


RESEARCH ARTICLES


Teaching Research in Educational Schools and Pedagogical Training Institutes in Peru

La enseñanza de la investigación en las Facultades de Educación e Institutos de Formación Pedagógica en el Perú

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Summary

This qualitative study (documentary and empirical) focuses on the teaching of educational research in institutions that train basic education teachers or professors in Peru. Specifically, and within the framework of research methodology courses (CMI), the following were studied: syllabi (programs); teachers' professional profiles (resumes); and the manuals or texts used. Likewise, educational research journals were analyzed and, in a complementary manner, interviews were conducted with teachers of these subjects. The results reveal the existence of positivist prejudices (which prevent the incorporation of qualitative methods and techniques), teaching guided by manuals that transmit a stereotyped and incomplete idea regarding research, and the limited experience of CMI teachers in research deployments in the field of educational sciences. In this context, the interviews revealed a high interest in research and publication of articles in scientific journals on the part of CMI teachers who did not have sufficient experience. In any case, it is likely that the difficulties (not present in two highly prestigious associative universities) refer us to more structural factors associated with a poor understanding of what formative research really implies and the development of an adequate scientific culture in the centers that train basic education teachers.

Keywords: Formative research; Student research; Research teaching; Faculties of education.

Resumen

Este estudio cualitativo (documental y empírico) se aboca a la enseñanza de la investigación educativa en las instituciones que forman maestros o profesores de educación básica en el Perú. Específicamente, y en el marco de los cursos de metodología de la investigación (CMI) se estudiaron: los sílabos (programas); los perfiles profesionales de los profesores (hojas de vida); y, los manuales o textos que se emplean. Asimismo, se analizaron las revistas de investigación educativa y, de manera complementaria se realizaron entrevistas a profesores de estas materias. Los resultados develan la existencia de prejuicios positivistas (que impiden la incorporación de métodos y técnicas cualitativas), la enseñanza guiada por manuales que transmiten una idea estereotipada e incompleta con respecto a la investigación y la escasa experiencia de los profesores de los CMI en despliegues investigativos en el campo de las ciencias de la educación. En este contexto, las entrevistas develaron un elevado interés por investigar y publicar artículos en revistas científicas por parte de los profesores de los CMI que no contaban con la experiencia suficiente. De todos modos, es probable que las dificultades (no presentes en dos universidades asociativas de elevado prestigio) nos remitan a factores más estructurales asociados a la escasa comprensión de lo que realmente implica la investigación formativa y el desarrollo de una adecuada cultura científica en los centros que forman a los maestros de educación básica.

Palabras clave: Investigación formativa; Investigación estudiantil; Enseñanza de la investigación; Facultades de educación.

Introduction

In the last four decades, teacher training has undergone a series of transformations in Peru and in much of Latin America. These changes have given rise to a variety of models and ways of understanding teachers' work, duties, habits and way of meeting social demands. Accordingly, research has always been a focus of attention, whether as part of initial training, degree requirements, or as a component for critical and innovative teaching practice.

Thus, every time the issue of research is raised, a series of tensions, misunderstandings - the result of myths or prejudices- and simplified visions of what it entails emerge. However, the key challenge is to clearly define what a schoolteacher (basic education teacher or “*maestro*” as they are called in Peru) is and how reading research literature and conducting research would help them improve their core task, i.e., teaching. This is most probably reflected in the quality of the degree theses, which have several deficiencies that suggest problems in the very teaching of formative research in Peru (Perdomo et al., 2020).

Notwithstanding, there appears to be a broad consensus regarding the status of schoolteachers or educators as legitimate professionals. Thus, according to Gyarmati (1984), schoolteachers have a professional status due to their well-defined scope of practice, their relatively long training (mostly in universities), their actions being protected by regulations, their specialized know-how, and their theoretical corpus that guides their work. Consequently -and as schoolteachers are professionals-, they should be prepared (thanks to formative research) to establish dialectical relationships that allow them to see in the theories their practices and in their practices the theories (Arzola & Collarte, 2009; Carr & Kemmis, 1986; Freire, 2011).

Thus, and bearing in mind the above, the teaching profession also includes the generation of rigorous knowledge about a wide range of phenomena that can be researched from the educational sciences as a multidisciplinary space (Ferry, 1991; Arias, 2002). By virtue of this, we have disciplines or applied sciences such as educational psychology, educational sociology, didactics, educational economics, educational philosophy and others that start by the same term (“educational”); all of which offer a large number of study objects, methods and special techniques. Unfortunately, this wide palette is underutilized in Peru, given that 95% of the theses presented to obtain a professional degree are related to educational psychology and the other 5% to educational sociology, anthropology or didactics (Montes, 2013). In other words, and as previously mentioned, education has become a consumer of information from a variety of sources, rather than a science that generates knowledge, without even providing it with the pertinent grounding to the particular school contexts (Bruner, 1966).

