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Omar A. Ponce, José Gómez Galán & Nellie Pagán Maldonado. Investigación cualitativa en educación: reexaminando sus teorías, prácticas y desarrollos en una era científico-política

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Qualitative research in education: revisiting its theories, practices and developments in a scientific-political era

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RESUMEN.
Desde que entró en la educación a mediados del siglo XX, la investigación cualitativa ha sido una metodología bien establecida entre los investigadores educativos. Su fuerza reside en su naturaleza, alcance y flexibilidad metodológica para comprender los fenómenos culturales, sociales, políticos y morales de la educación. Entre los años setenta y ochenta, la pertinencia y la superioridad de la investigación cuantitativa frente a la cualitativa, en el ámbito de la educación, se debatieron en foros académicos. El debate sobre el paradigma fue tan intenso que llegó a las discusiones políticas. En 2002, el Consejo Nacional de Investigación (NRC) de Estados Unidos de Norteamérica recomendó al Departamento Federal de Educación la exclusión de la investigación cualitativa de los fondos federales por no considerarla investigación científica. Desde entonces, la investigación cualitativa ha seguido desarrollándose como modelo de investigación educativa con el apoyo de fondos privados. Este artículo revisa la investigación educativa cualitativa y examina su evolución para reposicionarse como un modelo legítimo de investigación académica en un ámbito político-científico.

PALABRAS CLAVE.
Investigación educativa; métodos; educación superior; investigación cualitativa; teoría de la educación.

ABSTRACT.
Since it entered education in the mid-20th century, qualitative research has been a well-established methodology among educational researchers. Its strength lies in its nature, scope, and methodological flexibility to understand education's cultural, social, political, and moral phenomena. Between the 1970s and 1980s, the relevance and superiority of quantitative vs. qualitative research in education were debated in academic forums. The paradigm debate was so intense that it reached political discussions. In 2002, the National Research Council

(NRC) of the United States of America recommended the Federal Department of Education the exclusion of qualitative research from federal funds because it was not considered scientific research. A similar situation was observed in England and Australia. Since then, qualitative research has continued to develop as a model of educational research with the support of private funds. This paper revisits qualitative education research and examines its developments to reposition itself as a legitimate model of scholarly research in a political-scientific era.

KEY WORDS.
Educational research; methods; higher education; qualitative research; education theory.

1. Introduction.
Qualitative research is a methodology with the robustness, scope, and flexibility to capture the complexity and dynamism of education (Cooley, 2013; Ponce, 2014; Ponce, Pagán-Maldonado, & Gómez Galán, 2017). At the beginning of the 21st century, education is considered a complex and dynamic scientific research phenomenon. The complexity of education arises from the multiple simultaneous interactions among its constituents and components when moving towards achieving its standards and producing the desired learning in students. The social and cultural elements generated in educational institutions make education complex. The multilevel managerial structures that characterize it with their diverse political-partisan influences influence this complexity. The dynamism of education arises from this same complexity where educational management, learning, and educational institutions' effectiveness do not occur in a linear, orderly manner and progressive, systematic sequences of causes and effects. This dynamism is not always measurable, nor does it appear according to work plans. In education, qualitative research has generated significant controversy among academics and politicians.

In 2002, the National Research Council (NRC) of the United States of America questioned its education because it was not considered scientific research. It is recommended that qualitative research be excluded from public funding in the Federal Department of Education (Denzin, 2009). The NRC is a non-profit entity (Shevlson and Towne, 2002), subsidized by the Federal Education Government of that country (Denzin, 2009). Its role is to recommend policies to resolve controversies in scientific research (Shevlson and Towne, 2002). A similar situation occurred in England (Hammersley, 2007) or Australia (Erickson, 2011). At that time, it was politically decreed that educational research seeking federal funds in the United States of America should be scientific to generate quantitative evidence and guide educational practice and inform its policies. It recommended establishing institutional compliance committees to evaluate, assure, and raise the quality of federally funded research. Since then, the world's qualitative research community entered into a reflection to combat what some called the second war of quantitative vs. qualitative paradigms (Denzin, 2009), the political judgment of educational research (Barnhouse & Lareau, 2009), the qualitative research dilemma (Guzmán-Valenzuela & Barba, 2014), or the crisis of confidence in qualitative research (Moral, 2016). And as we have noted, the situation in Europe and in general in the international sphere is similar (Knoblauch, Flick, & Maeder, 2005; Osborne, & Dillon, 2008;

Prasad, 2019). This paper discusses the developments of the qualitative research community has produced and makes recommendations for repositioning itself to engage federal funding in a political-scientific educational era.

