# TEACHERS' BELIEFS ABOUT THE TEACHING OF DIGITAL WRITING

**María Rosa Coronado**
UMECIT University, Panama
Coroma70@gmail.com
https://orcid.org/0000-0002-7816-6188

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## ABSTRACT

This article arises from the doctoral research: Teaching beliefs about the teaching of writing with ICT support in the area of language whose general purpose is to understand how the configurations of teaching beliefs limit or favor the use of ICT in the teaching-learning process of writing, whose significance is to reveal the teacher characterization in the classroom from the way of teaching and transposing knowledge from the trinomial: Beliefs, writing and ICT in relation to the integration of ICT in the teaching process based on three elements: (1) writing to develop skills; (2) the use of ICT in education and (3) teachers' beliefs, the central axis of this research. The transcendence of this research will allow us to unveil specific constructs to improve educational quality and transform curricula at the level of education and teacher professionalization; in addition, to contribute to science, education and technology theoretical constructs to close learning gaps and at the same time demonstrate that the effective use of these tools in a positive or negative way does not depend on it, but on the people, in this case the teacher who applies or uses them according to the learning objective. This research is qualitative in nature, based on the interpretive paradigm, case study and ethnographic design; the type of technique or tool for data collection is the interview (in-depth and semi-structured, group) and focus groups for the final triangulation; the analysis tool to be used will be the constructivist grounded theory.

**Keywords:** Teachers beliefs, writing digital, language, ICT.

## INTRODUCTION

The trinomial: beliefs or teaching thinking, writing and ICT are the main and determining factor to achieve educational systems as established by the Chronological Agenda of the World Education Movement of UNESCO (2015), under the Sustainable Development 4. 0 (SDG 4); Law 1955 of 2019 with the National Development Plan 2018-2022, under the motto pact for Colombia, pact for equity, where the digital educational transformation is contemplated; and The National Ten-Year Education Plan 2016-2026 with the slogan: The road to quality and equity which seeks to promote and enliven knowledge management based on the appropriate use of ICTs as well as the relevant, pedagogical and widespread use of technology to support teaching, research and innovation throughout the educational process, the European Framework for the Digital Competence of Educators.

To achieve these quality standards at international and national level, it is necessary to go far beyond simply providing technological tools to the school, institution, university or school, but to break those intrinsic barriers, thoughts and beliefs that teachers have in relation to the use and benefits of ICT in the educational system. This is achieved by trying to understand, comprehend and reveal to the whole world how the configurations that teachers have positively or negatively affect the use of ICT and at the same time provide spaces or tools that allow the use of all those valuable resources found in the virtual world for the benefit of the development of higher order skills and abilities.

What prevents the teacher from using ICT in the teaching of writing, why do some teachers use ICT successfully in the classroom, what makes the difference between one teacher and another the success or barrier of ICT? What makes the difference between one teacher and another in terms of ICT success or barriers? These are reflective questions that should be asked daily in teachers' work, since it is a task that is still pending in education from the teaching role and prepare every day to face challenges and challenges to include new information and communication technologies, NICT, in the classroom; especially to ensure that the binomial writing and RED (digital educational resources) work together towards the development of literacy skills in adolescent students to provide a quality education for life.

### Contextualization of teachers' beliefs and the use of ICTs in writing

One of the great challenges, dilemmas and thoughts that teachers of the 21st century face are the beliefs towards the use of educational tools and resources supported by ICT,

to improve and facilitate the teaching-learning processes of writing, the central theme of this research, which is quite new in the argument that after the literature review, no studies have been referenced that specifically address teachers' beliefs about the use of ICT in the teaching-learning process of writing in students of basic secondary education, which results in teachers not being able to understand the pedagogical potential of ICT when integrating them as a didactic strategy, a great challenge of current education (Aparicio, 2018).

We have found empirical research and articles on teachers' beliefs regarding the use of ICT in the integration of subjects such as mathematics, computer science, natural sciences and English language at the elementary and high school level in terms of effectiveness and efficiency under the premises of: (1) improving student academic performance; also as (2) specific content of the area of technology and computer science; as well as the (iii) elaboration of didactic material for the learning of curriculum content without changing the traditional and behaviorist approach; and finally as ((3) communication tool inside and outside the educational institution (Acevedo, 2014).

In the words of Cassany (2017), research in the last thirty years on teaching beliefs has revolved around learning, teaching or general instruction of a particular subject or discipline; Tsui (2003), insists that there are four categories studied: (i) knowledge as reflective practice; (ii) staff teaching practice in relation to current educational policies; (iii) adequate practice to teach content, and (iv) area content. While: Moreno and Azcarate (2003), distinguish institutional beliefs (values, norms, principles and current educational policies) from those focused on teaching and learning (what actually happens in the classroom).

Tsai (2002), enunciates the term "nested epistemologies" (nested epistemologies) to talk about teachers' beliefs about how to teach science and how exact sciences are learned; following the line Deng, Chai, Tsai and Lee (2014), who expose teachers' beliefs from the epistemic, pedagogical point of view and the use of new technologies to improve learning. Therefore, it is necessary to understand the belief system behind teaching actions and to investigate how these perspectives influence positively or negatively in terms of training and work with ICT since the teacher acts according to convictions, thoughts, opinions, ideals, feelings, expectations, dogmas and creeds (Gomez, 2017).

Something very similar happens with the study of written language, whose contribution

is framed in three main topics: first, to evaluate the texts produced by the student (writing as a product), and focuses on analyzing grammar (omission, substitution, contamination of letters as well as punctuation marks; superficial aspects of the text). Second, the conceptions, stages or psychological stages in which the student is in order to work on the different compositions (writing as a process from psychology), and last but not least, the didactic strategies used by the teacher to encourage writing conditioned by the environment and the school (Caldera, 2003, p. 364).

Nowadays, we talk about: Vernacular writing, (Camitta,1993), networked writing (Barton, 1998), hypertexts (Mendoza-Fillola, 2006), digital writing (Hicks,2009), digital academic literacy (Olaizola, 2017), to refer to the new forms of reading and writing emerged outside the academic or official instruction, as e.g.: blog, chat, Facebook, WhatsApp, Twitter, Instagram among others used on a large scale by the new generations to communicate in opposition to the dominant practices (dominant practices) of writing (Guzman, 2015), which are established in schools around the world and have not yet been accepted in full by practicing teachers within the pedagogical task.

This is a consequence of the fact that the teaching-learning process of the majority of practicing teachers is formed from the experience they obtained at school and university, and during the time of training or study, access to the internet was restricted, limited or simply did not exist; therefore, such practices and teaching methods are reproduced in the new generations who are surrounded by all kinds of digital and electronic devices, social networks and web applications that allow obtaining instant and worldwide information about what they need (Solis, 2015).