Nonetheless, these research possibilities could not be reduced to the educational sciences; even more so when the professional nature of teachers or schoolteachers is educating. Thus, didactics as a discipline that theorizes, studies and directs rigorous knowledge towards the improvement of practices should be constituted as the main horizon of the research processes that are developed in the initial training of these professionals (Bixio, 2000). Therefore, pedagogy as such would offer the objects of study inherent to the tasks of schoolteachers, who teach in basic education. Unfortunately, and despite the high epistemological status of didactics as a discipline, the emphasis on teaching research courses would be pointing more towards the educational sciences (Claire, 2019).

It should be specified that it is not intended to avoid the contribution and legitimate presence of educational sciences in the objects of study that emerge in the institutions where teachers are trained. Rather, we would expect a healthy presence of them in a framework where didactics is positioned as the discipline most in line with the knowledge and practice of all education professionals (Botella & Ramos, 2019). Hence, Ferry (1991) considers this discipline (didactics) as special and adjusted to the highest levels of theorization in the field of teaching. In addition, we consider it relevant to note that didactics as an integrating field of pedagogy supposes an overcoming of the permanent tensions due to the dominance of some educational sciences: this denotes, to a great extent, a tendency to fragment the objects of study instead of seeking the much-desired interdisciplinarity within this broad field.

In any case, and despite the existence of epistemic tensions within the educational sciences, as well as in didactics (Zamudio, 2014; Díaz, 1998), the strongest consensus points to the recognition of the existence of a teaching profession and, at the same time, of the possibilities

of generating highly specialized scientific and technological knowledge (Aramendi et al., 2017). However, in the absence of an adequate intradisciplinary research base, a situation of low social status would be configured to the detriment of pedagogical praxis itself and its credentials as a specialized activity (Arias, 2012). Moreover, and in line with what Freire (2011) says, one could mention the indissoluble link between teaching and research; and where every educator would be expected to acquire -either through initial training and/or his/her pedagogical activity- the epistemological curiosity that is projected towards sustained processes of critical reflection on practice. And it is precisely here where a set of successful experiences refers us to the teaching of research through project-based learning and action research (Botella & Ramos, 2019; Ramírez et al., 2017; Spencer & Chugani, 2017).

Education then should not only apply knowledge, but also, generate it. Otherwise, it would become a mere technique or technology as it was erroneously believed in the seventies of the last century. Therefore, schoolteachers as professionals are indeed capable of using, creating, adapting and generating innovations that allow facing the challenges imposed by each school reality (Valbuena et al., 2018). Furthermore, schoolteachers are also able to generate relevant knowledge that is closer to the optimization of pedagogical practices through the systematization of experiences (Allen & Wright, 2014; Villamizar & Barbosa-Chacón, 2017).

On the other hand, a key aspect in the recognition of basic education teachers as professionals is the existence of higher education entities that grant these degrees after five years of studies. Thus, we have universities and teacher training institutes (ISP), which have the same legal status in terms of degree validity, but also major differences when devising formative research. As a result, the historical identity of the university institution, which has always been committed to science, would be giving rise to a much more vigorous imprint with respect to formative research, favorably influencing the Schools of Education in these deployments.

From pedagogical schoolteachers to researchers-schoolteachers

The review of a series of documents produced in Latin America in the last forty years reveals a great diversity in the ways of understanding what a basic education teacher should do and, therefore, the emphasis that should be made during his or her professional training. Thus, we can observe different challenges, ranging from the concept of the schoolteacher who is knowledgeable in his or her discipline (technical instructor) and skilled in didactics to the professional with critical thinking who also conducts research (researcher-teacher). Specifically, there is a more recent emphasis on conceiving -at least ideally- that all educators must follow pedagogical studies and in the context of their critical practices (García et al., 2018).

It seems that these challenges have not been properly addressed, perhaps because it was assumed that both dimensions would be mutually contradictory. Likewise, it may seem a simplistic solution to claim as a command (or obligation) that all schoolteachers must do (scientific) research, without an adequate epistemological basis to support it. Moreover, these views would not contemplate the need to teach research during training in order for schoolteachers to engage in a reflective professional practice capable of identifying new ways of dealing with their pedagogical reality. In any case, and following Stenhouse (1987), we are inclined to think that the forgetfulness and lack of interest in formative research would be associated, to a great extent, to the consideration of schoolteachers as mere instructors who teach subjects, rather than as social change agents.

