FORMATIVE RESEARCH AND RESEARCH COMPETENCIES IN FOREIGN LANGUAGE STUDENTS IN HIGHER EDUCATION

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KEYWORDS
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Foreign language
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ABSTRACT
The purpose of this study was to ascertain the degree of correlation between formative research and the attainment of research competencies by students majoring in Foreign Language at a Peruvian public university. Using a non-probabilistic sampling method, 59 colleague students were selected for the sample. The design of the study was non-experimental and transactional in nature. The correlation coefficient between the variables was calculated to be 0.705, indicating that the relationship is positive and has a strong positive correlation. Consequently, there is a significant relationship between the variables of the study.

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1. Introduction

Hewitt & Barrero (2011) argue that higher education must respond to the following challenges: economic globalization, information and communication revolution, and knowledge. In this sense, the current study is characterized as essential for preparation in the professional field, since students expand their ability to collect and systematize data resulting in the acquisition of new knowledge.

Parra (2009) maintains that formative research is of vital interest and importance in the university education of each future professional. Likewise, each house of study has the mission to train professionals according to their graduate profiles, considering primarily the development of their research competencies.

Research competencies entail enhancing knowledge, attitudes, and skills that holistically act in solving various situations in their academic-professional context (García et al., 2014). Therefore, it is actively integrated into the teaching-learning process in university education, to be actively involved in making decisions and acting. In a similar way, Muñez et al. (2001) allude that for the development of research competencies, they must fulfill different purposes, such as "understanding the implications of research, being reflective, capacity for argumentation and active involvement" (pp. 15-16). In addition, Turpo-Gebera et al. (2020) and Turpo-Gebera et al. (2023) emphasize the promotion of research through research groups and institutes with the active involvement of teachers and students in higher education institutions.

The University Law in Peru indicates that the act of researching is a primordial and mandatory capacity in university centers and that all the subjects that are part of the institution must actively participate in it. Thus, there is little evidence of the development of research skills in graduates of professional careers in Education, specifically in the professional career of Bachelor of Education: Foreign Languages in relation to the processes that involve the development of research such as thesis projects and reports. In sum, Márquez (2009) expresses that there is evidence of a low level of professionals with research skills. And the latent concern of the teachers is strengthening research competencies and thus making a more effective accompaniment (Romero, 2010). Thus, the curriculum of the school of education of a public university, as well as the curricula of the other faculties, require the performance of research as a necessary aspect for obtaining a degree. In addition, it is necessary to note that a small group of teachers actively conduct research and allow students to understand the contents and the way of development of such types of studies.

In this sense, the main problem is based on the lack of research skills and the respective scarce development of research areas, such as the planning and development of thesis projects according to the scheme constituted by the approach, objectives, hypotheses, study variables, design and type of research, hypothesis testing, and statistical coding.

For the Foreign Language career, formative research aims to guide the training of researchers, consequently, it seeks to develop and enhance research talent, promoting positive attitudes towards research that will motivate future generations to conduct research oriented to the specialty. Likewise, in this way to achieve the necessary professional competencies to respond to the academic, labor, and scientific demands in our society (Venegas et al., 2019; Esquivel-Grados et al., 2023).

For the house of studies, reformulate professional training policies, readjust the curriculum, especially in the curricular area of research, generating significant improvements in didactic strategies in the teaching-learning process to achieve competitive students from undergraduate, considering that the new university law makes it mandatory for obtaining the academic degree and professional degree to perform research work. In the same way, the commitment of universities and organizations of the State to achieve optimal results in the development of their research skills is reinforced (Buendía et al., 2017; Turpo-Gebera et al, 2023).