However, at present, it becomes "essential to associate digital culture with the teacher's training and beliefs, since it is considered that the education professional is anchored to his or her formative process, in which the intentionality of the profession is built" (Duso and Cerutti, 2017, p. 208). Since studies at the international, national, departmental and municipal levels that address these beliefs are scarce and incipient (Pittman, 2008; Luckin & Lewin, 2010; Machado-Casas et al. 2011; Nila et al., 2011; Leiva &Aguilar, 2012; Olmstead, 2013; Walsh, Cromer & Weigel, 2014; Galvis, 2016; Barnett, 2016;).

Therefore, to achieve our purpose, we aim to understand teachers' beliefs in three

thematic axes: (i) ways in which teachers can use ICT in the teaching-learning process of writing; (ii) benefits they perceive from ICT as resources to improve written production; and (iii) the ways in which they can use ICT as didactics of writing and identify teachers' thinking before and after the pandemic.

However, in Latin America, the integration of ICTs in the learning and teaching processes in recent years has had a low impact on the quality of education. Although the opportunities that the use of ICTs offers in education are well known, the results in the study conducted by the OECD, entitled: Students, computers and learning: making the connection (Translation from English), show that, despite the investments made in technologies for more than three decades, the results are not sufficiently congruent with the low impact on learning and teaching processes (IESME, 2018).

The report of the World Economic Forum between the years 2014 - 2019 when publishing the Network Availability Index, which consists of measuring the efficient scope that a nation has when making use of Information and Communication Technologies (ICT) for the benefit and competitiveness of people in the educational and labor field, it can be observed that Colombia year after year is getting closer and closer to the last positions of the ranking among the participating countries; each year it is detrimental since instead of increasing its rank, it drops considerably in position between one and two places (Portulans Institute, 2019).

In the case of Colombia, many of the new technologies have reached official educational establishments in recent years, thanks to state programs such as Vive Digital and Computadores para Educar, which according to figures from the Min Tic have increased accessibility to ICT in educational establishments by 80%. However, the incorporation of new technologies into educational processes and their integration into the curriculum in an explicit and transversal manner in all subjects is still a pending task for teachers in Colombia (Gamboa et al., 2018).

At the regional level, the Secretary of Education of Antioquia on the website manifests the existence of a digital divide in the department, where the possibilities of access to ICTs are few or nonexistent, (Secretary of Education of Antioquia, SEDUCA, 2019, para. 9), to which the Government of Antioquia in search of reducing this gap has established educational

tactics that encourage the use of ICT, which with its different approaches seek to appropriate the Antioquian communities of different technological utilities and content that enhance their study and regular use and thus make these processes part of their daily lives.

The above is supported by the research conducted in the region of Uraba, epicenter of the present research where Martinez, Rosa and Yangali (2021: p.5594 ): express that "The integration of ICT in the learning and teaching processes in recent years has shown a low impact on the quality of education" despite the fact that the different OECD studies under the premise: "Students, computers and learning: making the connection" argue that economic investment is not the main reason for not innovating in educational practice, but rather internal factors or internal barriers that prevent the use of different technological tools such as: teachers' pedagogical beliefs and lack of information to work with ICT as a pedagogical tool.

Martinez et al. also state that, according to figures from the Ministry of ICT in Colombia, access to technological, computer and connectivity tools has increased by 80% in the education sector through programs such as Vive Digital, Computadores para Educar, the last digital mile for university students in strata 1 and 2 in the region; but they insist that "the incorporation of new technologies in educational processes and their integration into the curriculum in an explicit and transversal manner in all subjects remains a pending task for teachers in Colombia" (p.5595).

However, despite the multiple policies and plans to introduce ICT in schools and the constant trainings, symposiums, diploma courses, meetings, NTAE courses and peer-to-peer meetings, the panorama inside the classrooms is the same: traditional, magisterial, repetitive, dominant, boring classes that day by day aggravate the situation in relation to the demands of the globalizing society motivate to investigate and understand in depth how the configurations of teachers' beliefs about the use of ICT favor or limit the teaching-learning process of writing in basic secondary education and this is reflected in the results of the descriptive analysis of the dimensions of curricular design, pedagogical practice and classroom management where:

> *"It shows that, of the total of 185 teachers surveyed from the educational institutions of the district of Turbo-Antioquia in Colombia in 2020, 10 teachers representing 5.4% have a low level in the dimension of curricular design;70 of the teachers surveyed, representing 37.8%, have a medium level and 105 of*

> *the teachers surveyed, representing 56.8%, with a high level. As for the second dimension of pedagogical practices, 15 teachers (8.1%) showed a low level; 82 teachers (44.3%) showed a medium level; while 88 of the teachers (47.6%) showed a high level in terms of classroom management"* (Martinez, et al., 2021 p.5596).

This is valuable when planning, executing and guiding the student's learning process, since the pedagogical practice is determined by the social, psychological and contextual reality of the institution and the classroom (Johnstone, 1999; Richards, 2001; Maclellan & Soden, 2003; Andrews, 2003) due to the fact that it is necessary to delve into the thinking that teachers have in relation to the use and integration of ICT in the teaching and learning processes of students, especially in the area of language in the topic of written production, whose area is the basis or mother of the others to improve students' thinking skills.

Taking into account the previous paragraph, the following questions arise: how can teachers use ICTs in the teaching-learning process of writing in elementary school students; what role can ICTs play in favoring the teaching-learning process of writing; what actions could teachers take to encourage the use of ICTs by students as a textual support tool; do teachers know the different computer applications for working on written production and encouraging collaborative work and project-based work; and do they know the different computer applications for working on written production and encouraging collaborative work and project-based work?

Education in the 21st century is characterized by three essential, basic and important elements to achieve the professional and human success of the learner: (1) the promotion of writing and reading to develop thinking skills (review, understand, apply, analyze, evaluate and create); (2) the use of new information technologies applied to the educational context as a fundamental pillar to develop technological skills in different contexts, and finally we have (3) the beliefs and teacher thinking when transposing, teaching, guiding or training the student in any school cycle in relation to a subject, area or didactics to be used.

This last item, has taken great strength, relevance, persistence in doctoral and postdoctoral research studies as well as indexed articles due to the great relevance and impact it has on the route to teach and guide as well as the use of ICT and the teaching of writing

supported in digital environments, conducted the literature review and taking into account the categories of the event to investigate as well as the perspective from which they are addressed.

**FOUNDATION ON TEACHERS' BELIEFS.**

Since the seventies, branches such as psychology, anthropology, sociology and philosophy, through the educational research paradigm called teacher thinking (Pritchard, 1976; Marcelo, 1987; Davidson 1988), seek to understand, analyze and interpret the way teachers think and express themselves in relation to what they plan and execute in their educational practice, thus revealing a wide range of reflections and purposes, which are manifested through behavior, a spearhead in the academic and staff training of the teacher to improve academic processes.

Now, from different areas of knowledge that have tried to decipher what are those factors that affect the teacher when planning or using a particular resource in the classroom and it is there where those beliefs or thoughts come into play that experts on the subject agree on the problem of conceptualizing it due to the diverse, complex and connotative at the time of defining since it is associated with values, implicit theory, conceptions, dogmas, attitudes, perspectives, constructs among others. Quintana (2001) as quoted by Pere Marques (2018) warns about the importance of elements such as culture, emotions, social environment and motivation or willingness to believe in something.