On the other hand, formative research also bets on forging professional habits that well characterizes physicians, sociologists, psychologists and biologists, among others; and that, through various activities, students learn to research by researching (Restrepo, 2015). This demands an appropriate student guidance through experiences that not only contemplate the

scientific, but also, the development of intellectual attitudes and communicative skills as recently reported (García et al., 2018).

It is possible that the emphasis on these aspects may have a favorable impact on raising the status, prestige and social recognition of schoolteachers. Similarly, it should be noted that formative research would not only aim at preparing future educational scientists, but would also ensure more critical, contextualized and reflective graduates in the social reality in which they will develop (Alarcón et al., 2019).

Formative research problems in teacher training

Indeed, there is a broad consensus in highlighting the role of research within schoolteacher training and subsequent practice at the professional level (Ferry, 1991; Arzola & Collarte, 2009; Flórez & Flórez, 2018). However, differences and challenges immediately jump out when we have to decide on the type of research, its purpose, and how it would become part of the repertoire of desirable professional habits (Valbuena et al., 2018).

All this controversy is reflected in a multiplicity of institutional emphases and decisions that mostly bet on the realization of systematizations, the practice of action research and the writing of extensive reports as a result of their pre-professional experiences in schools. Along the same lines, a very strict division is perceived between formative research and that which is mostly projected towards more academic studies (Guerra, 2017). This distinction would be associated with the fact of erroneously conceiving formative studies as efforts where rigor, compliance with standards and contribution to knowledge would not be so important. Moreover, they would be emphasizing achievements focused on the conjunctural, on activism and distancing from this process the dialogue between theory and the studied reality (Montes, 2009). This scenario is exacerbated when the country does not have enough research professors capable of facing the challenges of relevant scientific teaching within the entities that train teachers (Núñez, 2019). On the other hand, there are also positions that conceive research training from a merely instrumental technical plane that obviates the epistemological, critical and dialectical aspects involved (Turpo-Gebera et al., 2020). This is, perhaps, a pending challenge in the teaching of research, which also refers us to its didactic dimensions (Díaz, 1998; Flórez & Flórez, 2018; Ramírez et al., 2017; Villamizar et al., 2017; Zamudio, 2014).

It should be noted that we are advocating that students have the opportunity to carry out the most varied studies during their training, but hand in hand with standards, rigor and intentions that reconcile -as far as possible- the current concerns with the contribution to knowledge. By rigor and compliance with standards we mean, for example, that students observe systematically, manage their biases, write their reports properly, validate their instruments, ask questions (interviews) accurately, apply their questionnaires appropriately, know statistics, know how to conduct a content analysis and delimit objects of study in conjunction with theory. In short, it is important to instill the habit that there are quality criteria for each procedure in the field of research (Montes, 2010).

Given these circumstances, this paper aimed at characterizing formative research teaching in the institutions where basic education teachers are trained. Specifically, in this research approach the main object was the research methodology courses (CMI) and where we analyzed: the syllabi (programs); the professional profiles of their professors; as well as the handbooks and texts used. Likewise, and in a complementary manner, we analyzed educational research journals and conducted interviews with the professors of these subjects.

Method

This research followed a qualitative mixed methodology aimed at systematic documentary review (Díaz & Sime, 2016) and the development of systematic interviews in a complementary manner (Taylor & Bogdan, 2002). On the other hand, and in the empirical dimension (interviews) where professors of scientific research methodology (CMI) courses were interviewed, the rigor criteria established by Erazo (2011) and Krause (1995) were appealed to; and where it was intended to establish basic processes of triangulation between techniques.

In detail, Table 1 summarizes the different dimensions covered by this study, techniques and study units addressed in each case, which correspond to and are derived from the main objective of this study consisting of analyzing the teaching of formative research in the initial training of educators or schoolteachers:

Table 1.
Sample of the various units of analysis covered in this study

Dimensions	Techniques	N
CMI course syllabi	Documentary analysis form	40
Profiles of CMI professors	Documentary analysis form	20
Peruvian CMI handbooks	Documentary analysis form	16
Educational research journals	Documentary analysis form	29
Interviews with CMI teachers	Semi-structured interview	14

In the light of this diversity in terms of methods and techniques, we present in more detail the various deployments mentioned in Table 1, in two integrating dimensions: documentary analysis and empirical study, in which we conducted interviews with a group of CMI professors.

Document Analysis

The first four research activities included document analysis and, in each case, analysis sheets specially designed by the authors of this study were used. Specifically, the methodological aspects are detailed below.

