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Educational Technology to Support Reading Comprehension and Writing Competency Processes Through the Use of Writing in Virtual Learning Environments

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ABSTRACT

Information and Communication Technologies (ICT) have energized communication and facilitated interaction in society, eliminating spatial and temporal barriers and becoming an essential tool for the contemporary world. In the educational field, reading comprehension and writing skills, approached through purposeful writing practices mediated by ICTs, can have a significant impact on teaching and learning processes, for which it is essential that teachers encourage the development of digital and media competence through the renewal of their pedagogical practices, and guide students in the assertive use of ICTs so that they can participate in the construction of their own knowledge and contribute to the improvement of society.

Keywords: assessment of e-learning, collaborative learning, digital era, educational technology, pedagogies, reading comprehension, strategies, teaching, virtual learning environments, writing competence.

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I. Introduction

Society has changed. Nowadays, people have acquired new ways of relating, communicating, and searching for information, all thanks to Information and Communication Technologies (ICT), which have revolutionized and globalized the world much more by making communication more dynamic and facilitating the interaction and interconnection of people and institutions, eliminating spatial and temporal barriers, and becoming an essential tool for society.

ICTs are tools that contemplate immateriality, are characterized by their instantaneousness, and are found in the whole range of existing multimedia applications. They have their origin in the scientific advances produced in the field of information technology and communication, and can be defined as the set of technologies that support the development of telecommunications, information technology and audiovisual, with great deployment on the Internet, and whose main purpose is to facilitate and improve the quality of life of people through the advantages they provide, such as the processing of information from anywhere and at any time, from the use of computers, communication devices and software applications.

Information and Communication Technologies are present in almost all facets of daily life, becoming key factors in culture, economy, and politics with profound effects on the world population; and without a doubt, they have become one of the most important priorities in education. The situation of the coronavirus pandemic has forced humanity to live, at a global level, a totally new situation, and has led, among other aspects, to transfer studies and work activities to the home. Neither schools, nor teachers, nor students were prepared for this change and Colombia, like many other nations, faces great difficulties for children and young people to learn from home with the help of technology, which went from being so relegated in the classroom to being an ally in times of confinement.

Reading comprehension and writing skills strengthened through purposeful writing practices mediated by ICTs are of enormous importance as they affect teaching and learning processes at school and reveal new styles in which both processes and education itself are conceived and approached through new forms of socialization. But having a computer and a network connection, which is far from being part of the generality, is not enough to successfully face the challenge of education at home and, in general, of education in our days. It is necessary that teachers favor the development of digital and media competence through the renewal of their pedagogical practices and promote the empowerment of students towards ICT and because they are participants in the construction of their own knowledge and significant improvements in society.

Consequently, it is imperative to make an assertive use of virtual environments, which enable the communication of textual, auditory, and visual information, its time registration, synchronously and asynchronously, and are arranged for teaching and learning, as well as to be contemplated beyond their necessity in times of pandemic and home study.

The teacher has in his hands the raw material: the technological revolution of our time, thanks to which

people, today more than ever, are involved in reading and writing practices. These practices, oriented with a defined purpose, contribute to the significant development of skills in basic thinking processes and qualify reading comprehension, of substantial importance in modern society, as it is the basis for lifelong learning and strengthening communication skills, of great utility in the social, educational, and digital spheres.

This article focuses on analyzing the role of technology in the educational environment and as a tool to support the qualification of reading comprehension and writing skills through writing practices.

First, the status of teaching and learning in the digital age is described. Next, the pedagogies, strategies, and educational technology available to support collaborative learning are discussed. Finally, the concepts, methods, and tools for assessment in virtual learning environments are specified.

II. Teaching and Learning in the Digital Age

Information and Communication Technologies (ICT) emerged in the 1960s, but it was only in the 1970s that the possibilities they offered began to be known and implemented. The 1980s and 1990s saw the consolidation of this type of technology and a new era known as the knowledge society was born, based on information and communication technologies.

