OUR HERITAGE
ISSN: 0474-903- Vol-67, Special Issue-9
"GRCF Dubai International Conference On Sustainability And Innovation In Higher Education, Engineering Technology, Science, Management And Humanities" Organised by
Global Research Conference Forum, Pune, India
November 23rd and 24th, 2019

A Study on 21st Century Education: Challenges and Opportunity

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Abstract

Through decades, instructive Scrutinize need been the subject for considerably civil argument through the thing that ought to be those reason in the advancement about exploratory learning in the field from claiming training. The reason for this paper will be to available a chronicled foundation on the order from claiming instructive investigate: approaches, objectives methodologies to research in the zone of instruction. Similarly, the tests and chances about instructive Scrutinize would exhibit. Those tests about instructive examination need aid distinguished in the accompanying areas: the political nature of education; the issue from claiming definition from claiming instructive Look into Concerning illustration a science and the disengagement between instructive research and act from claiming instruction. Opportunities can be placed in the context of the following areas: consensus on the knowledge of education leading to a paradigm towards alignment, the utility of knowledge in the practice of the profession to establish their scientific effectiveness and research of education policies.

Keywords: *Educational research, challenges, opportunities, education, learning, scientific effectiveness.*

1. INTRODUCTION

1.1 Educational Research

There is no agreement once how on define instructive examination (Hedges &Hanis-Martin, 2009; Condliffe& Shulman, 1999; Ponce & Pagan, 2015; Ponce, Pagan-Maldonado & Gómez Galán, 2017). Although, sierra Nieto, Caparrós Martín, Díaz Moreno (2016) expressed that more than 30 a considerable length of time ago, john Elliot figured those delimitation the middle of Look into around training instructive Scrutinize. The overwhelming position will be with define it Similarly as "research Previously, training. " instructive Look into intends researching instructive practices, the impact from claiming these polishes looking into Taking in and the examiner for training issues (Ponce, 2016; Green, 2010; Johannigmeier and Richardson, 2008;McMillan & Schumacher, 2005; Condliffe Schulman, 1999; Segovia, 1997; Charles, 1988; Cohen & Manion, 1980). The interest in researching education emerges with the rise of public education during the industrial revolution and the desire to develop it scientifically (Green, 2010; Walters, 2009; Johannigmeier and Richardson, 2008; Condliffe, 2000). The argument was based on the fact that scientific research could improve public education as it had in other professions. From this interest emerges the term educational research to refer to research in public education issues (Johannigmeier& Richardson, 2008; Shavelson & Towne, 2002; Condliffe, 2000; Cohen & Manion, 1980). At the beginning of the 21st century, the focus of educational research centered on the issues of public education was transformed. Educational research is now also trying to understand the relationship between education, schooling and university education with the development of society. From its beginnings, until approximately the 1960s and 1970s, educational research was considered a multidisciplinary field of study and a social science

(Koichiro, 2013). The term "multidisciplinary field of study" was used to imply that education was a field where the knowledge of the natural sciences and social sciences were applied. In many European countries, the study of education was conceptualized as a social science. The focus of this science wasto study the social and cultural dynamics that occur in educational systems to produce teach (Segovia, 1997). In the universities of the United States of America, education was understood as a particular study discipline, which was organized in Departments of Education. The first university professors employed in the Departments or Schools of Education came from the various disciplines of the Natural Sciences and Social Sciences. They brought research models from their academic disciplines and applied them to public education research (Ponce, 2016; Walters, 2009; Johannigmeier& Richardson, 2008; Condliffe, 2000). Much of the educational research until the 1970s was research in history, in psychology, in sociology, and in philosophy (Koishiro, 2013; Green, 2010; Walters, 2009; Johannigmeier& Richardson, 2008; Condliffe, 2000). Since then, educational research is a science that is debated in a field of knowledge between natural sciences and humanistic philosophies (Cantero&Reyero, 2014).

At the beginning of the 21st century, the language of education has been replaced by business concepts (eg, standards of effectiveness rather than goals and objectives, indicators rather than achievements, accountability rather than evaluation, inputs-outputs). The transformation in the discourse of education has allowed us to change our understanding of curriculum, teaching and learning. Education in the 21st century shows the following characteristics and practices (Pring, 2007):

Learning was standardized to pinpoint the productivity and competencies that educators need to produce and meet expectations that define the standards. Traditional standards have been replaced by standards outside the profession. This brought a new language of education: (a) From reach a goal to achieve an educational product, (b) The educator is the one who makes the educational delivery of a curriculum that another designed and not the one that plans the teaching, (C) Teaching strategies have to be science- based or have been empirically validated (Green, 2010; Pring, 2007).