2. Critiques of qualitative research in education.

Qualitative research has its roots in multiple research practices that exist in the Social Sciences and Humanities. It enters the field of education approximately in the 1940s, in a scientific context demarcated by two influences: (1) The study of curriculum that established the intellectual ground for researching the social and cultural factors of learning. (2) The use of quantitative research as the model of educational research was adopted by the Colleges of Education of the universities in the 1930s. This step came due to the revolution in social research caused by the Vienna Circle (Paul, 2015). Quantitative research was sheltered in the positivist social research philosophy, operated from the premise that education is a set of external phenomena that influence the student, and focused on the study of causal relationships and the search for universal laws that explain learning in schools (Ponce, Pagán-Maldonado, Gómez Galán, & Canales, 2020). Between 1950 and 1980, qualitative research becomes clear in educational research. Phenomenology, hermeneutics, constructivism, symbolic interaction, postmodernism, and social criticism emerge as philosophies of qualitative research to address education problems and explain its social, cultural, and political phenomena, which quantitative research did not provide (Walters, 2009). There emerges an interest in researching education through its various contexts. For example, what education was like in urban and rural schools, with students of diverse socioeconomic levels, by primary and secondary levels, and by subject (e.g., Ponce, 2014; Merriam, 2009; Lichtman, 2006; Woods, 1996; Bogdan and Biklen, 1992; Manen, 1990; Straus and Corbin, 1990).

This distances educational research from the statistical measurement of educational phenomena and the search for universal laws to explain learning (Codliffe, 2000). This contrast of visions on educational research unleashed a strong polemic between the proponents of research that would produce causal and generalizable explanations of education (quantitative research) versus those who advocated study that would understand the social, cultural, and political phenomena in diverse educational contexts (qualitative research). The 1980s were characterized as paradigm wars because of the debate developed in academic and political forums between proponents of quantitative research and qualitative research (Eisner and Peshking, 1990). The two axes of the controversy were the superiority of one research model over the other (Tashakkori and Teddlie, 1998) and the legitimacy of qualitative research in education (Denzin, 2009; Ponce, Pagán-Maldonado, & Gómez Galán, 2020). Two significant criticisms emanate from qualitative research in education that culminates in its delegitimization to take part in federal funding:

2.1. Paradigmatic Relevance.

Criticism focused on the diversity of philosophies to which qualitative researchers resorted when studying education and their relevance in arriving at conclusive positions on how to solve educational problems. Three research models were observed in qualitative education research: (1) The constructivist or interpretive model of research, which emphasis is on

understanding the social and cultural phenomena of education through the experiences of its constituents. Constructivist studies recognize the importance of people's interpretation in constructing their educational reality and their behavior in this context. In this approach, phenomenological studies, ethnographic studies, field theories studies, and case studies were observed (Patton, 1980; Creswell, 2007; Ponce, 2014). (b) The social critique model, which starts from the interpretive premise of the constructivist model, argues that in interpreting the constituents, the schools' social, cultural, and political elements must be considered and provoke new social orders (symbolic interaction). These studies focused on exposing the voices of those who are the recipients of administrative and political decisions in educational systems. In this category of qualitative research, we observed studies on the impact of partisan politics on education, postmodernist studies or the new visions imposed by the educational management in control, and feminist and gender studies. The goal was to expose the voices of marginalized and disadvantaged groups that made up public education (Creswell, 2007; Ponce, 2014). (c) The realist research model, where it is assumed that people construct their reality through the interpretations they make as they relate to the external reality with which they interact. From this research perspective, the reality is identified in people's ideas and the external social realities they experience. This model assumes that this external reality is objective and that it exists independently of people's interpretation. In this model, studies with pragmatic and post-positivist philosophies are observed where they sought to understand, and sometimes measure, through human experience, those social phenomena external to the individual and that impacts interpretation (Patton, 1980; Miles & Huberman, 1994; Creswell, 2007; Ponce, 2014). Two criticisms emerge from this paradigmatic dispersion. First, the difficulty of identifying a uniform view of qualitative educational research. Some argued philosophically, qualitative research was neither a defined nor a consistent paradigm of scientific inquiry. The argument was that even among qualitative researchers, there were deep philosophical disagreements and severe critiques of how to do research in education (Mertens, 2005; Creswell, 2007; Denzin, 2009). Second, the relevance of these philosophies for researching education and their contributions were questioned—the argument centered on the fact that education cannot exist in a world of relativities and rhetorics. Educators need clear, concrete guidelines on how to teach students. Educational administrators need concrete, quantifiable, accurate, and generalizable data for decision-making (Pring, 2000). Qualitative research did not meet this need for scholarly research demanded by administrators and policymakers. The philosophical relativity of qualitative research, especially postmodernist research, was harshly criticized and classified as a pure rhetoric of ideas (Paul, 2015).