The evolution of ICTs, especially their interconnection through the network, is of great importance for the intellectual growth of the individual and his or her self-education, which is why it is essential to incorporate the use of technological tools and methodological and media strategies in school curricula for the organization of teaching and the learning process. This will make it possible to offer students a modern educational system that will give them the possibility of interacting with concepts and opinions of other people anywhere in the world, increase and strengthen their own knowledge, and become self-learners. But it is necessary not only for students to adapt to them, but also for the community of educators to make constant use of ICT tools as part of their academic training process.

The way of learning has changed and, therefore, the way of teaching must adapt. Facing the digital era, it is necessary to promote changes in the educational environment that equip students with digital and media competences that allow them to recognize technologies as a resource that can be deployed under their actions and, in this sense, to be able to search for what they want to learn, select information and communicate, strengthen learning and share their knowledge (Busquet-Duran *et al*., 2013). The implementation of projects and actions that integrate ICT in education and contribute to the qualification of the processes of reading comprehension and writing competence through writing practices that go beyond the reproduction of content, are valid proposals to give a new meaning to the class and an innovative look to the school, with epistemological and methodological supports in accordance with the historical moment in which the educational act takes place (Bates, 2015).

Digital and media competence refers to the set of knowledge, skills, and attitudes that a person must acquire in order to be critical, active and responsible in relation to information technologies and the media.

In the contemporary world, "learning is the equivalent of opening a door to a new way of perceiving and knowing, where our mind must adapt to the environment" (Viñals & Cuenca, 2016, p. 106). And among the basic learning that we would have to guarantee in all students is literacy (Coll, 2020). By implementing ICT in the processes of reading comprehension and writing competence through directed writing practices, teachers can interconnect their classes and capture much more of their students' attention, since through these tools' classes would stop being monotonous and repetitive, and would become attractive and innovative, thus achieving a meaningful and meaningful incorporation into the modern era.

Many teachers still do not decide to change their teaching methodology and adapt it to the way of conceiving knowledge nowadays, perhaps for convenience or for fear of making mistakes, and do not incorporate ICT in their classes because they do not understand very well what they consist of and are afraid of facing the unknown, delaying their necessary immersion in the innovative world of the technological era and relegating their students to traditional education, so little functional in these times. However, it is necessary to turn education around, to dare to tread new paths and focus on the technological progress brought about by this stage of modernization. Today's teacher must be trained to be at the forefront of the digital era and to provide meaning and the use in the classroom of everything that their students handle naturally as digital natives, in order to provide them with an education according to their needs (Prensky, 2011).

Since technological tools are revolutionizing society, the forms of education should not be alien to this revolution, which demands from teachers a change of role and teaching methods that allow them to implement a correct use of Information and Communication Technologies in all their subjects, not only taking them as a subject of the curriculum but as a content that transversalizes all areas. The change that is required nowadays must take place from a new conception of teaching that tends to the qualification of the processes of reading comprehension and writing competence with writing practices from which the interaction with the virtual generates in the student a taste for learning, by making use of resources that are familiar to him/her.

Although today's students, being digital natives, are fluent with technology, this does not necessarily indicate that they make a correct, useful and/or beneficial use of it for their personal development and learning, so the role of the teacher as facilitator of learning environments conducive to their students, becomes relevant. The transition from a traditional education to an education that considers the student as the center of all educational activity, recognizing his or her previous knowledge, needs, goals and interests, requires the use of means and resources that have some meaning for him or her. This delegates to the teacher the task of promoting truly meaningful learning, where learning is not a function of the means but of the method and writing

strategies used in favor of the qualification of reading comprehension and writing competence, taking into account the student and the contents and objectives of the curriculum, as well as his or her sociocultural context.

Technological innovations have provided society with new channels of communication and numerous sources of information that transmit models of behavior, forms of organization, attitudes, and values. The new information society demands the accommodation of the educational environment to technological tools and their appropriate didactic use, which implies knowing both the advantages and disadvantages they pose to education and reflecting on the new model of society and the consequences derived from them (Area, 2016).

In a digital world, education must be at the forefront. Information and Communication Technologies, with their advantages and disadvantages, are a great ally in the educational landscape and in the social and instantaneous dissemination of knowledge. However, a real and effective use of ICTs for the implementation of meaningful writing practices that strengthen the processes of reading comprehension and writing competence at school requires significant innovations in the curricula at all levels of education, in line with the needs of technological literacy in the midst of the 21st century.