Syllabi of Research Methodology Courses (CMI)

We analyzed 40 syllabi (subject curricula) of the CMI belonging to basic education teachers training institutions (30 in Lima and 10 in the country's regions); 26 were obtained from the official web pages and 14 were requested directly from the teachers responsible for these courses. The variables of analysis were: the declared teaching emphases; methodology and evaluation; identification of privileged bibliographic references; and, identification of the head of the CMI for conducting the interviews. The descriptive document analysis was projected on this dimension.

Professional Profiles of CMI Professors

The analysis of the syllabi allowed us to identify 20 CMIs that explicitly included the name of the tenured professors. Within this framework, their respective professional profiles (CV) were accessed through the CONCYTEC website. Similarly, and assuming that not all of them necessarily have their scientific production updated in this database, we also accessed the Academia.edu® platform and Google Scholar Citation® to identify the scientific production of the aforementioned academics. Professional training was corroborated through the registry of degrees and titles of *Superintendencia Nacional de Educación Superior Universitaria* [Peruvian National Superintendency of University Education] (SUNEDU). The variables of analysis were:

academic training; type of institution where they teach (public/private); scientific production; and subsidized research projects. The descriptive document analysis gained a biographical perspective (Huchim & Reyes, 2013).

CMI Handbooks

The reading of the syllabi allowed us to identify 16 handbooks (texts published in Peru) that are preferentially used for the teaching of CMI. It should be noted that these nationally produced texts, due to their low cost, shorter length and simplicity, are the most widely used in the country. Also, these texts lend themselves more to photocopying and/or informal reproduction, which is permitted in the country for training purposes. It is important to note that these 16 handbooks were present (at least one) in each of the 40 syllabi previously analyzed. We considered as criteria for the inclusion of these texts: that they were published by a formally constituted Peruvian publishing house; that their author (at least the main author) was Peruvian; and, that they exceeded 60 pages in length in order to exclude the guides or offprints that are often published and then sold to the students themselves. The variables of analysis were: considerations about scientific research in education; methodological breadth; didactic approach (if they contained real examples, explanations, presence of prejudices and other emerging issues); and content present - excluded. The descriptive documentary analysis was projected on this dimension.

Educational Research Journals

Twenty-nine educational research journals published in a group of institutions where basic education teachers are trained in Peru were analyzed. Inclusion criteria included those publications that include the words “education”, “pedagogical” or “schoolteachers” in their title, and that are presented as scientific journals. These 29 journals constituted 100% of the stocks of this nature belonging to the 40 institutions where we analyzed the CMI syllabi. The variables of analysis were: formal aspects; publication scheme; publication standards; methodological comprehensiveness; and, uniqueness in terms of citation and referencing standards. The descriptive documentary analysis was projected on this dimension.

Empirical Study: Interviews with CMI Professors

As a complementary measure, it was decided to hold interviews with CMI professors at the University Schools of Education and ISP. Consequently, the main intention was to contrast the information gathered in the documentary dimension, which took place before the interviews were conducted.

Fourteen interviews were conducted with these professors in order to learn about their professional careers and perceptions regarding their experiences in the field of research. A purposive sample was chosen (Lavrakas, 2008) composed of academics who freely accepted, and under informed consent, to participate in this study. For this purpose, a semi-structured interview guideline was elaborated with an estimated maximum duration of 8 to 10 minutes. The variables of analysis were: consideration about research in educational sciences; approach or perspective to face the teaching of CMI; perceptions regarding the conditions to teach CMI; and, institutional conditions to carry out formative research. The discourses were analyzed through content analysis (Debus, 1997).

Ethical Aspects

At the institutional data collection stage, a commitment was made to maintain strict confidentiality of the data. This same criterion is applied to this paper regarding the information obtained from the web pages of teacher-training organizations. Thus, this paper does not provide any information that would allow the identification of the training organizations or professors

who teach research in them. These ethical precepts have been strictly followed when analyzing research methodology handbooks (texts) and educational research journals.

Results

Due to the diversity of dimensions or focuses of attention in this research, we offer in this section the main findings in the same order that has been presented in the methodological part. This will facilitate a thorough understanding and, at the same time, will safeguard the way in which we have proceeded (order or sequence of the investigative deployments).

CMI Syllabi

Generally, students of Academic Programs of Education become familiar with scientific research through the CMIs. In this case, all the curricula reviewed include a single research methodology course that is taught throughout the entire degree program. Likewise, in the curricular reforms of the end of the last decade, Thesis Seminar courses were incorporated as a subject that projects the emphases of the CMIs and are oriented toward students' significant advancement (or completion at best) of their degree or licensure work in education. However, it is likely that the CMIs have been aligned to the formative spaces associated with the degree (Thesis Seminar or Degree Project) and, therefore, have assumed a restricted perspective (derived from the thesis regulations) with respect to what is research in the field of educational sciences. Namely, this instrumentalization of aligning the teaching of formative research to the thesis could reproduce to some extent the problems inherent to the regulations governing these achievements leading to the professional degree. Likewise, they could blur the critical-reflective scopes inherent to rigorous inquiry about didactic and educational objects.