2.2. Methodological deficiencies.
When comparing qualitative research with quantitative research to produce clear and conclusive guidelines on improving education, it was criticized for its lack of precision, rigor, and methodological systematization when describing complex social concepts and phenomena. Its internal validity was questioned because of its methodological fragility in studying causal relationships and its lack of generalization because of the small size of its study samples. When comparing qualitative research with quantitative research, it results in a

clear disadvantage due to its ontological and epistemological premises (Hammersley, 2008; Paul, 2015).

3. Advances of qualitative research in education in a political-scientific era.

From 2002 to the time of writing this article, qualitative education research has found funding in the private sector (Cooley, 2013). Someone widely used qualitative research in educational research (Cooley, 2013; Bank, 2016). In the policy and institutional compliance committee arena, qualitative research is a research model that is evaluated compared to quantitative research. In the United States of America, there is political pressure to positively qualitative research on quality standards and rubrics to assess it with the same criteria that quantitative research is evaluated (Hernandez-Hernandez and Revelles Benavente, 2019). This practice makes up a point of tension for educational researchers because qualitative research is distorted in its ontological and methodological foundations that affect its scope to generate knowledge (Pratts, Kaplan, and Whittington, 2020). The political world still does not understand the product developed from qualitative research (Cooley, 2013). A methodological refinement is observed (Guzmán-Valenzuela and Barba, 2014; Morales-Santaella, 2016), which is explained below:

3.1. Consensus on the paradigm of qualitative educational research.

In terms of the philosophical foundations of qualitative research in education, Pérez-Abril (2009) examines the legitimacy of qualitative educational research. Barba, González-Calvo, and Barba-Martín (2014) discuss the qualitative research paradigms that should prevail in educational research because of the nature of education. Guzmán-Valenzuela (2014) examines the epistemological postulates of qualitative research in education and how these are linked to the study's validity. Guzmán-Valenzuela and Barba (2014) and Moral (2016) discuss the construction and representation of knowledge in qualitative research in education. The philosophical foundations of qualitative research in education are considered confusing for novice researchers and a challenge to manage for experienced researchers because of the deep and encompassing intellectual territory it comprises (Bank, 2016). However, qualitative research is projected in the 21st century as a social critique research model that seeks to contribute to the world's social problems (Denzin & Lincoln, 2011; Flick, 2016). Three research statements define this positioning to contribute to a better society (Flick, 2016): (a) **Study social and inequity problems in communities**. Qualitative research needs to be critical in exposing and explaining the social and political issues being studied. It needs to identify vulnerable groups in society, define the problems that affect them, analyse how institutions handle these problems, and plan recommendations on how these problems can be solved. In this way, qualitative research will remain relevant and valuable to society. (b) **To study education scientifically**. In education, there is a need to question research practices in the evidence-based research movement, the prevalence of experimental research as the only form of an investigation of causal relationships, and the fascination with mixed methods. There is also a need to be critical of qualitative research methods used as scientific research in education. (c) **Questioning partisan politics in science**. The purpose of questioning practices under the name of scientific research in education, which includes qualitative

research, is not to discontinue some forms of research and make way for others. It is about questioning the premises to understand the methods better, the data generated, produce better reports, and politically eliminate the marginalization of qualitative research from the participation of governmental funds. This paradigmatic vision constitutes a step forward for qualitative research in education compared to the criticism it received in 2002 by the National Research Council.