XXI. Likewise, it is necessary to modify the pedagogical practice, both from the teacher's role as well as from the writing, reading comprehension and writing competence strategies implemented in their daily work.

Far from a vision of teachers as controllers of their students' actions in the classroom, their role should be that of someone who coordinates and facilitates their learning, in the midst of knowledge that is available online and abundant. In the digital era, there are tools that need to be taken advantage of, knowing how to be selective and opening a broad-spectrum and far-reaching perspective that allows us to approach the surrounding information and relate critically to it.

Students must be complemented and accompanied by the teacher in their learning process, an experiential and active process through which they can take advantage of modern technological resources and help them detect what is really important from what is not, guide their search processes, ask them to analyze the information found, guide them in selecting what they need and motivate them to interpret data, synthesize content and disseminate their own.

The access to knowledge available to humanity today is unprecedented. Today "we have gone from stopping our lives when we learn (going to school for two to four years, without working...), to learning in synchrony with life" (Siemens, 2006, p. 47). Therefore, more than providing students with knowledge, teachers must stimulate and be able to awaken in them curiosity and the exercise of asking and asking questions, as well as to develop their ability to learn to learn and make decisions, working in virtual learning environments with technological tools and services that allow them to carry out lifelong learning throughout their lives and in turn ensure their autonomy in contemporary society.

The virtual world is a space for social interaction that requires new knowledge and skills to learn to search for and transmit information and knowledge, and to construct and disseminate audiovisual messages. Competence is conceived as the ability to face complex situations and carry out diverse tasks adequately, mobilizing various know-how in context (Barriga, 2009), and today more than ever it is essential for students to be competent and to be able to participate in the construction of their own learning, giving them autonomy and providing them with intellectual tools that allow them to learn continuously throughout their lives. It is necessary to train students in Information and Communication Technologies so that they can intervene and develop in the new virtual scenarios, in which it is necessary to know how to read and write as a complement to the skills and abilities necessary to be able to develop in the telematic social space.

Living in accordance with the current era, taking advantage of all the resources it provides and using them to improve the student's learning experience, is a duty to which teachers are called. The adoption and use of Information and Communication Technologies in education has a positive impact on teaching and learning, as they can affect education and allow greater access to it. ICTs allow students to access education without limitations of time and space, and by providing the right environment and motivation for the learning process, they influence both the way they are taught and the way they learn.

Traditionally, literacy has been conceived as a set of skills and knowledge based on sound-letter correspondence, on the ability to verbalize a written document, to understand a text or to identify main ideas. With the inclusion of technology in the classroom, the paradigm of literacy in school becomes digital literacy, where the practice of literacy is no longer developed in a specific community, among interlocutors who share the same culture, with the same language and very particular expressive forms, but becomes broad and changing.

The qualification of the processes of reading comprehension and writing competence through meaningful writing practices in virtual learning environments can have a positive impact on student performance and achievement when directed through specific activities, which will contribute to promote better teaching and increase students' academic performance.

The current digital revolution gives a new twist to the supports of writing and to the technique of its reproduction and dissemination, as well as to the ways of reading, which have gone from stone to papyrus, from papyrus to manuscript, then to the printed book and now to digital forms such as the electronic book or e-book. These new supports go beyond the linearity of the written text, giving rise to hyper textuality, a new itinerary where the reader decides what to read with just a click and where digital written culture is framed by a set of dynamic practices that change at the forefront of the evolution of the technologies that make them possible.

In the digital era, the teacher is called to change the unidirectional transmission of knowledge for the horizontal exchange of knowledge, and in this sense, to learn to learn and to teach with meaning, for which he/she will sometimes have to relearn, and many times unlearn (Area, 2016). The new ways of teaching and learning place us in front of a

change of great magnitude. Traditional teaching methods, based on analogical methods with paper, pencil, eraser, book, a fixed space, and a predetermined time for study, are currently enriched thanks to new technologies and the construction of platforms, applications and online learning modalities that allow sharing information and building knowledge.