Thus, we found that the syllabi, both in Lima and in the provinces, present an exclusively quantitative vision with respect to research. Similarly, it was possible to identify (with two exceptions) exclusive considerations towards probability sampling (leaving aside non-probability sampling). Also, we did not find (in all cases) an express allusion to standards of rigor, quality norms and criteria for applying the various techniques. However, 8 of the 40 syllabi analyzed made express reference to the American Psychological Association (APA) standards for the drafting of instruments (and their validation or adaptation), the formulation of variables, the style of scientific writing and the coherence between the different components of a study. Three of them also mentioned the style for presenting tables and figures and the norms for citing and referencing according to APA. In any case, it is important to point out that we did not find express allusions to rigor in qualitative studies or to the application of statistical procedures that are generally expressed as conditions or mathematical assumptions to assume a type of proof.

Regarding the epistemological framework of determining an object of study and its appropriate formulation as part of the studies previously carried out, we found only two syllabi that deal with these aspects. In the others, the formulation of problems in the form of questions is briefly mentioned; and very probably this is under the influence of the degree regulations that tend to reduce the object of study to questions (Montes, 2013).

As for the methodology, the majority (32 cases) emphasized the exposition by the CMI professor of the different topics or contents. Likewise, and in these cases, the evaluation included exams, reading controls and written tests. In the remaining 8 cases, there was express emphasis on the combination of expository lectures and student assessment of research work, where both exams and the presentation of research work were considered as evaluation criteria. Finally, it should be noted that in two cases (two associative universities in Lima) it is made explicit that students will have to read papers published in scientific journals and submit written reports on them. These same universities are the ones that have incorporated qualitative methods -and techniques- and consider contents associated with mixed research designs; where in both CMIs

they mention the American author John W. Creswell. One of these two universities also includes documentary research and the Peruvian Luis Sime is mentioned as the author; both authors are well known for their respective contributions.

CMI Professors' Professional Profiles

The links made it possible to identify the names and surnames of the CMI professors, which made it possible to search for professional information thanks to the databases mentioned in the methodological section of this paper. Thus, we were able to identify that of the 40 professors, 28 held Master's degree, 7 held a Bachelor's degree or a degree from an ISP, and 5 held a Doctorate. It is worth mentioning that the 7 professors who did not hold postgraduate degrees belonged to ISPs and 3 of them did hold a Master's degree. Similarly, there were 6 Master's degrees and 3 Doctorate earned abroad; all of these professors were part of universities in Lima. The original Titles (or Bachelor's degrees) of the entire sampling corresponded to education (55%), sociology (12.5%) and psychology (32.5%). In terms of gender, 18 CMI professors are men and 12 are women.

In terms of scientific production, 5 papers in Scopus (Q3), 6 papers in Web of Science and 8 conferences indexed in Web of Science or Scopus were found in all 40 profiles. Sixteen papers were found in non-refereed printed media. It should be noted that of the total sample (n = 40), 32 did not record any publications: this shows that the scientific and specialized publications found were by 8 professors (7 from universities and 1 from an ISP) from the CMI (5 from Lima and 3 from the provinces).

Also, the analysis of the professional profiles in the public records of CONCYTEC (CTI Vitae) allowed us to identify that of the 40 profiles, 8 of them state that they have been granted allowances to carry out research. Of these projects, 3 have been financed by international organizations, 1 by a governmental entity and 4 by internal competitive funds. As for the type of institution, 6 of these funded projects belong to professors from the CMI of universities in Lima and 2 to universities in the provinces. However, due to the lack of information in the electronic profiles mentioned above, we do not have precise information regarding the amounts of funding or subsidies. The latter probably refers us to situations where this information was omitted, given that the main interest of the higher education system as a whole would be in scientific papers.

CMI Handbooks and Guides

It was found that, in general, the CMI would be very attached to handbooks (especially those published in Peru), which would be transmitting an incomplete (and even distorted) idea of research in the field of educational sciences.