3.2. Methodological refinement.

There is evidence in the literature of research that attempt to improve qualitative methodology. Hammersley's books present a critical analysis of qualitative research in education in an era of scientific research to generate evidence to guide practice (2007) and methodological aspects that need to be strengthened (2008). Padilla-Díaz (2015) and McGregor (2020) examine the role of phenomenology in educational research. The topic of ethics in qualitative educational research seems to be an emerging theme in the literature, especially in an era of institutional compliance committees (Ponce, Pagán-Maldonado, & Gómez Galán, 2018). Outside the field of educational research, work is identified that examines qualitative methods to improve it. For example, Kross and Guist (2018) discuss the importance and role of research questions in the design and validity of qualitative research. Roger, Bone, Heinonen, Schwartz, Slater, and Thakrar (2018) argue the importance of qualitative researchers exposing their beliefs and biases to generate better qualitative research. Kizlari and Fouseki (2018) examine the apprehension presented by some participants in qualitative interview studies and suggest how to manage these dynamics to turn them into data. Lane, Blank, and Jones (2019) examine the methodological and ethical aspects of involving children in qualitative research. Thomas (2017) investigated the unvalidated premise of corroboration technique when establishing data credibility. Reid, Brown, Smith, Cope, and Jamieson (2018) discuss the ethical aspects of qualitative research in medical education because of the multiple interactions between the researcher and study participants. Reynolds and Lee (2018) examine the ethical considerations of recording qualitative interviews and the methodological implications. Finally, San Martín Cantero (2018) discusses qualitative data analysis in the Social Sciences. In summary, a purification of qualitative methodology in education is observed in the literature. This methodological refinement does not yet answer some questions and criticisms of qualitative education research: methodological precision, the study of causal relationships, sampling procedures, and generalization models.

3.3. Theories to explain the functioning of schools.

At the beginning of the 21st century, three theories emerge that seek to guide qualitative research in search for educational efficiency: complexity theory, critical realism theory, and relational theory (Ponce, Pagán-Maldonado, & Gómez Galán, 2017 & 2018). These theories group ideas serve as a conceptual framework for understanding the life of complex organizations such as schools and their social phenomena. Using these theories is to understand how changes occur in complex organizations, how they develop, and how they grow in the organization's context. These theories postulate complex systems, which operate centered on multiple relationships and multiple components, interact simultaneously (Galán,

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Ruiz-Corbella, & Sánchez Melado, 2014). Complex systems always use in a dichotomy between order and disorder. Order is the desired functioning of the system, and a condition that always makes up an opportunity for improvement and innovation to develop them if higher levels of efficiency have aspired. Complex systems exhibit outputs that are not always fair to the "cause" because their internal relationships are not always linear, orderly, and logical. The analogy of this in education may be that academic failure is not the product of the school but of the student or the home from which he or she comes. Another element that affects complex systems is the variable "time." This implies that specific processes and certain tasks must occur on definite dates for the desired performance to occur and organizational stability (Galán, Ruiz-Corbella and Sánchez Melado, 2014). In complex organizations, the relationships between their components cannot be analysed or understood in terms of linear relationships of causes and effects, but as multi-dimensional relationships, dynamics between their agents, their elements, or their components, and handle the operation, functioning, and phenomena that are generated. It is assumed that complex organizations do not function based on the laws of the physical world of causes and effects; their analysis cannot be reduced to capture the essence of their phenomena. Therefore, positivist methods of absolute truths do not charge or explain the results because the components are interrelated. Studying the components alone does not help to understand the complete operation of the organization. Complexity theory emphasizes how things work rather than describing how they are (Cochran-Smith, Ell, Grudnoff, Ludlow, Haigh, & Hill, 2014).