In this sense, student participation is fundamental for the acquisition of competencies in both subjects, as is the participation of the teacher, who is expected to be competent to take initiatives, make choices and decisions, as well as to innovate and develop in his students the ability to learn to learn and learn by doing. It is in this scenario where digital and media competencies acquire great prominence, and where the call is to train not as islands but with each other, while sharing the knowledge that is being built in the wide world of education and new technologies.

III. Pedagogies, Strategies and Educational Technology to Support Collaborative Learning

It is clear that the way of communicating, seeking knowledge and learning has been transformed. In the contemporary information and knowledge society, citizens are required to possess a wide range of competencies so that they can fully participate in its development. Currently, we have a wide range of digital possibilities that give new meanings to social interactions and knowledge itself, which is now focused on understanding the benefits of new technologies to accompany and improve reading comprehension and writing competency experiences through well-directed writing practices.

Information and Communication Technologies (ICT) are nowadays an essential component of 21st century education; they save resources, are available at any time and cross spatial barriers, allow to be selective when searching for what one wants to learn, to have fun in the process and to share knowledge. In addition, through judicious writing practices, they provide new opportunities to face the processes of reading comprehension and writing competence in an increasingly connected society, in which learning to work with others and collaborate is a fundamental competence.

Current education must go beyond the conventional and contemplate the use of ICTs in curriculum development, with the main objective of expanding students' way of thinking through the use of collaborative learning methodologies in virtual environments, which meet their training needs and allow them to build and share knowledge with others, because "knowledge is never learned alone and learning is never done alone, it is done with others" (Coll, 2020, p. 12). Technological tools offer a varied panorama of resources to search for information, teach and learn, communicate, and collaborate with each other, as well as to edit and publish content or information; they allow the creation of new knowledge networks, are conducive to collaborative work and optimize the exchange of information and the coordination of activities.

Collaborative learning is based on constructivist theory, which confers a fundamental role to students as the protagonists of their own learning process. Collaborative learning methodologies in the classroom involve students working in teams, where they are called upon to work in groups to try to solve a problem and achieve common objectives. Numerous strategies can be employed to get students to work together to achieve certain shared objectives for which each and every member of the team must take responsibility. There are a variety of collaborative learning patterns and techniques. Among the main collaborative learning patterns are the following (Barkley *et al*., 2007):

1) *Brainstorming*: Proposes a collaborative learning flow in a context where several participants must generate alarge number of ideas quickly.
2) *Jigsaw or puzzle*: It proposes a flow of collaborative activities for a context in which several small groups arefaced with the study of a large amount of information.
3) *Pyramid*: Proposes the collaborative learning flow for a context in which different participants are faced withthe collaborative resolution of the same problem.
4) *Simulation*: Proposes a collaborative learning flow for a context in which members of one or more groups play a role in a simulation.
5) *Pair problem solving by thinking aloud*: It proposes a flow of activities in a context in which students are grouped in pairs and must solve a series of problems.
6) *Think-Discuss-Share*: Proposes the collaborative learning flow for a context in which students are grouped in pairs to solve a problem without a single solution.

On the other hand, among the main collaborative learning techniques are those presented below (Hernández-Leo *et al*., 2019):

1) *Paired note-taking*: Students are provided with a structured activity to share individual notes, fill in gaps, check and review errors, and help each other to have better notes.
2) *Learning cells*: The purpose of this technique is to actively involve students in reflecting on the given content, to stimulate them to develop questions that provoke such reflection, and to teach them to check theirunderstanding.
3) *Fishbowl*: Students in an inner circle are challenged to engage in a high-level dialogue while those in an outer circle listen to the dialogue and critique the content, logic, and group interaction.
4) *Role-playing*: A situation created in which students deliberately represent or assume personalities or identities that they would not normally admit to in order to achieve certain learning objectives.
5) *Exam teams*: Students work in teams to prepare for the exams set by the teacher and take them, first individually and then as a group.
6) *Pass the problem*: Each group receives a problem, tries to solve it and then passes the solved problem to the next group. The last of the groups analyzes, evaluates and synthesizes the answers to the problem receivedand reports the best solution to the class.