These aspects are detailed in Table 2. In light of what has been expressed, it is possible to glimpse the existence of problems also suffered by many other Humanities and Social Sciences programs in Latin America (Guzmán & García, 2016; Sánchez, 2014). We refer to the (positivist) prejudice of thinking that there is only one scientific method with a series of rigid steps that has to lead us all to quantify our objects of study (Rodríguez & Caurcel, 2019). Moreover, many of the classic books or handbooks in these fields (national and foreign), equate the scientific method to quantitative methodologies. That is to say, there would be a predisposition to consider as scientific any effort with variables, indicators, hypotheses, measuring instruments and refined statistical procedures. Furthermore, these texts are unaware of the real possibilities of reconciling quantitative and qualitative methods under a complementarity scheme (Meza, 2002; Rodríguez & Caurcel, 2019).

Table 2.*Problems found in research methodology handbooks or texts published in Peru and used in CMIs*

<ul style="list-style-type: none"> • They convey the idea that there is only one scientific method for conducting research in education. In this case, an experimental-quantitative approach. • They do not include chapters or sections on how to rigorously deal with a topic at different stages of the research. • They do not deal with the multiplicity of quantitative and qualitative methods that are part of the educational sciences. • They instill the assumption that scientificity is a quality proper to quantitative studies and the measurement of attributes. • They ignore the fact that scientific studies always involve a contribution to knowledge. • They reduce the research process to a format that must be filled out in a linear fashion to meet the requirements. • They discredit qualitative approaches as unreliable and unfit to contribute to the development of scientific theories. • They make no reference, by way of models, to rigorous scientific publications in the field of education. • There are no references to mixed designs (quantitative and qualitative) for conducting research. • They do not consider the systematization of pedagogical experiences or action research as valid resources. • They do not consider the systematization of scientific literature as legitimate ways to learn from documentary sources.

Note: This table is based on the 16 handbooks or texts published in Peru and used in CMIs.

This bias of the handbooks to offer a single way of looking at the scientific method would have at least two consequences. The first consists in the disqualification of any qualitative intentionality directed at the study of discourses, observable behaviors and documentary sources. The second is associated with forcing minority qualitative studies to formulate indicators, variables or representative samples (typical of quantitative studies) with the intention of giving them a halo of scientificity. The latter is very frequent in graduate programs in education where students have to fit their qualitative research with a single pre-established format that was made in the light of the scheme of experimental studies.

In this regard, and epistemologically speaking, it should be understood that the methods have to be adjusted to the reality configured as the object of study and not the other way around. Therefore, there would not be only one scientific method within the educational sciences, but many, which would make it possible to generate relevant knowledge for reflection and decision making. Therefore, students training to become schoolteachers could well carry out studies using the methodologies and techniques of history, economics, anthropology, sociology, administration, psychology and philosophy, among others. But, as already pointed out, only one method would generally predominate in the centers that train basic education teachers and, therefore, other intentions would be disregarded (nor would they arise) with the same force.

Education Research Journals

This crisis in formative research is also reflected in the quality of the scientific journals of the faculties of education and ISP throughout the country. These journals, for the most part, do not acquire the status of scientific journals as such, since they do not have major quality controls on their products to be published, i.e., they do not operate under the double-blind refereeing system. Specifically, for this paper, 29 University Schools and ISP research journals were reviewed. It was found that only 3 of them had editorial committees made up of national and foreign academics. In addition, in these 3 journals, compliance with commonly accepted criteria for this type of publication, such as publication norms, standards for citation and referencing, definition

of the scope of the journal, and instructions for authors, was evident. Specifically, we identified that 2 of the journals were indexed in Web of Science Emerging Sources Citation (among other indexes such as Latindex) and 1 only in Latindex 2.0. All these journals with verified indexing belong to universities in Lima.

This context not only casts doubt on the academic quality of the works published in most of these journals, but also raises the impossibility of indexing these publications in national or international databases. In addition, some of these journals would not promote among readers and authors an adequate research culture in accordance with the standard parameters governing scientific communication. In this regard, it is thought that these shortcomings are mainly due to the fact that many of these publications are not in charge of competent personnel, i.e., research professors with the appropriate experience and/or duly certified as such. Therefore, given the lack of experience in the field of research, the academic management of these journals, in the hands of editors or directors without due preparation, tends to be insufficient.

Table 3 summarizes the major problems found in education research journals.

In addition to the limitations mentioned above, Table 3 shows that the endogamy in the authorship of the publications, the irregularity of their appearance and the low quality of the papers only reflect a biased management of the journals and the absence of academic networks. Therefore, it is likely that the aforementioned shortcomings are major hindrances to the maturity of these publications from a scientific point of view.

Table 3.