Epistemologically, complexity, critical realism, and relational theories emphasize the deep examination of the causal mechanisms between the natural and social worlds. This set of theories are viable approaches to positivism and postmodernism that helps resolve the conflicts of the paradigm wars in educational research. It rejects the absolutist realism of purely objective reality and the radical view of postmodernism that does not exist beyond perceptions. It is recognized that there is a reality independent of human consciousness and allows human beings to generate knowledge of it. This does not mean that reality is ordered and empirically accessible. Still, that knowledge of it is mediated through concepts that human beings develop in statements of supposed truths. The fact has layers, some perceptible and others hidden and unnoticed. These layers can influence human behavior, beliefs, values, and social patterns. In turn, organizational structures can add layers to reality, distort or hide them. In education, critical realism is valuable because it recognizes that fact has personal and institutional relationships at various levels that include human reasoning (Cochran-Smith, Ell, Grudnoff, Ludlow, Haigh, & Hill, 2014). Examining the internal relationships among the components of educational systems and adding to the complexity they present redefines the functional coherence of educational systems and allows for different lens on the nature of needed data to understand education. In examining the school as a complex organization, the primary argument is that education is a social phenomenon. Assuming that education is a social phenomenon implies that all educational phenomena that sometimes go through technical issues, such as teaching strategies, didactic materials, curriculum, and curricular designs, teaching methodologies, as well as all phenomena, practices, and values involved in education, are social, and must be known social-scientifically (Morales Zuñiga, 2016).
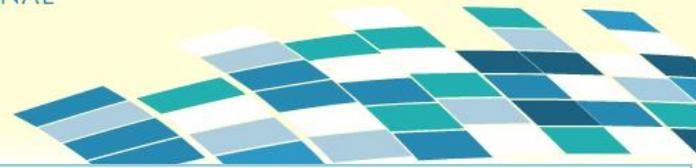
Embracing complexity makes it easier to understand that the results of complex systems such as schools do not come from a single set of causes but from the sum of many multi-dimensional relationships that are not always linear. These multi-dimensional relationships can only be understood and improved if they are studied in the organization's context. Understanding the functioning and effect or outcomes of the multiple relationships that occur in schools in their organizational, administrative, and policy structures should facilitate improving the efficiency of schools and educational systems. This should facilitate improving teaching practice and educational policies in the complexity's context of educational systems (Radford, 2006; Galán, Ruiz-Corbella, & Sánchez Melado, 2014; Ponce, 2016; Ponce, Pagán-Maldonado, & Gómez Galán, 2017; Ponce, & Pagán-Maldonado, 2017; Ponce, Gómez Galán, & Pagán-Maldonado, 2017). This constitutes a step forward in qualitative education research.

4. Challenges and Opportunities for qualitative research in 21st-century education.
However, although qualitative research has been relegated to the background by institutional policies, it still occupies a relevant position in the field of educational research and, in general, the social sciences, as demonstrated by the quality of contributions in this field made in recent years (Johnson, & Christensen, 2019; Tracy, 2019; Hennink, Hutter, & Bailey, 2020; Noblit et al., 2020). It clearly shows that it is still advantageous in many scientific domains, from multiple perspectives (Sirignano, Perillo, & Maddalena, 2015; Hayashi, Abib, & Hoppen, 2019; Umanailo et al., 2019; Ponce, Pagán-Maldonado, Gómez Galán, & Canales, 2020; Underwood, Kowalczuk-Walędziak, & Barrow, 2020). Moreover, current theoretical developments present a scenario in which it would be fundamental to achieve different scientific goals (Ponce et al., 2021). Even in educational technologies, during the explosion of the digital paradigm, there are spaces in which the qualitative can be predominant (Concepción et al., 2019; Gómez Galán, 2020). Sometimes, even mixed methods would be shown to be at disadvantage with qualitative methods since they would involve a much higher cost and, in essence, would not contribute significantly more than what careful qualitative research can yield. From this approach it would be sufficient (Ponce, Gómez Galán, & Pagán-Maldonado, 2019).

The reflected disinterest in qualitative research over the decades has not only occurred in the educational sciences but in social sciences (López Meneses et al., 2017; Burgos et al., 2020). Moreover, it has been evident in scientific publications in education, where articles of a quantitative nature are now predominant (Gómez Galán, 2015 and 2018). This means that, on many occasions, excellent articles of a qualitative nature are at a disadvantage for publication. Therefore, a change of perspective and even of paradigm is urgently needed.