For Da Ponte (1999) beliefs are very unstructured and very staff knowledge that do not require validation, demonstration or social acceptance and are linked to the religious part or simply to daily life product of experiences. In the words of Linares (1991) it can be said that they are all those subjective thoughts and knowledge, little elaborated that are born inside the person based on feelings, experiences and experiences that mark the professional path; Ortega and Gasset (1986) insist that they are basic ideas that arise from convictions and unconscious positions of relationships and experiences with other people and the social environment.

Kane, Sandretto & Heath (2002) explain that they are all those knowledge and thoughts of teachers related to educational practice such as planning, instruction and reflection including attitudes, values, opinions, ideology, conceptions, staff theories, implicit theories,

internal mental processes, conceptual systems and epistemological beliefs.

Estevez et al. (2014, pp. 49-64) systematizes the relationship between beliefs, conceptions and knowledge; he points out that beliefs are personal, subjective, intrinsic and very little structured or elaborated while conceptions allow organizing, structuring, categorizing and classifying such beliefs, based on concepts, propositions and rules that affect what is perceived in relation to what the teacher knows, teaches and transmits to his students; also on what he says he knows he knows and teaches or fails to teach by the way of thinking.

Pajares (1992), insists that conceptions are constructions that are formed from beliefs and result in knowledge, therefore it is structured, sequential and organized, contrary to beliefs that are mainly composed of evaluations and judgments that can affect the normal course of an activity whose field of action to be investigated would be three: first, to describe the mental life of the teacher; second, to try to understand and explain the observable behaviors of teachers before, during and after the educational practice and last but not least, to build general frameworks in the field of psychology and teaching to improve learning processes (Schunk, 1997).

Based on the above and following Pajares (1992), Barry & Ammon (1996), Richards & Lockhart (1998), Tilema (1998), Borg (2001), Levin (2001), Andres & Echeverri (2001), Goodson & Numan (2002), Muchmore (2004), the main element of beliefs is based on the truth or the reality that the individual has lived or believes as a person, even if there are other foundations or different ways of thinking or acting. Thus, there is coincidence or similarity in the individual and subjective character of beliefs, as well as in the role they play in the behavior of each human being in a dynamic way that can change as new experiences are had to face problems, associated to specific situations (Cortez, Quelin, Ortiz & Guzman, 2013).

When talking about teaching beliefs, it is necessary to take into account that they are formed at an early age and tend to be self-perpetuating; they are acquired through the process of cultural transmission whose adaptive function helps to define and understand the world and themselves. Undoubtedly, knowledge and beliefs are intrinsically related; however, the affective, evaluative and episodic nature of beliefs makes them become a filter through which new phenomena can be interpreted, and the earlier a belief is incorporated into the belief structure, the more difficult it is to modify it (Bustos, 2009).

Although beliefs can vary over time, there are two characteristics that make them difficult to modify: On the one hand, they tend to be universal, that is, they are conceived as a product of thought that is considered true (Catalan, 2011). On the other hand, beliefs tend to be implicit, in that people are not permanently aware of them. Likewise, they tend to be constructed from the exchange with the environment and with other people, so that those who belong to the same group tend to share very similar beliefs among themselves, which increases their validity, veracity and reinforces their perception of suitability to explain the environment and adapt to it (Ferreyra, 2018).

Green (1971, as cited in Parra, 2010, p.112) identifies three dimensions of the belief system: one of them is interdependence in relation to other beliefs; the second makes mention of central and peripheral beliefs; central beliefs are those convictions strongly rooted in the person and peripheral beliefs are modifiable, susceptible or changeable; and finally, beliefs that are shaped through groups and strengthened through interaction and bonding.

However, beliefs do not need to be consensual to be considered valid, nor do they require logical rules to determine their correspondence with real situations (Carr & Kemmis, 1998). Therefore, beliefs are idiosyncratic truths that do not require a condition of contrasted truth, given that they represent data, assumptions and opinions of their own or transmitted by others and arising from the knowledge of common sense (Martinez, 2013).

Now, regarding the origin or nature of beliefs, theorists maintain consensus in referring that they are created or formed through culture and social construction. Van Fleet (1979) states that cultural transmission is composed of three important elements: (i) incidental or secondary learning that occurs through observation, participation and imitation of other people who are part of their staff's life; (ii) education received in formal or informal institutions whose purpose is the transmission of specific knowledge; and (iii) teaching-learning of specific processes that take place outside the home (Harris, Revuelta & Velasco, 1990).

Beliefs throughout history are based on the model of Clark and Peterson (1986), who present the central axes for the analysis or study of teachers' thinking: teaching planning, thoughts and decisions involved in teaching practice, reflections, meditations, judgments and evaluations that they express or feel after transmitting, producing or constructing knowledge, as well as expressing affirmations, acknowledgments and dogmas they have about certain

actions or lifestyles (Jibaja, 2010).

In addition, it glimpses aspects related to unobservable emotional and cognitive processes, in relation to the teacher's observable behaviors, which directly affect the teacher, such as the teacher's behavior in the classroom, the students' performance and their behavior. It is then when the term didactic transposition is born by Chevallard (1997) as the process through which the knowledge or the knowledge that the teacher has transforms it and adapts it to the student's context making it much easier and technical at the moment of transmitting that knowledge; in other words, they are those elements of the context that the teacher uses to make himself understood before his dicents (Bolivar, 2005, pp.1-39).

In this same line appears the Didactic Content Knowledge Model (CDC) of Shulman (1993) where he relates the knowledge of the specific area and the strategies he uses to show or transmit this knowledge and at the same time try to interpret all this path of values, aptitudes and advice that the teacher transmits when expressing the learning objective to the students, aptitudes and advice that the teacher transmits at the moment of expressing the learning objective to the students, thus reaffirming that beliefs and knowledge of the content of that area are closely and powerfully linked to and influenced by beliefs at the moment of learning and teaching at certain moments of teaching practice (Acevedo, 2009, pp. 23-26).

In relation to the conformation or configuration of beliefs as a system, it can be said that it is the way to study, classify and describe organized cognitive patterns that are constantly restructured in time and space with a high affective-emotional component and a valuable degree of veracity for the teacher acting as a strainer or filter in planning, methodological structuring, teaching content, teacher-student interrelationships, evaluation procedures, organization of classroom life, type of academic tasks that in the words of Perez (1989) and De Vicenzi (2009) would be the categories or dimensions to study educational practice (Sandi & Cruz, 2016).

Clark and Peterson (1990) as cited in Sanchez (2010) insist that the teacher's thinking is oriented in three main axes: (i) the planning of teaching action; (ii) thoughts and decisions in the curriculum in action and (iii) conceptions and beliefs; while Fenstermacher and Soltis (1998) sustain that three, are the axes or configuration of the pedagogical task: (i) teaching practice as a technical activity (1940-1960), where teaching practice focuses on the

application of specific techniques for handling machines and being knowledgeable about knowledge they can reason, evaluate and make decisions about the order and manner of imparting knowledge.

