaires allowed the identification of two initial categories regarding contributions and the pedagogical skills developed in the use of the digital portfolio as an evaluation strategy: i) in the teacher and ii) in the student. The initial categories are the first impressions about the studied reality. In order to define them, the whole corpus of the analysis was separated, grouping the answers from the respondents based on the intentional inquiry in the questionnaire.

Similarly, as the chains of meanings bound together by content similarity and through the progressive separation of these initial categories intertwined, they were led to the final categories. From the refinement of the two initial

categories, eight final categories emerged and were constituted as indicators of the pedagogical skills developed in the use of the digital portfolio as an evaluation strategy. The final categories represent the synthesis of the apparatus of meanings, identified during the study data analysis and it is through them that we promote interpretations, infer results and we respond to the objective proposed for this research.

At the end of the analysis process, respondents' perceptions of the contributions of the digital portfolio as an assessment strategy, indicate that the final categories for similar and complementary teacher and student codes, of which those with the highest incidence were:

### **Promote critical reflection**

According to 16 students, the evaluation through the Digital Portfolio promotes the **critical reflection**<sup>3</sup> on their productions. It was through critical reflection during the discussions and production process that the students analyzed their productions, made up arguments to support their own opinions through attention, categorization, selection and judgment and chose to redo them whenever they deemed necessary. Dewey's (1997) judgment formation of the present situation is developed when the individual thinks and reflects on past experiences and manages to identify similarities between past and present experiences. The teacher portfolio is an instrument that allows teachers to build knowledge, and in turn it functions as a reflection element and continuous improvement of their own teaching practice (Salazar; Arévalo, 2019). From that moment, the student assumes the responsibility in the planning, organization and evaluation of his learning.

### **Develop autonomy**

According to 13 students through critical reflection during the construction of the Digital Portfolio, it improves the knowledge produced favoring the development of **autonomy**. This principle is directly linked to the choice of the master's degree student to organize and present the production developed in the construction of the Digital Portfolio and to look for different ways of learning. They were encouraged through procedures in that master's degree students organized their own studies, searching for sources of information and knowledge, and building a knowledge linked to their own learning objectives, through **research**.

### **Stimulate Research**

According to 19 students the evaluation through the Digital Portfolio, the stimulation to **research** was configured as a fundamental condition for the achievement of the media's intellectual autonomy. For this, they were encouraged to learn how to research and master different forms of access to information, as well as to develop their critical capacity to evaluate, to gather and to organize much more relevant information.

### **Respect to individuality**

In order for the evaluation construction process to be concluded and the Digital Portfolio completed, according to 08 students, an individualized look at the work of each student was carried out. The principle of **individuality** was established by the close and continuous monitoring of each master's student, respecting their particularities, allowing teachers a more detailed vision of where the student was, where he could arrive and which strategies could help in the process to be more effective and by doing that the student himself actively participated in the construction of his knowledge. The differential, in this case, is that the opportunities were applied in a unique way, perceiving and respecting the limitations of each one of them, with a design of evaluation activities based on the conceptions of the different participants, combining evolution and adjustment in each concrete learning situation.

### **Favor self-evaluation**

According to 11 students, a gradual action of critical reflection, autonomy, research and individuality was carried out to continuously evaluate their progress, favoring the exercise of **self-evaluation** during the research process, taking as a reference, specifically for this group of teachers, the learning objectives, as well as the established evaluation criteria. Thus, the pedagogical work and the evaluation ceased to be the sole responsibility of the teacher and the partnership was a guiding principle of activities through collaboration and interaction from which the authorship of the students and the co-authorship of the teachers' productions were derived.

<sup>3</sup> The development of the critical reflection in the learning and teaching process offers several benefits, among which: i) improvement in attention and observation; ii) improved focus on reading; ii) improved ability to identify the key points in a text or a message, rather than being distracted by less important material; iii) improved competence to answer to appropriate points in a message; iv) the ease of adopting own points of view; and v) the analytical competence that can be applied in a variety of situations (COTTRELL, 2005).