Collaborative learning has multiple academic, social and psychological benefits, which have been widely discussed

by authors such as Kolloffel *et al*. (2011), Kozma and Anderson (2002) and Panitz (1999). Among the *academic benefits* are the fostering of metacognition and students becoming more responsible for their own learning by exercising greater control over the assigned task. *Social benefits* occur when environments are provided through which students can practice social and leadership skills and are encouraged to see the same situation from different perspectives. And the *psychological benefits* include providing students with a satisfying learning experience that allows the externalization of thoughts and emotions, which significantly reduces anxiety levels (García-Valcárcel *et al*., 2014).

Education is "a continuous dialogue between the "self" and the "other" (in the broadest sense of the word "other"), in which both are formed and transformed" (Biesta, 2016, p. 126). Technologies offer a wide range of possibilities for social mediation to create, favor and enrich interpersonal learning contexts. In collaborative learning mediated by ICTs, the creation of learning environments or communities among students facilitates the joint realization of activities related to the real world, including the objectives set for their approach. Technologies thus become a tool to help students acquire their learning in a much more efficient and meaningful way.

The use of technological tools that promote communication, collaboration and knowledge construction are essential nowadays to improve educational processes (Suárez & Gros, 2013). Collaborative learning supported by technology provides teaching scenarios for both students and teachers to interact and work together in any subject and there is a greater increase learning. Contributing to students' learning is to offer them better communication channels on par with tools that allow them to explore different sources of learning (Coll *et al*., 2008; and García- Valcárcel & Hernández, 2013; cited by García-Valcárcel *et al*., 2014).

The school, as a function of teaching, must create environments where students are allowed to participate proactively in their learning process, developing connected learning through networks that provide the opportunity to share practices, constructions, and experiences, as well as to analyze, understand and manage collaborative learning, setting objectives and goals and adopting a critical spirit to discriminate the sources of learning. Teachers have the task of promoting large-scale technological literacy that empowers students to make decisions and exercise full citizenship in harmony with an increasingly technological society.

New technological tools have amplified the social nature of learning and placed people at the center of the process, i.e., learning is nowadays characterized by the connection between people regardless of their experience, the place where they are or whether they are students or teachers; today everyone learns from others and with others. It is now a matter of rethinking what, how, where, when, why, for what and from whom one learns, where learning is promoted by the interest of sharing what one knows and making the acquired knowledge available to others.

In order to promote the qualification of reading comprehension and writing skills through writing practices in virtual learning environments, learning environments must be created that allow knowledge sharing and where students interact with their peers, teach each other and learn, for example, how to use new technology on a daily basis to perform a task and qualify learning. The teacher must tend to integrate educational projects through which learning environments are generated that take the student from individual work to teamwork. To this end, they should organize digital meetings that allow them to talk, read, write, share ideas, discuss, share news, and make decisions, as well as use solutions such as gaming to complement their classes.

Technology alone does not train students, nor does it help, guide, or advise them; hence the importance of the teacher's work in the education of the digital era, who, although not requiring complex technical knowledge in computers, must learn to make technological decisions. The teacher must contribute his knowledge, imagination, and creativity to, after having selected the topic, objectives, activities and evaluation strategies, design experiences that make the processes of reading comprehension and writing competence through writing practices, something meaningful, attractive and effective for his students, motivating them to reflect and reconsider a point of view through the art of asking and answering well posed questions. The call is then to break away from traditional forms of teaching in favor of others that make the construction of learning with others viable.

Learning in the digital era is based on co-creation, which implies going from being receivers to co-constructors of knowledge. In other words, knowledge is now built thanks to the joint activity of the people who participate in it, which makes knowledge synonymous with connectivity and dynamism in informal, flexible, and decentralized environments, and with respect to which the teacher should strive to make them safe and allow for the possibility of experimentation and tolerance to error, favoring the development of an ethical spirit.