Education seems more a range of training than formal learning. Learning means showing behavior that resembles standards. Assessment is no longer to describe learning but to indicate how many achieve what is expected. The curriculum is no longer exposing the student to a strange world that others have attained. The teacher is no longer a mediator between the curriculum and the student. Evidence of learning changed to provide concrete evidence of whether or not the student has the required competencies (Pring, 2007).

1. Education in a global age is characterized by the standardization of public and university education (Ponce, 2014 [a]; Ravitch, 2014).
2. Education in the 21st century cannot be conceptualized in a way that is disconnected from other realities such as health, the environment or the technological means to understand its results (Lee, 2010).
3. In the 21st century, education has no institutional context because it is lifelong learning: Learning to know, learning to do, learning to live and work, learning to be and learning to teach (Lee, 2010).

In the 21st century instructive exploration is formed characterized likewise an interesting also exemplary field about experimental exploration (Koishiro, 2013). Similarly as a field about experimental research, it looks will create its own hypotheses that aide the act of the calling (Green, 2010). In the actuality of training for a worldwide and innovative unrest age, instructive Examine can't a chance to be restricted to that examination for educating (Lee, 2010). Instructive research must produce those important approaches to guarantee prosperity in the execution of the exploratory instructive model (Pring, 2007). At this historical moment, educational research is incorporating technology into its scientific work. Technology is generating new data and

understandings (Rice &Vastola, 2009; Smeyers&Depaepe, 2008). The core question that contemporary educational researchers are making abouteducation is what knowledge can be generated from this field (Green, 2010) and what kind of research is useful for these purposes (Cantero&Reyero, 2014).

2. DEVELOPMENT

2.1 The Field of EducationalResearch

In countries such as the United States of America, England and Australia, large amounts of money are invested in educational research with the aim of improving public education and eradicating its problems. Educational research is important because education is considered to be an essential component of a country's development (Koishiro, 2013; Scott, 2010; Walters, Lareau & Ranis, 2009; Johannigmeier& Richardson, 2000; Pring, 2000). Contemporary educational research is an institutionalized activity. From its institutionalization emerge the influences that define its scientific culture and its controversies: (a) Regulatory offices. (b) Universities, (c) Research Offices and Divisions in Educational Systems (d) Professional Educational Research Associations. € Professional journals for educational research; and (f) Consultancy offices and private for-profit organizations.

2.2 The aim of educationalresearch

The point of instructive Scrutinize will be will make training a successful calling over molding the new generations from claiming subjects experts (Ponce, 2016; Green, 2010; Walter, Lareau & Ranis, 2009; Latorre, 2008;Elliot, 2007; Labarre, 2005; Carr&Kemmis, 1985).
Historically, those discourse on the adequacy from claiming instruction need been identified with those impact about educating once learning, those way for learning, the cost-benefits about educating Also manage a government funded instruction system, the school's part to diminishing poverty, entryway school cam wood move forward the country's gainfulness monetary intensity (Johanningmeier & Richardson, 2008; Cohen & Barnes, 1999). For instruction should make effective, instructive investigate must attain those following: (a) produce those learning that those calling necessities on create (Ponce, 2014 [a]) in the particularities for every one school alternately instructive framework (Latorre, 2008). (b) Build the thing that meets expectations doesn't partake) energizes schools on have the capacity should fill in enhance their viability (Labaree, 2004). (c) Describe the conditions to develop a coherent and effective teaching-learning process in the different educational contexts that exist (Latorre, 2008; Eliott, 2007; Carr&Kemmis, 1985). (d) Identify the strategies used by educators in the various educational settings and validate these practices. This implies studying their beliefs about education in order to expose and direct them (Latorre, 2008; Pring, 2000; Carr&Kemmis, 1985).
(e) To study the educational objectives, the teaching practices and the product of these practices to improve them if necessary (Green, 2010; Biesta&Burbules, 2003; Pring, 2000). (f) Assess the scope of education policies and determine if they achieve their role (Green, 2010; Biesta&Burbules, 2003; Pring, 2000). (g) Generate educational theories that inform the practice of the profession and the development of educational policies (Koishiro, 2013; Green, 2010; Shavelson & Towne, 2002; Pring, 2000, Carr&Kemmis, 1985).
(h) Generating understanding in educators and helping them to remove limitations in their educational practices (Clark, 2011).