## Encouragement to collaboration

According to 09 students the evaluation through the Digital Portfolio stimulated **collaboration**<sup>4</sup> and favored the partnership between teachers and minimized the verticalization and centralizing actions and attitudes. Collaboration was advocated by teachers as a methodology with the potential to promote a more active learning by stimulating i) critical thinking; ii) the development of interaction capacities; iii) the negotiation of information and the resolution of problems; and iv) the development of the self-regulation capacity of the learning and teaching process (Torres; Irala, 2014). This way of learning and teaching has made the students more responsible for their learning, leading them to build knowledge more significantly. This collaborative action between students and teachers, based on the premise that knowledge is socially built, in the interaction between the subjects and their practice can assume multiple characterizations, and there may be dynamics and results of different learning for each specific context. However, for the development of this collaborative action involved planning, development of common actions, the establishment of connections, reflection on the process together and this methodology impelled the sharing of knowledge and discussions around the proposed themes, the clarified doubts in which it arrived to collective learning and to individual knowledge, through the concepts of mutual help, sharing, discussion, interaction and a common end to learning and the construction of knowledge (Torres; Irala, 2014).

## Promote interaction

For 12 students the evaluation through the Digital Portfolio promoted **interaction** and thus, it was characterized as one of the most important factors for the success or failure of the production process. Communication, interaction and interactivity were basic elements for the learning and teaching process to take place. The interaction allowed maintaining a communication relationship between students and teachers, being a strategy in which the systemic research attitude was stimulated and extremely useful in the understanding of the teaching and learning process, through their cognitive, affective and action dimensions.

## Develop authorship and co-authorship

Finally, the launching of the evaluation process through the Digital Portfolio for 06 students, developed the **authorship and co-authorship** of the productions during the organization of the pedagogical work and in the construction of a new knowledge, now based and constructed from particular conceptions and life experiences and in which scientific productions were generated from the experiences in the research group that used the Digital Portfolio as an evaluating strategy.

Thus, experience has shown us that in addition to the essential characteristics of the evaluating activities proposed in the composition of the Digital Portfolio and its direct commitment with the learning process, four basic principles deserved attention: i) critical reflection; ii) research; iii) individuality; and iv) autonomy. Through these principles the construction of the Digital Portfolio promoted: i) collaboration; ii) interaction; iii) self-evaluation; and iv) authorship and co-authorship in those involved in the process. After this experience, we systematize in Figure 1 the learning-teaching process developed during the construction of the Digital Portfolio.

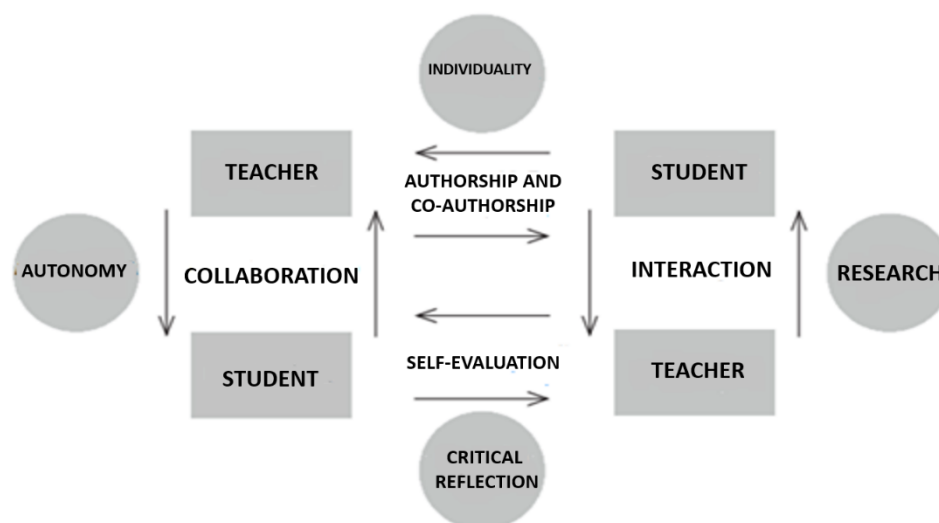


Figure 1. Evaluating praxis through the Digital Portfolio

<sup>4</sup> The concept of collaborative learning is related to the concept of learning to work in group and it has been recognized, even in the academic world, as a methodology with the potential to promote a more active learning by stimulating critical thinking; the development of interaction, information negotiation and problem solving capacities; to the development of the self-regulation capacity of the teaching-learning process (Torres; Irala, 2014).