For the period between 1970 and 1990 approximately (ii) the teaching practice as understanding of meanings arises, with great contributions from cognitive psychology where the teaching action is conceived as the way in which the teacher configures his intervention in the classroom having as a reference cognitive strategies used by students to process information and theories such as Piaget, Ausubel, Vygotsky, take force in the educational field such as: the ages for each grade; the form of teaching (behaviorism, cognitive and social constructivism).

And finally (iii) teaching practice as a space for socio-cultural exchanges, where teaching is approached from a global perspective, based on the ecological pedagogical model, whose purpose is to identify the complexity of variables involved in the interaction of the educational environment; both the teacher and the student are active agents where interaction, communication and affectivity within the classroom have a direct and reciprocal influence on the learning-teaching process; and the different social subgroups emerge as a great influence when guiding knowledge and awakening the interest and participation of the learner when regulating, exchanging, processing and developing skills (Nunez, 2007; De Vicenzi, 2009).

Regarding research on the teacher as a subject of study Pozzo (2005) cited in Nieva & Martinez (2016) identified two dimensions: (i) the teacher as a decision maker, where knowledge and knowledge are above interpersonal relationships and good classroom climate and (ii) the teacher as a reflective professional where he/she fulfills the role or role of friend and counselor; he/she knows the student's potential and helps in the construction of knowledge in an integral way thus allowing "the intimate union between theory and practice, in rewriting and restructuring the daily life of the subject and his/her interactions, feedback and personal transformation" (Nieva & Martinez, 2016, para. 12).

In the line of William Perry (1970), authors such as: Schommer, Crouse, & Rhodes (1992), Schommer & Walker (1997), Kardash & Howell (2000), Barnard (2007), Brownlee, Purdie, & Boulton-Lewis ( 2001), Schommer, Duell, & Barker (2002), Schommer, Duell, & Hutter (2005) Schommer & Easter (2008), Arancibia (2018), Garrido (2019), argue that

epistemological beliefs (Ce), are all those forms of learning and understanding of knowledge that human beings make, product of their own experiences, theories and positions on how knowledge is known, and it is what ends up influencing the thought processes and didactic transposition to give rise to new premises (Balderas, 2020).

As a result of all these studies and research, the existence of four epistemological frameworks that circumscribe the form of approach or approximation to knowledge that people make, among them the dualistic vision, where the existence of knowledge is static, unilateral, bad or good and linear whose knowledge is dominated by one person, in this case the teacher, a second typology is the multiplicative knowledge, (Multiplicity) where the student or learner is willing to know different points of view and accept all opinions supported and guided by the teacher.

While relativism, students can build their own meanings, from the context where they develop; and finally the commitment to relativism where the student apprehends the knowledge to create their personal identity through changes and commitments to the environment where they live and other people around them under ethical, moral, social, religious principles which allows them to reflect, self-question and compare the significance of this in their daily routine (Yerovi, & Riascos, 2019, pp. 33-39).

## TEACHERS' BELIEFS ABOUT THE USE OF ICT IN EDUCATION

According to the result of research on teacher beliefs, it can be said that through research and articles we find the work of Perry (1970) on epistemic beliefs who provided a developmental trajectory of four stages that includes: (1) the dualistic view is where individuals believe in good or bad knowledge transmitted by authority; (2) the multiplicative stage is where they begin to recognize the possibilities of multiple viewpoints, but still believe that most knowledge is true; (3) the relativistic view is where they see most knowledge as provisional, contextual and generated by the self and the (4) commitment to relativism is where they commit to themselves that knowledge is uncertain and is based on the weight of accumulated evidence.

Focusing on the epistemological development of women, Belenky, Clinchy, Goldberger, and Tarule (1986) provided a scheme similar to Perry by classifying the origin of knowledge into: (a) silenced or receiving knowledge, (b) subjective, (c) procedural, and

(d)constructed; alternatively, Schommer (1990) advocates the multidimensional model that conceives epistemic beliefs as a system of independent beliefs whose main axis are beliefs about learning: innate ability and rapid learning; while the second focuses on beliefs about knowledge (simple and certain knowledge).

Later another dimension is added (Schommer & Walker, 1995; Schraw, Bendixen, & Dunkle, 2002) as Omniscient Authority, meaning a recognition that authority is having access to other inaccessible knowledge. Hammer and Elby (2002) conceptualized epistemic beliefs composed of naive and sophisticated resources that individuals draw on in different contexts, therefore, the more connections it has with other beliefs indicates that it is less likely to change this belief. This idea suggests that beliefs are established during previous experiences and become stronger over time as they are used to process subsequent experiences.

Nespor (1987) suggests that beliefs gain strength from their "unboundedness," meaning that the connection that one belief has to another is highly variable, unpredictable, unstable, and uncertain, indicating that there is no clear logical rule for the connection. In addition to this illogical formation, the links are bounded with emotional and staff experiences. This premise suggests that teachers' beliefs vary in strength and amenability, and the ease with which teachers change their beliefs is related to the strength of the belief being challenged. This is fundamental to our understanding of how and why teachers change their practice with the use of technologies in the classroom. Below, Table 1, which refers to epistemic beliefs according to the aforementioned authors, is shown in a summarized and condensed form for a better understanding of the theory.

**Table1. Summary of Epistemological Beliefs of Knowledge**

| AUTHOR | TYPE OF KNOWLEDGE |
|---|---|
| **Perry (1970)** | (a) dualistic<br>(b) multiplicative<br>(c) processual relativistic<br>(d) constructed relativism |
| **Belenky et al. (1986)** | (a) silenced or receiving knowledge<br>(b) subjective knowledge<br>(c) procedural knowledge<br>(d) constructed knowledge |
| **Schommer (1990)** | (a) innate and fast learning<br>(b) simple and certain knowledge<br>(c) omniscient |
| **Martillo & Elby (2002)** | (a) naive<br>(b) sophisticated |

**Source:** Author's elaboration

Pedagogical beliefs are understandings, premises or propositions about education (Tondeur et al., 2007) that revolve around teachers' preferred ways of teaching (Chai, 2010) formed over many years of experiences, from life as a student in the classroom (Keys, 2007; Richardson, 2003) to the variety of professional contexts that teachers encounter (Prestridge, 2012) these can be conceived as goals, purposes and reasons for the use of technologies in education. Tondeur et al (2007) found three types of goal orientations for the use of technology in educational contexts: basic computer competencies (technological competence), computer as an information tool (to research and process information), and computer as a learning tool (to practice knowledge and skills).

These three categories of teacher pedagogical beliefs can also be seen in Downes et al. (2001) as teachers' goals for ICT integration among which are: (1) skill development in relation to basic computer skills and (2) ICT as a learning tool, including here: information and learning tools and (3) ICT as changing content and pedagogy. This theoretical construct has focused on understanding the relationship between beliefs and technology integration practices.