The advantages of collaborative learning include the development of transversal competencies that facilitate the deployment of social skills, autonomy, problem solving, responsibility, initiative, and the capacity for reflection, all of which are highly relevant in 21st century education. For their part, ICTs become a source of motivation and capture the attention of students, facilitating their work, giving them autonomy, and adapting to their level, while allowing them to improve their learning, whether or not they have difficulties with it.

To form critical, constructive and active students who continuously reflect on their learning processes and become aware that such practices imply taking a position with respect to the context is viable through strategies that tend to interrelate them with new ways of learning through teaching with digital educational content, which, among other benefits, are varied and editable, allow copying, pasting, editing, re- editing, publishing and mixing in different contexts, and can be corrected and improved at any time and place.

Multimedia materials in digital environments and the Internet (videos, films, documentaries, simulations, photo galleries) are easy to use resources and can be used as

sources of knowledge in all subjects of the curriculum. It is time for the school to profile itself differently in order to teach more and learn better, taking into account the students and their contexts, in order to form them as beings capable of working in teams and contributing to the construction of a better society.

IV. Concepts, Methods, and Tools for E-Learning Evaluation

Evaluation is one of the fundamental elements in any educational process, as it supports learning by measuring students' performance, analyzing their achievements, assessing their competencies, and strengthening their skills. The stipulation of indicators to assess the academic performance of students and measure their level of performance requires coherence between the learning objectives, the competencies to be achieved with the subject matter and the activities proposed to make this possible.

Information and Communication Technologies (ICT) are tools that allow speeding up, optimizing, and extending the processes of reading comprehension and writing competence through appropriately directed writing practices. The development of teaching strategies supported by digital technologies is a process known globally as *e-learning*, whose platforms offer a wide variety of tools and allow the adoption of various types of strategies, both for the development of content and for the staging of activities aimed at the construction of learning and its assessment. The influence of technology in the educational scenario is opening the way to new ways of writing, reading, and understanding, which in turn generates new challenges for the evaluation of teaching and learning processes.

Educational assessment has a transcendental and decisive influence on the processes of reading comprehension and writing competence assumed through meaningful writing practices. On the one hand, it provides useful information to students to recognize strengths and weaknesses in their process, determine how well they are learning and define action plans, making use of study and learning strategies (Gibbs & Simpson, 2004). On the other hand, evaluation provides teachers with substantial information to define successes and difficulties in their methodology and act, accordingly, reorienting their teaching design.

Assuming the evaluation from virtual environments allows it to be carried out throughout the process and in a continuous manner and provides the possibility of obtaining quick feedback both at individual and group level. Effective evaluation provides feedback to students, teachers, and the educational community in general, and therefore demands a congruent process in which the objectives of the evaluation are in correspondence with the purposes of learning and the activities that accompany it; likewise, it demands the use of different methods and the timely communication of the results (Naidu, 2003).

Evaluation as an educational process has different purposes and therefore can be diagnostic, formative and/or summative (Woolfolk, 2010; Ruhe & Zumbo, 2009).

1) Diagnostic evaluation is carried out at the beginning of the program or academic year and serves to identify the student's learning level.
2) Formative assessment takes place throughout the program or academic year and its purpose is to help the student to consolidate learning.
3) And summative assessment is generally given at the end of the academic program or course and is used tograde the learning achieved by the student.

For the evaluation of learning in virtual environments, teachers must review the pedagogical model that supports their work, choose appropriate strategies, and specify functional tools that make it possible to verify the progress made by students, taking into account the diagnostic, formative and summative function of evaluation.

Participation and collaborative construction of knowledge are features that should be contemplated in the evaluation. The information collected will facilitate knowing the degree of responsibility and involvement of students in the restructuring of their own learning, and will be a consistent indicator of the achievement of the competencies outlined (Rodriguez & Ibarra, 2011).

When designing assessment with Information and Communication Technologies, the fundamentals and characteristics of learning must be taken into account, i.e., it must be constructivist, collaborative, problem-based and meaningful. Evaluation, conceived as an opportunity to learn and assess the achievements reached or not during the ICT-mediated educational experience, presupposes a design congruent with the teaching methodology used by the teacher and in which interaction among students, who, together with the teacher, share interests, goalsand formative purposes, is encouraged.