Considering this systematization, the Digital Portfolio becomes a reflexive, critical and autonomous narrative that has given each Master's student a voice, as an individual and unique learner in the process and in the multiple interactions between teaching and learning. The masters' students through interaction and collaboration interacted with the teachers and with the proposed themes and identified their own learning strategies, giving them meaning, authorship and co-authorship.

It is a framework that places the student's and teacher's reflexive practice within a dynamic process of continuous interaction in which the teacher has the role of coordinator, mediator and facilitator of learning. In order to play this role, the teacher needs to reflect together with the students, to show them the new paths, means and procedures necessary to acquire new knowledge. This process will always be unfinished, however, finite and intentional.

#### 4. Final considerations

Our objectives in proposing an evaluative process through the Digital Portfolio are far from those that seek to find solutions or definite recipes for good pedagogical practice. Our intention was to reflect on an evaluative praxis that would bring some innovation to everyday pedagogical processes.

In the discussions in the investigative process through the construction of the Digital Portfolio as a research procedure it was possible to observe that teaching and learning can welcome a dynamic, constructive, reflexive process that subsidizes the active and autonomous participation of the participants producing knowledge.

The masters' students and teachers realized that it is urgent to prioritize learning, to turn the attention to their students and their needs and to seek new paradigms that meet these demands. In order for this to happen, one must shift the focus from "reproduction" to "production" of knowledge. In this sense, the process evaluation must be seen as a continuous process and not as an end result, watertight and definitive.

The experience carried out in the research group that aggregated the individual and collective activities proposed in an evaluative process through the Digital Portfolio, reflected the commitment and involvement of the masters' students mediated by the teachers. The elaborated productions presented significant results of deepening in the investigated themes and promoted the opportunity for the development of an innovative practice, based on the critical reflection, research, individuality of the process, promotion of autonomy, the establishment of collaboration and interaction among the masters' students and teachers and in the development of self-evaluation, authorship and co-authorship of teaching and learning among all involved. In this perspective, this study pointed out that:

- the diversity of activities to compose the evaluation process proposed for this discipline favored the formative process, since it contemplated all the masters' students' learning styles and with this, it favored the knowledge production process;
- choosing the Digital Portfolio as a pedagogical strategy was assertive, since the masters' students did their weekly activities, in a progressive movement of learning;
- the experience of the research teachers conducting the learning process in the identification of advances and difficulties of the masters' students, assisting them throughout the process.

A training process based on an innovative approach is extremely hard work, requiring a lot of dedication, commitment and patience. Each student learns in a different manner, has a rhythm of learning, interests and intrinsic motivations and the organization of a collaborative learning process must promote reflection, discussion and construction of a new knowledge, now based and built from particular conceptions, life experiences and a historical context.

That is, every evaluation process should provide opportunities for the exchange of knowledge experiences, meaning the possibility to build and foster innovative practices and the Digital Portfolio by positively influencing teaching, learning and evaluation, can create a new classroom concept: a place where learning is built according to the individual rhythm of each student, including the valuing of the reflexive thinking, experience, intuition and the knowledge of each individual and the belief that difficulties can be overcome.

Although we are still in an early stage of developing the Digital Portfolio implementation in educational contexts, we believe that they can become an interesting strategy that promotes reflection on teachers' practices and it has great potential in relation to curricular innovation.

The construction of the Digital Portfolio, as an evaluative strategy, allows the development of more participative learning environments, as well as favors each student's awareness of what and how he is learning.

The teacher plays a vital important role in the management of the process and in the effective support to individual learning. Although, they can be effectively built with the traditional means, the possibility of using digital means brings an enormous potential if it is conveniently integrated and used in the educational context. However, this implies in the domain of these tools, specifically in regard to their choice and suitability the methodological proposal and the objectives.



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