The above categories on pedagogical beliefs do not include a skills development category that would: (1) Complement the curriculum where teachers believe technology was to motivate, reinforce, and practice subject-specific skills; (2) Enrich the existing curriculum where teachers believe technology was an educational tool to teach content, collaboration, and higher order thinking; and (3) Facilitate an emergent curriculum where teachers believe technology is a transparent tool for 21st century literacies that transforms the way students learn.

Prestridge (2012) identifies four types of beliefs that underpin pedagogical approaches to technology use likewise there is the skills-based category, the functional (as in productivity outcomes such as word processing) and a developing category where teachers orient their beliefs to augment and enrich the existing curriculum; another digital category where teacher beliefs emphasize exploring new ways of learning and opportunities with ICT in digital spaces.

Mama & Hennessy (2013) expose four categories of diversification, which allow different approaches to develop and enhance learning that align with this research: (1) Subversive, i.e., it identifies the teacher's fear of being replaced and, therefore, avoids its use in classrooms. There are four categories that encompass pedagogical beliefs; these include teachers' beliefs about (a) developing computer skills or competencies in the technology itself, (b) complementing the curriculum, (c) enriching the existing curriculum, and (d) facilitating new ways of learning. Categories of computer competency and complementing the curriculum, i.e., reinforcement-practice of content, as functional practice.

## THE PROCESS OF WRITTEN COMPOSITION

Balderas (2020) expresses that one of the fundamental pillars in the process of educational formation is writing; immersed in all the areas of knowledge and in all the degrees of formation of the human being; since it allows preserving, perpetuating and transmitting to new and future generations values, knowledge and/or knowledges as well as exchanging and spreading the cultural and historical legacy of the world in general; In history, it can be said that the study of writing and its teaching was born in the ancient Greek world, whose study was emphasized in the inventio, where the lecturer, speaker or speaker analyzed the content of the repertoire to be informed and the dispositio that refers to the form or structure of organization of the content (p. 12 ).

However, by the sixties, the interest in writing revolved around the expression of emotions, feelings and opinions with the aim of improving and developing the personality of the writer or speaker; they tried to go beyond the traditional and focus on the development of both oral and written skills, but no major changes were observed in the process of teaching writing; Rohman promoted the development of research models in the field of written production and composition among which stand out Hayes and L. Flower (1980, 1986), Bereiter and M. Scardamalia (1992) who approach writing from the cognitive paradigm; Lev Vigotsky who situates writing from the social perspective, who join this great challenge, Mendoza Fillola and others.

Hayes during the years 1980 and 1986, refers that "the act of writing involves three essential elements that are reflected in the three units of the model: the work environment, the long-term memory of the writer and the writing processes" (Flower & Hayes, 1996, p.6), and in parallel Bereiter and Scardamalia during the years 1987 and 1992 with the theory of saying and transforming knowledge where they show the work process of written production between experts and novices (Scardamalia & Bereiter, 1992, p.44).

Thus, Zimmerman and Risemberg (1997) consider writing as a very complex cognitive process where the emotions, feelings, thoughts, ideas and opinions of writers play a key role in achieving goals or document objectives to improve the quality of the text; this process of self-regulation in writing occurs when playwrights use strategies to regulate external or environmental factors along with their behavior.

Three aspects or elements come into play during the process of producing written texts: (i) strategies to control the writer's actions; (ii) the environment where the text is produced; (iii) internal thought processes, the joint work of these actions allow the person who writes to monitor, evaluate and react to what they wish to express; this triad, leads the author to self-efficacy; in other words it allows them to perceive their own ability to plan and route the writing according to the proposed objective therefore, the staff processes are directly influenced by behavioral and environmental events from which they influence and nurture each other.

The dominant or traditional writing in this global context is not enough to create, expand and produce knowledge; therefore, the new multimodal communicative ecosystems are

gaining strength in educational institutions worldwide; therefore, it is supported, advocated and defended by an educational model that understands the process of teaching and practice of multiple literacies to respond to the impact they are having on education in the midst of globalization and technological advances.

Therefore, multimodal communication environments, digital skills and abilities that according to Kress and van Leewen (2010) give great relevance to the multimodal literacy model, i.e.: that the student is able to critically use multimedia and interactivity through the different modes (oral, written, visual, tactile and spatial) offered by the digital environment, are currently given special importance.

From these social and functional aspects of writing and discursive communities or indeed as Gonzales (2009, pp.157-158) calls them, reading and writing in digital environments where an integrative approach of multimodal character is proposed, called in Cassany's words as literate practices (written language) through electronic devices, platforms, social networks and digital applications whose practical practices are not circumscribed in institutionalized school programs but in any cultural context.

However, Hernandez Zamora (2016) makes certain confrontations such as: that literacy (teaching the alphabet) is developed in the first years of schooling, therefore once apprehended is able to read and write (psycholinguistic approach); the other perspective, insists that reading and writing are social practices that acquire meaning in the context where the writer interacts and not only isolated cognitive processes therefore it must be validated and reinforced the teaching curricula and the pedagogical practice of the teacher to include it within the formative process of the student.

Therefore, these new literacy paradigms take on connotative meanings among some theorists or language scholars such as Hernandez (2012), Camps (2003), Gee (1997), who take up the term: academic literacy; a term coined for the study of reading and writing: literacy, (Latin root word "littera" meaning: written letter and translated into literacy); in the words of Ferreiro (1999), "literacy or written culture", Cassany, Luna & Sanz (2003) define it as: literacia, literacy and/or escrituralidad, a proposal as an alternative to orality.

Meanwhile Carlino (2013), makes a distinction between literacy and academic literacy,

the first is conceived within the educational task and academic literacy as cultural practices around texts (didactic-educational and linguistic-ethnographic); meanwhile Hernandez (2012) defines academic literacy as: "the set of literate practices that occur and make sense within an academic, discursive and disciplinary community; these practices are expressed through specific genres and types of academic-scientific texts and particular discursive modes (p.44).

Lea and Street (2006) distinguish three major topics in the teaching and learning of literacy; (i) study skills or skills development model for learning rules and techniques for writing; (ii) the academic socialization model, which refers to the transculturation of students to acquire literate practices used by the members of a community and (iii) academic literacy, as a social practice whose interest focuses on the reconstruction and construction of meaning, identity, power and authority, taking into account the author's volitional part to form an identity about the type of knowledge generated in social subsystems.

Jenkins, Clinton, Robinson, Weigel (2009) argue through various studies and educational research that users, students and professionals have gone from being simple consumers of information to become active producers of content (prosumers) that they distribute on the network. Among these new competencies and/or skills, prosumers develop three stages similar to remix: transmedia navigation (pursuing or following the flow of stories and information through multiple modalities), distributed cognition or interacting tools that expand cognitive, volitional and behavioral capacities; they also speak of collective intelligence, i.e. knowledge construction among peers.

Continuing with the new prosumer skills is the game as a way to experiment and solve problems, thus allowing to act, improvise, discover and take different roles as identities in order to search, synthesize and distribute information in different multimodal formats; similarly Herrero (2019) within the competencies and skills include "making efficient use of the search engine, ability to interact in social networks, skill to write and publish in various multimedia formats, knowledge of how to store and share information, knowledge transfer, remix of formats and content" (p. 125).