At the beginning of the 21st-century, qualitative research in education faces opposition from politicians and scholars from other disciplines of studies that benefit from federal funding (Cooley, 2013; Ponce, Pagán-Maldonado, & Gómez Galán, 2017). Barnhouse, Lareau, and Ranis (2009) illustrate how studies in education of dubious academic quality have served as the basis for the development of educational policies while studies of high literary quality are discarded. Since 2002, the political world has been arguing that education needs studies that
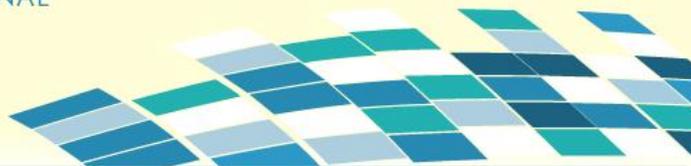
establish the validity of educational practices and inform educational policies. In this working climate, qualitative research faces the challenge of making itself accessible and establishing bridges of communication with the political world and educators. Qualitative research must address the problems facing education systems and generate information on these problems, and their institutional and cultural contexts, to respond to educational policies and teaching strategies needed by educators and demanded by the policy sector. Qualitative research needs to generate solutions for educators and policymakers in the fiscal reality in which many educational systems live. Qualitative research data should promote and facilitate communication channels between policymakers, educators, and administrators about what is happening in schools (Sallee & Flood, 2012; Cooley, 2013). Understanding the problems in schools helps to improve educational systems (Galán, Ruiz-Corbella, & Sánchez Melado, 2014; Ponce, 2014; Ponce & Pagán-Maldonado, 2016) and to have more responsive educational policies (Sallee & Flood, 2012). Qualitative research fills three significant gaps in academic research; studying causal relationships, linking qualitative research to educational policy development, and seeking to generalize:

4.1. Causality.

In education, causal relationships have been successfully studied with qualitative studies of field observations (O'Connell and Grey, 2011), with case studies (Flyvbjerg, 2011), and with ethnographic studies (Ponce, 2014). Qualitatively studying causal relationships involves describing in-depth the events or situations that are causal, describing the effects, connecting, and describing the processes of causality, and explaining the institutional context where the causal relationship manifests itself with its temporal elements (Miles and Huberman, 1994). The greatest strength recognized in qualitative research is its flexibility to capture the complexity of education and trace its multiple relationships (Cooley, 2013; Galán, Ruiz-Corbella, & Sánchez Melado, 2014; Ponce, 2014; Ponce & Pagán-Maldonado, 2016). In the political-scientific vision of 21st-century educational research, the call is to study and validate educational practices and inform educational policies. For example, suppose qualitative research in education studies educational methods to produce student learning. What is the rationale for these practices, what educational goals do they pursue, what procedures or protocols are necessary to implement them effectively, with which student groups do they produce better results, what training do educators need to apply them expertly, or what educational policies are necessary for their effective implementation? These questions transcend the phenomenology of students or educators because they are answered by tracing the use of the educational strategy with different student groups, observing the use of these educational strategies and practices in the diverse working conditions of schools, and the adaptations that educators have to make when using them with student groups with diverse educational needs. The answers to these questions merit qualitative causality studies. In this type of study, causality is not mathematical but qualitative, tracing to understand, describe and explain the effects of educational practices in a diversity of contexts and educational realities.
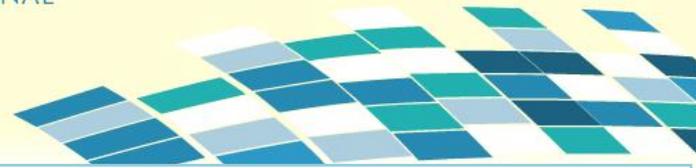
It is possible to give an example of the above. In a recent doctoral dissertation, Mercado (2018) studied the educational practices, textbooks, and teaching materials used by a sample of kindergarten teachers in the Puerto Rico Department of Education to teach gender equity. Covered by the educational policy that established gender equity teaching in the country's public schools, he analysed the policy's rationale for establishing gender equity teaching in schools. Also, identified the guidelines and recommendations delineated by the regulation. The objective of this analysis was to determine the socio-cultural conditions that the educational policy identified as the rationale for this type of education and how gender equity education should be implemented in the country's public schools. Additionally, studied the debates documented in the literature that were generated by the educational policy. The author analysed literature and professional guidelines issued by professional associations and recognized experts on how gender education should be developed. To study the educational practices of kindergarten teachers, he conducted open-ended interviews to learn about their teaching strategies and the textbooks they used; visited the classrooms to observe the educational practices of these teachers; and studied the textbooks and educational materials assigned for these purposes by the Department of Education. From the visits, the author developed diagrams of the different classroom organizations used by the teachers. After analysing the data, he established clear contrasts between the guidelines established by educational policy and the educational practices and teaching strategies used by teachers in the working and cultural conditions in which they worked. Finally, observed how educational patterns they modified to respond to the academic needs of the students and their parents. There was a need for professional in-service training to help teachers understand and contextually manage the concept of gender equity in the classroom, as everyone had their understanding. There was also a need to provide teachers with protocols on how to educate on gender equity. Teachers would not experience the fear of whether they were doing their job well or in line with the employer's expectations.