Main problems found in Peruvian education research journals

<ul style="list-style-type: none"> • They include content that does not correspond to scientific journals, such as photographs of authorities, reviews of recreational or social events, comments or proposals that are not based on systematic didactic studies, among others. • There is no editorial committee whose members belong to different institutions. The tendency is markedly endogamic. • Almost all of the papers correspond to professors from the university itself and there is no relevant presence of authors from other institutions. • They include papers of other sciences such as biology, nutrition or chemistry. This was evidenced in several journals that were the object of this study. • They used different systems for citation and referencing in the same volume (e.g., APA and footnote references). • They lack publication standards and instructions for authors. • There is no date of receipt or acceptance of papers. • They focus exclusively on quantitative studies within the field of educational psychology. There are no major references to other educational sciences or to qualitative studies. • Papers' quality is inconsistent. Some of them stand out for their rigorousness and others practically do not make rigorous criteria explicit. • The writing styles of the papers are inconsistent and it seems that there is no thorough proofreading and editing work.
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Note: This table summarizes the analysis of 29 research journals published by the Schools of Education and ISP.

Interviews with CMI Professors

The interviews revealed a broad interest of the CMI professors in improving their teaching practices. This tendency was also registered among those with scientific publications and greater experience. Thus, they referred to the absence of conditions to develop research that would allow them to interact with their students in the light of their own experiences as authors of scientific

papers. Thus, they mentioned that they enjoy teaching CMI and that they would like more understanding of the work they do (e.g., “It is a very fascinating course, but they do not support us with bibliography;” or “When I tried to do real research with my students, we were not even given letters of introduction to go to schools”). However, 10 of the 14 interviewees argued the importance of this course in terms of the degree or diploma thesis, and did not mention the formative need to teach this course to future basic education teachers (e.g., “If they do not take this course, they will not be able to graduate;” or “This course is aimed at helping them with their thesis”). In other words, the value of this subject to develop critical thinking, pedagogical reflection and the establishment of a professional identity committed to teaching hand in hand with constant research was not perceived.

Further to the above, only 4 CMI professors emphasized the urgent need for these subjects to teach how to think, to promote the habit of resorting to research products to make decisions and to develop vocations committed to scientific research (e.g., “My course should make them think about pedagogical problems;” or “To become a critical teacher, one needs to exercise deep habits and this course provides them to a great extent”).

It is worth mentioning that a large number of the interviewees considered that choosing a Master's degree in University Teaching and Research automatically makes them researchers (e.g., “I have been trained as a researcher in the Master's degree in Teaching and Research and that is why I teach this course”). This was also extended to people who achieve a doctorate degree, who were equated with being researchers because they have this academic credential (e.g., “When I complete the Doctorate Program, I will be considered a researcher” or “Being a Doctor is equivalent to being a researcher because of the type of studies”). Added to this is the majority perception regarding the way in which researchers are trained within the teaching bodies; and where it was estimated that this is possible thanks to courses and certifications. Thus, on this point, only 2 of the CMI professors rightly alluded to the fact that research groups are the spaces par excellence to adequately train this highly specialized human resource (e.g., “We have to form research groups to learn from those who know the most.”). For this reason, and given the situation described above, it is not surprising that among their demands, most of these professors mentioned the need for training and not so much networking, links with centers of excellence and the establishment of policies to promote the creation of research groups within the Schools of Education and ISP.

On the other hand, it was striking that more than half of the professors interviewed mentioned that they needed support to publish under their authorship the theses of their students who were advised after taking the CMI (e.g., “Research professors and advisors are co-authors together with students and we must appear in the papers.”). Likewise, they expressed that teaching this chair placed them in an advantageous position when advising students' theses; which implies -in most cases and especially in ISPs and public universities- a direct charge to the thesis students, quite apart from what they pay to the institutions in an official manner.

Regarding the consideration of what is a research product, the professors interviewed (8 of them) stated that the submission of reports to the research unit (after receiving a number of hours for this purpose or the respective economic support) constitute scientific publications; and where compliance resolutions are almost always delivered as a consequence (e.g., “I have completed five research projects and I have complied with submitting the reports to the corresponding area;” or “I am asked for the reports and I submit them on time; I have not been asked to publish the results.”). Also, when asked about some kind of feedback or the requirement for publication, it was stated that they had never been required to publish. This finding is quite different from what was expressed by 4 of these professors, who stated that any study should end in the publishing of a paper, book chapter or research notes reviewed by academic peers. Thus, 3 of them expressed that what is not properly published does not exist for the specialized world and, therefore, internal reports should not be cited (e.g., “What is not published does not exist and is

not worthwhile; ring binders or folders with reports cannot serve as an authoritative source.”). These same 4 professors argued about the importance of their students being able to read them throughout the formative process, a way of teaching from what one does.