Dudeney et al. (2013) emphasize digital literacy in four main areas: (1) language, a line linked to linguistic communications, (2) information as a search for and valuation of knowledge, (3) connections, which refers to the type of individual identity they want to

project in a scenario as well as the ability to interrelate and connect with other communities at a social or academic level, and a final area which is (4) (re)design, whose capacity or ability consists of reusing and transforming what others have already produced.

Now with the pedagogy of Leander (2009) it is suggested or promoted that students should learn to read and write multimodal texts without despising, belittling or moving away from the dominant, traditional or analogous written composition; and at the same time he recommends that in order to write online texts, the norms, guidelines and formats of conventional writing should be followed.

Complementing the above, Hicks (2009), with the heuristic taxonomy: MAPS, which stands for Mode, Media, Audience, Purpose and Situation: (1) Mode, which indicates or expresses the genre of the digital text, followed by (2) the Medium or form of production (text, image, audio, video or web page) of the writing, (3) the audience to whom the text is addressed directly or indirectly; (4) Purpose, which reveals what you want to inform, describe, persuade, among others and finally (5) the Situation of the writer related to tastes, habits and skills to write as well as the time, space to work.

Another writing model in different digital environments are those proposed by Andrew and Smith (2011) whose main objective is that students dare to explore, innovate, create, imagine, and transform real life through digital texts articulating the situated practice as a process in which students must appreciate, grope and rediscover according to the knowledge or vision they have of the episode to write; For these writers, the practice of digital text composition includes expression, articulation, structuring and configuration.

In this research we cannot leave aside the taxonomy of Benjamin Bloom (1956) who at the University of Chicago first exposed the taxonomy of educational objectives in which Lorin Anderson (2001) and Anrew Churches (2008) reviewed and modified for the digital age or as a base document to assess the learning potential of a teaching resource not only in traditional or basic topics, traditional or basic in the areas of mathematics and language in this case writing as an event to investigate, but also in all those 21st century skills that the student and why not say the teacher should improve and perfect as creativity and collaboration as well as participation, collaboration and teamwork among individuals or groups of a specific community.

But also, the course or path of learning that is to be transmitted through the evaluation of topics such as: the depth of content, ability to transfer skills, support, help, rewards, feedback, progress reports, among others that will improve, purify or debug applications to promote and ensure meaningful learning among users or cybernauts; whose key terms are characterized in the development of skills in lower order thinking (remember, understand and apply) and higher order (analyze, evaluate and create).

**Table 2. Thinking skills according to Bloom's digital taxonomy.**

| **Lower Order Thinking Skills (LOTS)** | **Levels of Learning Questions** |
|---|---|
| Recall: Recognize, list, describe, identify, retrieve, name, locate, find. | Acquire knowledge (Collect) |
| Understand: Interpret, summarize, infer, paraphrase, classify, compare, explain, exemplify. | |
| Apply: Implement, perform, use, execute. | |
| **Higher Order Thinking Skills (HOTS)** | Deepen knowledge (Process) |
| Analyze: Compare, organize, deconstruct, attribute, delineate, outline, find, structure, integrate. | |
| Evaluate: Check, assume, hypothesize, critique, criticize, experiment, judge, test, test, detect, monitor, review, criticize. | Create knowledge (transform) |
| Create: To design, build, plan, produce, invent, devise, make. | |

Taken and Adapted from Andrew Churches' Bloom's Taxonomy for the Digital Age. http://www.eduteka.org/TaxonomiaBloomDigital.php

The foregoing gives a glimpse of the cognitive, affective and psychomotor domain to understand the general learning process and in this particular case the textual production that is the ultimate goal to be achieved in the proposed objectives; for this reason it is stated that developing higher order thinking skills in a collaborative way is fundamental, necessary and important to take into account the four principles of Delors (1998) (1) learning to know, (2)

learning to do, (3) learning to live together, learning to live with others and (4) learning to be; this invites the change of teaching in the classroom and the inclusion and integration of ICT in the pedagogical practice.

## CONCLUSIONS

The beliefs and thoughts of teachers will always be immersed in educational practice and will tend to be modified to the extent that new guidelines, theories and models of teaching and learning reveal the way to develop skills and competencies for life; all beliefs can and must be modified if education is to surpass the standards of competence required in a society where globalization, science and technology are the main basis of the economy and the different subsystems of the world.

The educational system must advance, transform, educate and guide under the four basic principles or treasures of the world: learning to be, do, know and live together; writing in digital environments, takes strength and dominance in our way of communicating and disseminating emotions, feelings, opinions for this reason it is necessary to rethink the curricula in official schools and integrate academic writing and/or vernacular in language teaching due to the positive impact that brings with it the different technological devices such as cell phone, Tablet, computer, laptop among others; as well as the importance of social networks, web 2. 0, web 3.0 to develop reading and writing skills. It is affirmed that ICT as a tool to search and organize information continues to be the main use given to the web in academic, social or simply leisure matters.

It is concluded that all applications, tools and platforms allow to organize, evaluate, and follow up the student in a personalized way, thus managing to visualize the work and contribution of each student to then give feedback and reflect on what has been learned, among them are: Google drive, Dropbox, wetransfer, easyclass, Remind, socrative, projeqted, storybird, ardora, rayuela, Mindomo, mindmeister, zotero, mendeley and others that can be mentioned that will undoubtedly help cooperative work, through the exchange of ideas, thoughts and opinions that can be built from the experience.

Now ICT as a tool to develop skills and competencies of higher order and confirming the theories and postulates of great pedagogues it can be said that ICT play a highly important role in the reproduction, generation, reciprocity, propagation, management and access to

knowledge, characteristics of the technology itself but on the contrary of the people who use it therefore it is necessary to clarify that the effective use of these tools in a positive or negative way; beneficial or detrimental, does not depend on it, but on the people, in this case the teacher who applies or uses them and at the same time on the objectives pursued in their application.

## BIBLIOGRAPHICAL REFERENCES


- Anderson, Lorings, Airasian, Cruikshank, Mayer, Pintrich (2001). Una taxonomía para aprender, enseñar y evaluar: una revisión de la taxonomía de los objetivos educativos de Bloom, edición abreviada. White Plains, Nueva York: Longman, 5 (1).
- Balderas Georgina & Hernández Gerardo, (2020). Géneros de escritura académica en el bachillerato ¿Qué tanto se utilizan para fomentar el aprendizaje? Revista Mexicana de Orientación Educativa, 16(39).
- Belenky, M., Clinchy, B., Goldberger, N., & Tarule, J. (1986). Women's ways of knowing: The development of self, voice and mind. New York, NY: Basic Books
- Bustos (2009). Creencias docentes y uso de nuevas tecnologías de la información y comunicación en profesores de establecimientos de formación técnico profesional de las regiones.
- Camps, Ana (2013). La escritura académica en la universidad. REDU: Revista de docencia Universitaria, 11(1), 17.
- Carlino, Paula (2008), Concepciones y formas de enseñar escritura académica: un estudio contrastivo. Signo y Seña, (16), 71-117.
- Cassany Daniel, (2017). ¿Cómo se lee y escribe en línea? Revista electrónica leer, escribir y descubrir, Volumen 1 número (1).
- Cassany Daniel, Marta Luna & Gloria Sanz (1994), Enseñar lengua. Barcelona: Graó.
- Chevallard, Yves & Gilman, Claudia (1997). La transposición didáctica: del saber sabio al saber enseñado. Buenos Aires, Aique. contemporary communication. London, UK: Arnold. Computers & Education, 58(1), 449–458.
- Cortez Quevedo, Fuentes Quelin, Villablanca Ortiz, & Guzmán, Carlos (2013). Creencias docentes de profesores ejemplares y su incidencia en las prácticas pedagógicas. Estudios pedagógicos (Valdivia), 39(2), 97-113.