4.2. They are linking qualitative research to the development of educational policies.
Relating research to the formulation of educational policies makes up another alternative to improve education (Ponce, Pagán-Maldonado, & Gómez Galán, 2018). In the 21st century, the study of educational policies emerges as a relevant topic of academic research because of its impact on the effectiveness of educational systems. The problem with educational policies in many countries has been their fragmentation, politicization, irrelevance, and distance from educational practice (Woulfin, 2014; Pedró, 2015). Nor does there seem to be a clear link between policy and research, despite the pressures for their study (Pacheco-Mendez, 2014; Hanusheck, 2015; Jennings, 2015). Two objectives seem to dominate educational policy research: to determine its effectiveness in improving educational systems and plan science-based educational policy that eradicates those educational policies centered on ideologies (Woulfin, 2014). The expectation is that academic research will assume a critical role and evaluate current educational policies (Smeyers and Dapaepe, 2008; Green, 2010; Koichiro, 2013; Jennings, 2015). In the science-based educational model of the 21st century, it is necessary to understand how educational policies work, not in terms of mathematical
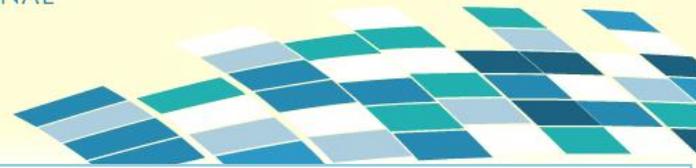
cause-and-effect relationships, but how these regulations influence students' performances and their teachers' performance (Smeyers and Dapaepe, 2008). There is a need to understand how educational policies affect the contexts of the schools where they are implemented (Diko and Bantwini, 2013). There is a need to understand better the philosophical, moral, and value aspects of educational policies and the behaviors they entail and wish to impose or eliminate (Gil-Cantero and Reyero, 2014). Qualitative education research has an excellent opportunity to contribute to the study of educational policies if it traces the effects of these policies considering the educational objectives aspired to and the institutional realities they entail. Quantitative research has dominated this territory in academic research (Cooley, 2013).

It would also be possible to illustrate the above with an example. In another recent dissertation, Mojica (2020) developed a qualitative study to understand the challenges and opportunities in developing the pedagogical sport in the Physical Education Program of the Puerto Rico Department of Education. The premise of his research was that pedagogical sport in Puerto Rico was visible on paper and not in classroom practice. The author began by studying the educational policy and public policy from which the pedagogical sports movement legally emerges in the country's public schools. Also, analysed the physical education curriculum of the Department of Education to understand how the idea of pedagogical sport should be translated into the action of teaching it in classes and curricular activities in schools. He also studied the literature on the subject that came from the work and research of academics in the country's universities and at the international level. From this analysis, he found several visions in precise juxtaposition of what pedagogical sport means; discovered these visions translated into various programs with original objectives and identified from the analysis several stakeholders in the development of the pedagogical sport. Considering this exercise, the author designed an open-ended interview study to explore the concept of pedagogical sport with the participation of administrators of physical education programs in universities, administrators of the physical education program in the Puerto Rico Department of Education, administrators of the pedagogical sports program in the Puerto Rico Department of Recreation and Sports, and some members of the Senate and House of Representatives committees that work with education, sport, and health issues. This interview process ratified the diversity of visions on pedagogical sport's concept and the objectives pursued in Puerto Rico. The interview process also identified government documents and unapproved bills that helped build a more defined picture of pedagogical sport in Puerto Rico. With this information, re-interviewed a select group of these critical participants because they were very knowledgeable on the subject. In a second round of interviews, the author presented his preliminary findings to the study participants. Finally, discussed with them the diversity of visions on the concept of pedagogical sport that he had identified, and how these visions translate into very different programs, the disarticulation that seems to exist among the key groups in the development of pedagogical sport in Puerto Rico, and the absence of mechanisms to determine the impact of pedagogical sport in society. The study concluded with recommendations for possible models of public and institutional policies to articulate the development of the pedagogical sport on the island. It planned guidelines and statements of measurable objectives and products to be