2.3 Distinctive of Educational Research

The focus of educational research is education that occurs in education systems and their effectiveness. The field of education revolves around five major areas that determine its effectiveness: (a) educational practices to teach students, (b) student learning, (c) social dynamics of education, (d) the problems of education and (e) the management of educational institutions to direct teacher's role to the achievement of educational goals and objectives. Let us examine these areas in order to delve into the work of educational research and the distinctive features that differentiate it from other forms of scientific research (Ponce, 2014; Ponce, 2014b; Koishiro, 2013; Green, 2010; Elliot, 2007; Pring, 2000; Kemmis, 1985):

1. Research on educational practices. The term educational practices are used to describe all the efforts, activities and dynamics that are generated to provoke students' learning. Good teaching is the essential element to produce learning (Cantero&Reyero, 2014; Pring, 2000). Educational practices are developed around the following components: (a) Educational goals and objectives. (b) Curricular research-evaluation, and (c) the effectiveness of teaching and assessment strategies. The study of educational practices and their effectiveness makes educational research multifactorial or the study of many factors that interact simultaneously. Education has the distinctive of being multidimensional (Smeyers&Depaepe, 2008; Berliner,2002). A multidimensional phenomenon means that it can be studied from different optics, produce different interpretations, and all have value from the optics that is generated. For example, a teaching technique, a curricular unit, or a program can be designed and validated from the foundation of a learning theory, but educators, students, or parents may question or catalog it as insensitive to the cultural context of a school and this affects its effectiveness.

2. Learning Research. The purpose and product of education is student learning.
Learning is examined as an individual phenomenon of students and as an institutional product. The research on learning as an institutional product has followed different approaches:
   (a) Standardized test programs to measure knowledge (Ponce, 2014a),
   (b) Research-evaluation of the effectiveness of programs/institutions (Greene, 2007; Mertens, 2005),
   (c) Phenomenological research-evaluation (Ponce, 2014b),
   (d) Assessment of institutional learning (Ponce, 2014a),
   (e) Research- evaluation of institutional products.

3. Research on the influences of the educational contexts in the student.

4. Educational research is contextual because it occurs in educational institutions. Students' educational practices and learning are studied as individual changes and as an institutional product. To understand this, we study how students or groups of students interact in specific contexts such as classrooms, schools as social institutions or in communities where schools are located as scenarios of another range of social interactions. In these contexts, it is a question of understanding how the educational practices, the curriculum or the programs affect the students. Educational institutions provide the context and setting for educational research. Educational research always has to keep in mind the range of factors that affect the functioning of educational institutions when explaining teaching and learning: the physical environment, the social, cultural and economic realities of its students and the political influences that Govern educational systems and regulate their functioning (Shavelson & Towne, 2002). For example, the phenomenon of school dropout is the same in any school, but the reasons for dropouts may be very particular to the social context of the school. One area that is possible to explore is whether the school is urban or rural. The educational researcher has to question what

similarities and differences may explain learning among secondary school students in an urban school and a rural school. Explaining the particularities of educational contexts is a hallmark of educational research when studying teaching, learning and changes in students.

5. Research on educational management. Educational management is responsible for the functioning of schools. This includes from the management of finance, administrative and academic affairs, the organizational climate and creating working conditions that allow the work of teachers and student learning. Educational research has examined managerial practices, their effectiveness and educational technologies and their effects on institutional effectiveness

6. Research on educational policies. Educational policies are the norms that institutions use to regulate their functioning. Policies are the "rules of the game" that define the expected behavior of members of the education system. Policies regulate the functioning of the education system by establishing the dates, procedures, responsibilities and duties of the personnel in the operation of the system processes.

2.4 Educational Research Strategies

Educational research uses six strategies to investigate education. These strategies are as follows: (a) to observe live educational events, (b) to interview, (c) to experiment, (d) to survey, (e) to study particular cases, (f) to study history.

3. CHALLENGES OFEFFECTIVENESS

At the beginning of the 21st century, three challenges are identified that affect the effectiveness of educational research:

3.1 The political nature of education.

The issues for adequacy for instructive exploration start with the political- partisan way about training. Government funded instruction is a social development that responds and may be controlled by those administration. It may be challenging will examine those social and political goals that need aid installed in instructive frameworks in the structure for instructive destinations or principles. These beliefs interpret under vague instructive objectives (Lysenko, Abrami, Bernand, Dagenais & Janosz, 2014) Also would was troublesome with study, measure, confirmation (Johannigmeier& Richardson, 2008; Condliffe& Schulman 1999). Much of the publicly financed instructive investigate responds of the criteria Also prerequisites made by administration agencies/offices. Exploring under administration security here and there intimates that specialists must translate and oversee the requests that go with these exploration solicitations.