- Costa & Lowery (1989). Técnicas para enseñar a pensar. Critical Thinking.
- Criollo Carlos Eduardo (2020). Uso de las TIC en Educación. 593 digital Publisher CEIT, 5(1), pp. 37-54.
- Da Ponte (1999). Las creencias y concepciones de maestros como un tema fundamental en formación de maestros. On research in teacher education: From a study of teaching practices to issues in teacher education, pp. 43-50.
- Davidson, Donald (1988). En una teoría como la de Donald Davidson, que se basa en el supuesto de que los sujetos intencionales somos generalmente racionales, la explicación de las creencias y acciones irracionales debe jugar un papel importante, 15-25.
- Deng, Chai, Tsai, & Lee (2014), Las relaciones entre las creencias epistémicas de los profesores chinos en ejercicio, las creencias pedagógicas y las creencias sobre el uso de las TIC, Revista de tecnología y sociedad educativas, 17 (2), pp. 245-256.
- Downes, T., Fluck, A., Gibbons, P., Leonard, R., Matthews, C., Oliver, R (2001). Making better connections: Models of teacher professional development for the integration of information and communication technology into classroom practice. Canberra, Australia.
- Ertmer, P. (1999). Addressing first- and second-order barriers to change: Strategies for technology integration. Educational Technology Research and Development, 47(4), 47–61.
- Ertmer, P. (2005). Teacher pedagogical beliefs: the final frontier in our quest for technology integration? Educational Research and Development, 53(4), 25–39.
- Ertmer, P. A., Ottenbreit - Leftwich, Sadik, O., Sendurur, & Sendurur (2012). Teacher beliefs and technology
- Estévez, Valdés & Zavala (2014). Creencias sobre enseñanza y aprendizaje en docentes universitarios. Magis. Revista Internacional de Investigación en Educación, 6(13), 49-64.
- Evans-Pritchard, (1976). Las teorías de la religión primitiva. Siglo XXI.
- Fenstermacher, Soltis & Sanger (2015). Enfoques de la docencia. Teachers College Press.
- Ferreira, da Veiga, da Silva, & Olcina-Sempere, (2020). Inclusión y diferenciación pedagógica: concepciones y prácticas. Dos estudios cualitativos en la realidad del sistema educativo portugués. Revista Colombiana de Educación, 1(78).
- Flower, L. y Hayes, J. (1996). Textos en contexto. Los procesos de lectura y

escritura. Buenos Aires: Asociación Internacional de Lectura.

- García, Maria (s.f) Symplegades: una obra de Leander Kaiser.
- Gee, (2010). Los nuevos medios digitales y el aprendizaje como un área emergente y los "ejemplos prácticos" como un camino a seguir. Cambridge, MA, MITPress
- Gómez, Juan (2017). Creencias sobre el aprendizaje de una lengua extranjera en el contexto universitario. Íkala, revista de lenguaje y cultura, 22(2), pp. 203-219.
- González Carmen & Sánchez Susana (2009). Las prácticas docentes para enseñar a leer ya escribir. Infancia y aprendizaje, 32(2), 153-169.
- González Irene (2013). Un asalto al discurso histórico. La práctica escritural de Tatiana Lobo. Revista de Filología y Lingüística de la Universidad de Costa Rica Vol. 38 Núm. 1.
- Guba, Egon & Lincoln, Yvonna. (2002). Paradigmas en competencia en la investigación cualitativa. Por los rincones. Antología de métodos cualitativos en la investigación social, pp. 113-145.
- Gutiérrez, Cesar (2018). Herramienta didáctica para integrar las TIC en la enseñanza de las ciencias. Revista interamericana de investigación, educación y pedagogía. 11(1), pp. 101-126.
- Guzmán, Luz Adriana (2015). Competencias matemáticas: Creencias y sus implicaciones en el diseño curricular.
- Hammer, D., & Elby, A. (2002). On the form of a personal epistemology. In B. K. Hofer & P. R.Pintrich (Eds.), Personal epistemology: The psychology of beliefs about know-ledge and knowing (pp. 169–190). Mahwah, NJ: Erlbaum.
- Harris Marvin, Bordoy Francisco & Velasco (1990). Antropología cultural. Madrid: Alianza editorial.
- Harris, Marvin, Bordoy Víctor, Revuelta, Francisco & Velasco, Humberto (1990). Antropología cultural. Madrid: Alianza editorial.
- Hernández Zamora, Gregorio (2016). Literacidad académica. México: Universidad Autónoma Metropolitana, pp. 7-17.
- Herrero, (2019). Escritura digital: estrategias de enseñanza-aprendizaje en entornos digitales. Lectoescritura digital. Madrid, 2019; p. 123-132.
- Hurtado León, & Toro Garrido (2005). Paradigmas y métodos de investigación. Venezuela: Episteme consultores asociados.
- Iglesias, Andrew (2008). La taxonomía de Bloom florece digitalmente. Tecnología y aprendizaje, 1, 1-6.