Discussion

Our findings refer us to problems associated with the handbooks, guides and texts used for these teachings. In this framework, we found that the syllabi of the CMI distort -to a great extent- the intellectual development and the establishment of professional habits of utmost importance in the teaching staff; due to the fact that these subjects are frequently related to the regulations to obtain the Bachelor's degree or the Title. In general, these regulations do not conceive qualitative studies, let alone their integration with quantitative research under a mixed scheme. Added to this is the presence of simplifications and stereotyped visions that are mostly transmitted by these regulatory provisions as to what research is. Thus, it is likely that these results largely corroborate the evidence related to the inadequacies perceived by Peruvian students with respect to the teaching of formative research (Hernández et al., 2021).

On the other hand, and although there is a broad consensus regarding the importance of research in higher education in general, we could consider that in the preparation of educators this could be vertebrated throughout the entire undergraduate studies; and not only in the research methodology course (Guerra, 2017; Hilton & Hilton, 2017; Giraldo et al., 2018). Thus, these influences would at least be embodied in forging critical, reflective teachers concerned with reading studies as part of their professional practice (Freire, 2011; Giralt-Romeu et al., 2021; Allen & Wright, 2014; Cariola, 1997; Téllez, 2012).

In this scenario, our document research processes report (and which had as objects the Peruvian research methodology handbooks and the CMI syllabi) that the confrontation between quantitative and qualitative methods is still maintained; a situation reviewed by Cook and Reichardt (1989) and more recently for our country by Rodriguez and Caurcel (2019). This long-standing rivalry is very present in the teaching of research within the institutions that prepare future basic education teachers in Peru. This, without failing to point out that it is likely that in some Latin American academic environments these misunderstandings are present, but in a framework of real coexistence of both methodological traditions. In this regard, it would be feasible to think that in Peru these tensions are marked by the hegemonic presence of quantitative methodologies, which would explain the scarce qualitative studies by CMI professors and students at the time of writing their theses. To this could be added the fact that these formative spaces, not being mostly led by researchers with proven experience, would be reflecting the same inadequacies regarding quantitative studies that emerge from the manuals used in these courses (Giralt-Romeu et al., 2021; López-de Parra et al., 2017).

It should be clarified, that these problems found would not be exclusive to the CMI, but rather, they would be symptomatic of the scarce institutionalization of research within the training plans of future teachers in Peru (García et al., 2018). Which also explains the almost nonexistent support for student research in the country and in much of Latin America (Barbón et al., 2019; Giraldo et al., 2018). In this sense, the inadequacies detected in the area of formative research in the field of education would be due to an institutional crisis of the Peruvian university that encompasses both teachers, students and authorities (Arias, 2013). In any case, this crisis would be deeper in the entities that train teachers given the historical tradition of training pedagogues under an approach focused on developing skills to teach and not so much to generate knowledge about school phenomena (Ferry, 1991; Montes, 2013; Allen & Wright, 2014).

Undoubtedly, and in spite of the fact that the Education program would present more critical problems in terms of research, it is necessary to promote favorable influences throughout

the university system. This will consolidate research nuclei in which professors and students participate, and which will make possible the internalization of the methodological frameworks necessary for academic work according to each specialty (Arias & Gordillo, 2019; García et al., 2018; Guerra, 2017; López-de Parra et al., 2017; Parra, 2004). At the level of education programs, the main challenge would be to offer adequate opportunities for teachers to research and improve their skills in this field through an adequate management of internal research systems. Likewise, these conditions would be gestating institutionalized spaces to train in research those teachers who so wish (Montes & Arias, 2012; Hilton & Hilton, 2017; Guilbert et al., 2016). In addition, it is worth noting that empirical evidence supports the favorable impact of adequate teaching of formative research; the same that generates greater expectations with respect to achieving postgraduate studies and specializations (Giraldo et al., 2018; Guilbert et al., 2016).

In this regard, and following the thinking of Giroux (1997), it is likely that the neglect of formative research is largely associated with the preponderance of the positivist, traditionalist and technocratic discourse that insists strongly that teachers should only provide mere instruction (Rodríguez & Caurcel, 2019). Thus, the exercise of critical thinking that benefits thanks to the learning of research in all its forms would not be sufficiently valued. These situations that are projected in the CMI's would be impacting on the inauspicious perceptions that students would have about the teaching of research (Giralt-Romeu et al., 2021; Alvunger & Wahlström, 2018).

To conclude, it is worth highlighting the value of encouraging multidisciplinary scientific work in order to facilitate academic growth, innovation and the establishment of collaborative networks that support formative research, which, like all human activity, becomes legitimate and sustainable when it is anchored to groups, collectives or communities (Guerra, 2017; Hernández, 2015; Vargas et al., 2016).

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