The new Information and Communication Technologies in education make it necessary to review the practices of traditional evaluation to confront its relevance and reliability, and to generate new approaches for an evaluation of student learning in virtual environments (Lezcano & Vilanova, 2017). Formative assessment, whose purpose is to support learning, is substantial for that given in environments mediated by technology, since it must be continuous and supported by different instruments that allow assessing the progress of students during their training and knowledge construction process.

At the moment of evaluating from virtuality, the teacher must consider the function of the evaluation, the content to be evaluated and the instruments to do so, together with the platforms where the students' learning is recorded so that they can receive feedback. The instruments, situations, resources and procedures are evaluation techniques that are used to obtain information about the students' learning process, so they must be selected according to the type of information to be obtained and their structure must be consistent with the purpose pursued (Lezcano & Vilanova, 2017).

Although there are countless applications that can be used in educational contexts, it is essential that teachers are trained and know their characteristics and possibilities, and that they know what to evaluate with them and with what criteria to choose them in order to plan training processes that are appropriate to the curriculum and meaningful for the student.

Some tools that allow the creation of exercises for knowledge assessment, that provide support for competency assessment and that provide learning analytics for assessment follow-up (Del Moral & Villalustre, 2013), are the following:

1) *Easy test maker*: Web service for creating easy-to-use tests. Forms can be customized and used to createquestionnaires and tests to evaluate students and obtain their scores instantly.
2) *Quizz slides*: Allows the creation of a quiz from a Microsoft PowerPoint template or through a pdf file.Results can be viewed online, or the file can be downloaded in a spreadsheet format.
3) *Google Forms*: Allows you to create online questionnaires and edit them collaboratively. To use this tool theuser must have a Gmail account.
4) *Evalcomix*: Web service for e-evaluation. Allows the design of evaluation instruments in the form of a rubric,rating scale, checklist, etc. Download required.
5) *Rubistar*: Allows creating evaluation rubrics online, in addition to storing them in the cloud, so they are available for editing. It offers matrix templates to evaluate artifacts from different subjects or disciplines and can even be modified to adapt them to the characteristics and needs of each subject.
6) *Class Marker*: Allows you to create, print and publish tests online. The scores of the questionnaires can be obtained automatically.
7) *e-Rubric*: Allows the creation of evaluation rubrics for competency-based learning. It has a list of rubrics created and ready to use.
8) *Quizizz*: Allows you to create tests to take in class in real time. In addition, it allows you to share the tests withother teachers and send them to do at home. The tool is flexible as it allows you to add text, images, or audios to the questions.
9) *Jclic*: It is an environment for the creation, realization, and evaluation of multimedia educational activities, developed on the Java platform. It requires installation. It is free software.
10) *Kahoot!* A game-based learning platform that can be used from any device. It is generally used for formative assessment, to monitor students' progress through learning objectives, and to identify their strengths and weaknesses. It allows teachers to generate online quizzes and/or reuse materials generated by third parties.

The impact of technology in education and specifically in the ways of learning, generates new challenges for evaluation, which enhances the importance of pedagogical foundations and student-centered evaluation strategies and tools with the help of Information and Communication Technologies. There are several ways to evaluate and, depending on the situation, a great variety of instruments and formats for the evaluation of learning in virtual environments, among which rubrics and portfolios stand out, extremely useful to systematize the measurement of the different dimensions of learning and provide relevant information on the progress of students at the educational level (Del Moral & Villalustre, 2013).

Rubrics are resources and instruments that make it possible to manage and systematize the evaluation process, providing a fairly accurate assessment of the competencies achieved at the end of a course. These strategies havea set of criteria that demarcate the path to follow to assess the work developed and in a graded, clear and explicit way, they allow to verify the different levels of student achievement. In general, rubrics are used when there are several dimensions with a different weight of value each, and the teacher needs to evaluate the final product and determine different levels of performance based on the degree of competencies acquired by the student.

Portfolios are a type of evaluation of both processes and products, which allow the teacher to follow up on individual or group tasks of students, promote problem solving among them, the possibility for them to reflect on their own learning and commit themselves to their qualification, valuing the competencies developed at the end of their training process. *Portfolio* work is a type of open and flexible evaluation, with learning objectives defined by teachers and students, based on the creation of a portfolio where the tasks performed are introduced and through which it is possible to check the academic and formative evolution of the student.