evidenced in educational sports programs. Concluded the study with recommendations for in-service training for physical education teachers in the Puerto Rico Department of Education.

4.3. Generalization.

Generalization is understood as using data generated from one educational context and applying it to other classrooms and schools. Among qualitative researchers, generalization is considered a research ideal that is neither necessary nor desirable because qualitative research is oriented to the in-depth description of educational phenomena (Niaz, 2007). Generalization has been an ideal of scientific research desired by the political sector but unattainable in education because of its complexity and dynamism for qualitative and quantitative researchers (Ponce, Pagán-Maldonado, & Gómez Galán, 2018). Qualitative researchers handle two phenomena when researching education: (a) socio-cultural phenomena that are generated from human interactions and interpretations in educational contexts, and (b) phenomena that are generated from procedures, processes, educational practices, educational policies, and aspirations that guide educational institutions as educational standards, goals, and objectives. Both phenomena have been studied in an integrated manner through phenomenological studies, ethnographies, and contextual social criticism. For example, the school experience of dropouts is examined, and factors related to its interpretation or conditions in the school, such as educational policies or school practices, are described. These descriptions are difficult to generalize because they involve many factors inherent to the phenomena being studied in the institutional contexts from which they originate. Qualitative education research must differentiate these phenomena in its studies because they affect the operation of educational organizations. The theories of complexity, critical realism and relational theory presented in the previous section make up conceptual frameworks that invite to investigate this dichotomy and to link both educational phenomena in educational institutions. These research theories generate the possibility of developing institutional explanations of the functioning of schools through the various organizational models that exist in education (field theories). Generating explanations of institutional functioning should facilitate the possibility of generalization between educational models because these are not infinite but clearly defined and contextual. Qualitative research on the functioning of educational institutions, from the point of view of institutional field explanations, should generate information that allows describing and explaining the functioning generated in these organizations and in the context in which they originate. This line of research would make it possible to replicate studies centered on these institutional field explanations to establish their ecological validity in various schools or educational systems, with different generational groups, which could cause generalizable explanations. Generalization is a gap in educational research.

5. Conclusion.

At the beginning of the 21st-century, qualitative research in education shows a more refined model of educational research than in 2002. This refinement can be seen in a paradigmatic positioning centered on social criticism to contribute to the solution of educational problems. Its improvement can also be seen in an increase in works and research that seek to improve qualitative methodology. Using three theories that serve as a conceptual framework to explain

the functioning of schools as educational institutions is innovative. The challenge of doing qualitative research in the political-partisan environment that permeates education and controls access to funds for research financing is still present. In this reality, qualitative research has the excellent opportunity to contribute to educational problems if it studies the effect of educational practices on the improvement of education, investigates educational policies, and generates field explanations of the functioning of educational institutions. This territory of qualitative research serves to understand instruction and improve its procedures, processes, and organizational structures.

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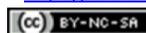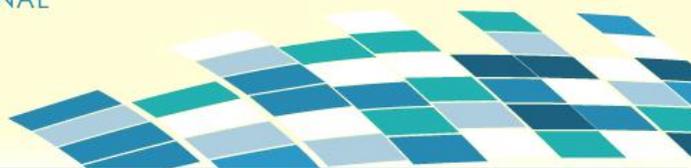
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