- Jenkins, Clinton, Purushotma, Robinson, Weigel (2006), Afrontando los desafíos de la cultura participativa: Educación en medios para el siglo XXI. Chicago, IL: MacArthur.
- Journal of Educational Psychology, 87(3), 424–432.
- Kem mekahKadzue, Oscar (2018). Tic y enseñanza de español en Camerún: creencias del profesorado e implicaciones didácticas. Intercambio/Échange, 2018, núm. 2, p. 84-96.
- Keys, P. (2007). A knowledge Elter model for observing and facilitating change in tea-chers' beliefs. Journal of Educational Change, 8(1), 41–60.
- Kress & Van Leeuwen, T (2001). Multimodal discourse: The modes and media of
- Latorre Marino (2018). Historia de la web, 1.0, 2.0, 3.0 y 4.0. Universidad Marcelino Champagnat, pp. 1-8.
- Linares & Pérez (2020). Construcción de identidad profesional docente durante la formación inicial como maestros. Revista Complutense de Educación, 31(3), 329.
- Mahwah, NJ: Erlbaum. Schraw, G., Bendixen, L. D., & Dunkle, M. E. (2002). Development and validation of the Epistemic Belief Inventory (EBI). In B. K. Hofer & P. R. Pintrich (Eds.), Personal epistemology: The psychology of beliefs about knowledge and knowing (pp. 261–275).
- Mama, & Hennessy, S. (2013). Developing a conceptual framework of teacher beliefs and practices concerning classroom use of ICT. Computers & Education, 68, 380–387.
- Márquez, Clara (2019). Medellín, ciudad educadora y en progreso https:// repositorio. idep. edu. co/handle/001/276.
- Martínez Edwin, Rosa Maria, Judith Yangali (2021). Integración de las TIC en los procesos de gestión académica y administrativa. Revista de Psicología y Educación 58 (1), 5594-5599. DOI: https://doi.org/10.17762/pae.v58i1.2179
- Mendoza Fillola, Antonio, López Amando & Martos Eloy (1996). Didáctica de la lengua para la enseñanza primaria y secundaria. Madrid: Akal, 1996.
- Meyer, J. H., & Eley, M. G. (2006). The approaches to teaching inventory: A critique of its development and applicability. British Journal of Educational Psychology, 76, 633–649.
- Moreno, Mar & Azcárate, Carmen (2003). Concepciones y creencias de los profesores universitarios de matemáticas acerca de la enseñanza de las ecuaciones diferenciales. Enseñanza de las ciencias: revista de investigación y experiencias

didácticas, pp. 265-280.

- Nespor, J. (1987). The role of beliefs in the practice of teaching. Journal of Curriculum Studies, 19, 317–328. doi: 10.1080/0022027870190403
- Nespor, J. (1987). The role of beliefs in the practice of teaching. Journal of Curriculum Studies, 19, 317–328.
- Núñez Jover, J. (2018). Educación superior, ciencia, tecnología y agenda 2030.
- Olaizola, Andrés. (2011), El ensayo como herramienta en la enseñanza y el aprendizaje de la escritura académica. Reflexión Académica en Diseño y Comunicación, 16, 61-66.
- Oliva, Ponce & Ibáñez, (2020). Las TIC en el fomento lector de los adolescentes. Un estudio de caso desde las creencias docentes. Contextos educativos: Revista de educación, (25), pp. 105-125.
- Ortega & Gasset (1986). Ideas y creencias y otros ensayos de filosofía, Ideas and beliefs and other philosophical essays.
- Pajares, (1992). Las creencias de los profesores y la investigación educativa: limpiando una construcción desordenada. Revisión de la investigación educativa, 62 (3), pp. 307-332.
- Parra, Hugo. (2010). Creencias matemáticas y la relación entre actores del contexto. Revista Latinoamericana de Investigación en Matemática Educativa RELIME, 8(1),
- Pérez, Vinueza, Jaramillo, & Parra, (2018). Las Tecnologías de la Información y la Comunicación (TIC) como forma investigativa interdisciplinaria con un enfoque intercultural para el proceso de formación de los estudiantes. Etic@ net. Revista científica electrónica de Educación y Comunicación en la Sociedad del Conocimiento, 18(2), pp. 196-215.
- Perry, W. (1970). Forms of intellectual and ethical development in the college years: A scheme. New York, NY: Holt, Rinehart and Winston.
- Pozo, J. I., & Postigo, Y. (2000). Los procedimientos como contenidos escolares [Procedures Such as School Content]. Barcelona, Spain: Edebe´.
- Prestridge, S. (2012). The beliefs behind the teacher that influences their ICT practices. Computers & Education, 58(1), 449–458.
- Prestridge, S. (2012). The beliefs behind the teacher that influences their ICT practices.
- Quintana, José. Maria (2001). Las creencias y la educación. Pedagogía

cosmovisional. Barcelona:

- Richardson, V. (2003). Pre-service teachers' beliefs. In J. Raths & A. C. McAninch (Eds.),Teacher beliefs and classroom performance: The impact of teacher education (pp. 1–22).
- Rodríguez-Sosa, & Solis-Manrique, (2017). Creencias docentes: Lo que se hace en el aula es consecuencia de lo que se piensa. Propósitos y Representaciones, 5(1), pp. 07-20.
- Rokeach, M. (1968). Beliefs, attitudes and values: A theory of organization and change. San
- Rosas Carmen & Alvites-Huamaní (2021) WhatsApp como recurso educativo y tecnológico en la educación.8 (2), pp. 69-78.
- Scardamalia & Bereiter (1992). Dos modelos explicativos de los procesos de composición escrita. Infancia y aprendizaje, 15(58), pp. 43-64.
- Schommer, M. (1990). Effects of beliefs about the nature of knowledge on comprehension. Journal of Educational Psychology, 82(3), 498–504.
- Schommer, M., & Walker, K. (1995). Are epistemological beliefs similar across domains?
- Schraw, G., Bendixen, L. D., & Dunkle, M. E. (2002). Development and validation of the Epistemic Belief Inventory (EBI). In B. K. Hofer & P. R. Pintrich (Eds.), Personal epistemology: The psychology of beliefs about knowledge and knowing (pp. 261–275).
- Schunk, (1997). Teorías del aprendizaje. Pearson educación. Herder. research on the teaching beliefs and practices of university academics", Review of
- Serrano Rocío (2010). Pensamientos del profesor: un acercamiento a las creencias y concepciones sobre el proceso de enseñanza-aprendizaje en la Educación Superior. Revista de educación.
- Solís, Lisandro (2015). La cura por la palabra. Erotismo y escritura en Descubrimiento del alba de Xavier Abril.
- Tondeur, J., Hermans, R., van Braak, J. & Valcke, M. (2008) Exploring the link between teachers´educational belief profiles and different types of computer use in the classroom. Computers in Human Behaviour, 24, 2541-255 doi: 10.1111/ j.1365-2729.2006.00205
- Tondeur, J., van Braak, J. & Valcke, M. (2007). Towards a typology of computer use in primary education. Journal of Computer Assisted Learning, 23, 197-206.

- Tsui, (2003), Comprensión de la experiencia en la enseñanza: Un estudio de casos de profesores de segunda lengua. Prensa de la Universidad de Cambridge.
- Universidad Metropolitana en Educación, Ciencia y Tecnología, (2016) D-33 Líneas de Investigación.
- Vaillant & Rodríguez (2018) Perspectivas de UNESCO y la OEI sobre la calidad de la educación. Calidad de la Educación en Iberoamérica. Discursos, políticas y prácticas, pp. 136-154.
- Van Fleet, Connie & Douglas Raber (1990), "The Public Library as a Social/
- Vázquez, Leal, & Núñez (2020). Formación dual, Favoreciendo al desarrollo de Talento 4.0. Dual Training, Contributing to the Development of Talent, 4, 230-245 Rosas, Charo & Alvites Cleofe (2021). WhatsApp como recurso educativo y tecnológico en la educación. Hamut´ ay, 8(2), 69-78.
- Zimmerman Barry & Bandura Albert (1994). Impacto de las influencias de la autorregulación en el logro del curso de escritura. Revista estadounidense de investigación educativa, 31 (4), pp. 845-862.