In evaluation, communication, interaction and feedback are the central axis; the instruments are the agents that facilitate these processes and the evidence revealed constitutes the incentive to make the necessary improvements. One of the primary functions of evaluation is therefore feedback, since it provides a formative assessment of the effectiveness of writing practices to improve reading comprehension and writing skills, which, given their social impact, are important for teachers, students, parents and the educational institution in general.

Feedback, as part of the evaluative strategy, is a dialectical process that allows students to understand the ways in which they learn, assess the processes they carry out and verify the results obtained (Anijovich & González, 2013). In feedback, a dialogic attitude is fundamental, through which the results of the evaluations are analyzedin light of the evaluation criteria constructed and decisions are made to demarcate the actions to be taken.

Evaluation in virtual environments facilitates the structuring and development of new forms of evaluation and encourages the enhancement of skills such as communication, teamwork, and critical thinking. In addition, it reduces time and costs, allows the use of techniques to evaluate large and diverse groups, enables their integration into learning activities, provides immediate feedback on the results and promotes the practice of acquired knowledge and skills. Evaluation, carried out at different moments of the educational process, with different elements and a variety of situations, constitutes a substantial indicator to determine educational excellence as an integral part of the search for a better education.

V. Conclusion

In the digital era, the way we learn has changed and therefore, so must the way we teach. Knowledge has increased a hundredfold and is now within reach of a device

with an Internet connection. But technology alone does not educate; therefore, today more than ever it is necessary that the teacher accompanies the student in his learning process and teaches him to search for and structure information, differentiating what is meaningful, valid, and reliable from what is not, and guides him on how to present and share it.

Meanwhile, teachers must acquire technological competencies and adapt their role and teaching methodologies to the new virtual environments, where the processes of reading comprehension and writing competence are qualified through meaningful writing practices that allow them to acquire knowledge, skills, and attitudes to face the challenges posed by contemporary society, while making an assertive use of technology at school, at home, insocial life and in leisure environments.

Today it is essential to understand what it means to teach, learn, and evaluate in virtual environments, as well as to be aware of their successes and difficulties. Virtual environments are a broad community conducive to bringing together time, space, and cultures in order to enrich what we have in common without neglecting the uniqueness of those who participate in them. The call now is for both teachers and students to move from learning from virtual environments to learning with virtual environments, where the evaluation of learning is also part of the process and not an end in itself, as it is generally conceived in traditional education.

An effective education in the digital era requires a substantial transformation of school practices that promotes the development of collaborative programs and projects focused on the development of competencies and the qualification of teacher training, using technological tools as valid communication alternatives as guarantors of open learning scenarios (without limits of time and space), interactive, accessible, rich in stimuli, motivating for students and with an infinite number of information sources.

We are in a process of reconceptualization and adaptation to the new educational demands that call for the acquisition of competencies that guarantee the mastery of contents and skills, as well as the development of attitudes and values in accordance with the technological society in which we are immersed. The role of the teacher has a fundamental value to assume this educational challenge and favor the development of digital and media competence in students, focusing their didactic proposals towards new teaching models as a committed professional, critical, and knowledgeable of the potential of new technologies and media.

Digital and media competence implies autonomy, efficiency, and responsibility, and requires a critical and reflective attitude to select, evaluate and use both the available information and the sources of information by as well as the different technological tools. Consequently, teachers and students should strive to be digitally competent to know how to coexist in the midst of the advances of today's world and not be left behind in the process.

Today's students, natives of digital contexts who have grown up with technology, must receive an education according to their needs. New technologies are a propitious means to reconfigure the role of the teacher and to establish didactics based on writing that significantly promote new processes of reading comprehension and writing competence that result in a better interaction with the environment. Therefore, within the framework of social and collaborative learning, the educator must acquire digital and media competencies that allow him/her to know how to use technology together with writing, in order to improve reading comprehension and writing skills as well as his/her teaching methodology and students' learning.

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