3.2 The problem of lack of definition of educational research as a science From its beginnings, the expectation has been that educational research solves the problems of education and that prescribes its practice. To achieve this, educational research must generate understanding among educators to help them remove the limitations of their educational practices (Clark, 2011). It also has to generate data from local educational contexts to inform the decisions of politicians and other constituents of education (Ravitch, 2014). It must generate the data and theories to guide the practice of the profession and educational policies that counter the expert-centered models that are questioned in the 21st century, if it aspires to become a scientific field (Ravitch, 2014). During the 20th century, educational research was described as a problematic science (Clark, 2011), unlike others (Berliner, 2002) or elusive (Condliffe, 2000) in the face of its lack of effectiveness. From

the outset, educational researchers have been debated in a field of knowledge between natural sciences and humanistic philosophies (Cantero&Reyero, 2014), which supported the study of education as a university discipline (Johannigmeier& Richardson, 2008; Condliffe, 2000; Condliffe& Schulman, 1999).

3.3 The dislocation between educational research and the practice of education

A third argument to explain the ineffectiveness of educational research lies in its relation to the practice of the profession. The argument focuses on the little influence that educational research has had on developing the practice of education in public schools (Hargreaves, 2007). For some, the relationship between research and practice has been controversial (Peñalva, 2014), imperfect and sometimes non-existent (Scheneider, 2014; Lysenko, Abrami, Bernand, Dagenais&Janosz, 2014)

OPPORTUNITIES FOR SCIENTIFICEFFECTIVENESS

Several strategies are identified in the literature as opportunities for educational research to achieve scientific effectiveness:

3.4 Consensus on the knowledge of education: towards a paradigmatic alignment

Since the time of the Copernican revolution, scientific research has been understood as the search for knowledge. Science means knowledge (Thompson, 2012). This knowledge has to increase the effectiveness of the profession in the following way: (a) generate theories that explain the practice of the profession, (b) validate these practices, and (c) produce laws that precisely guide the profession towards its achievements. In this way, their professionals will be able to intervene, control or predict the events or their results. In this third expectation of science lies the challenge of the effectiveness of educational research. At the time of this paper, educational research has not found and has not been able to generate that universal teaching method that guarantees learning or that mechanism that makes it possible for all students to complete their studies. Between the 1980s and 2000s, a great deal of controversy was found among educational researchers about the nature of knowledge (Paul, 2005). This debate seems to continue for much longer, even if it does not lead to any solution (Fernandez- Ramirez, 2014).

3.5 The utility of knowledge in the practice of the profession : implications of scientific effectiveness

The call in the 21st century is to an education based on the results of educational research (Lysenko, Abrami, Bernand, Dagenais&Janosz, 2014). The usefulness of knowledge emerges as a relevant topic on the effectiveness of educational research (Ranis, 2009). It is framed in the link that must have the educational research with the practice of the profession. Effective educational research in the 21st century is considered to be one that generates theory, guides practice in the profession, or informs its educational policies(Scheneider, 2014; Marley & Levin, 2007). The subject of the usefulness of knowledge has two considerations.

3.6 Research of educational policies: science onideology

In the 21st century, the study of educational policies emerges as a relevant subject of educational research because of its impact on the effectiveness of education systems. The problem with educational policies in many countries has been their fragmentation, their politicization, and their irrelevance and distance from educational practice (Pedro, 2015; Woulfin, 2014). Nor does there seem to be a clear link between policies and research, despite the pressures that exist for their study (Pacheco-Méndez, 2015). Two objectives seem to dominate policy research: determining its

effectiveness in improving education systems, and formulating science-based education policies that eradicate ideologically-oriented educational policies (Woulfin, 2014).

5. CONCLUSION

This work summarizes the authors' reflections about the challenges and opportunities for scientific effectiveness of educational research in the 21 century from an historic and evolution perspective. As mentioned before, the aim of educational research, in general, is to make education an effective profession in shaping the new generations of citizens and professionals. The literature review allowed us to identify, some challenges of effectiveness in educational research and opportunities for scientific effectiveness that needed to be address to achieve that goal. Done general, those ranges for tests from claiming viability for instructive investigate are connected to: the political way of education; those issue of meaning from claiming instructive Scrutinize likewise a science and, those disengagement the middle of instructive Examine and act for training. The primary chances to experimental viability previously, instructive examination is related to: agreement on the information for instruction prompting a standard towards alignment; the utility for learning in the act of the calling should create their experimental viability and, exploration instructive approaches.

Our position is that as educational researchers we all are responsible to fulfill the needs of useful knowledge, for the protagonist of education, regarding to the following areas: (a) educational practices to teach students,(b) student learning, (c) social dynamics of education, (d) the problems of education and (e) the management of educational institutions to direct teacher's role to the achievement of educational goals and objectives. We understand that this knowledge, to improve the education process, eventually would impact effectively the development of any country.

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