For the Ministry of Education, knowing aspects of the curriculum, specifically in the Foreign Language career is necessary in order to contribute to and improve the policies of training and evaluation of English teachers, in addition, to successfully facing various calls for scholarships such as Champion Teacher, a program that trains and prepares teachers and classroom researchers to become true agents of transformation of the challenging educational realities in the area of English.
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On the other hand, no antecedent has been found on the subject at the end of the specialty in the different public universities of the country. For this reason, this research is strengthened in this proposal and motivates other study programs to carry out research and to train professionals with research competencies that solve and contribute significantly to their society.

Certainly, it is necessary to carry out this type of research for a better diagnostic for quality process purposes, to promote research and teaching commitment, scenarios that allowed channeling the present study with the objective of establishing the relationship between formative research and the achievement of research competencies of students in the professional career of Foreign Language of a public university.

2. Methodology

The hypotheticohypothesis was used in the present research with a quantitative approach to corroborate the stated hypothesis (Hernández-Sampieri & Mendoza, 2018). Likewise, the non-experimental correlational and cross-sectional design was used. Two questionnaires were applied to the students corresponding to the sample in order to acquire quantitative data for data analysis and statistical correlations, thus determining the contemporaneous fluctuations between variables.

The students of all academic cycles (II-X) of the professional career of bachelor’s degree in Foreign Language Education of a Public University of Tacna, Peru, enrolled in the academic year 2021-II are considered as part of the study population. The sample size was estimated through the non-probabilistic sampling system by convenience (Carrasco, 2007; Vara, 2015) since the 59 students enrolled in the X cycle of the professional career were considered, and this is what comes to constitute a sample population. In this sense, Ramírez (2004, p. 10) points out that "the census sample is one in which all the research units are considered as a sample".

The instruments for data collection were established in two questionnaires which through the reliability of internal consistency obtained results that evidence its reliability, for variable 1 (formative research) reached 0.90 through Cronbach's alpha. Next, variable 2 (research competencies) achieved 0.92 (Hernández et al., 2014) and was validated by five specialties in the field. Both variables counted with 26 items, in the first variable it was sustained in the dimensions of planning and development of research. On the other hand, the second variable is considered in its dimensions of knowing-knowledge, knowing how to do-abilities.

3. Results

The results present the relationship between formative research and research competencies. In the same way, SPSS 26.0 software was used for data processing. From which the levels and correlations of both variables are presented.

<table>
<thead>
<tr>
<th>Formative Research</th>
<th>Higher Education students</th>
<th>Research planning</th>
<th>Research development</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Low</td>
<td>2</td>
<td>3.39</td>
<td>3</td>
</tr>
<tr>
<td>Medium</td>
<td>9</td>
<td>15.25</td>
<td>8</td>
</tr>
<tr>
<td>High</td>
<td>48</td>
<td>81.36</td>
<td>48</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100.00</td>
<td>59</td>
</tr>
</tbody>
</table>

The table depicts the perceptions of Foreign Language Specialization students regarding research planning and development. On the research planning dimension, only 3.39 percent of students are at a low level, followed by 15.25 percent at a medium level, and the majority of students, 81.36 percent, are at a high level. On the dimension of research development, 5.08 percent of students are at a low level, 13.56 percent are at a medium level, and the plurality of students are at a high level.

The results indicate a high evaluation in the proposed dimensions due to the fact that instructors of the Foreign Language specialization include investigative situations in the various courses they are...
responsible for. However, a lesser proportion of students continue to struggle with the planning and execution of research.

Table 2. Perceived level of knowing (knowledge); knowing-being (attitudes); knowing-how (skills) in university students.

<table>
<thead>
<tr>
<th></th>
<th>Knowing (knowledge)</th>
<th>Knowing-being (attitudes)</th>
<th>Knowing-how (skills)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
<td>%</td>
<td>n</td>
</tr>
<tr>
<td>Low</td>
<td>4</td>
<td>6.78</td>
<td>1</td>
</tr>
<tr>
<td>Medium</td>
<td>12</td>
<td>20.34</td>
<td>11</td>
</tr>
<tr>
<td>High</td>
<td>43</td>
<td>72.88</td>
<td>47</td>
</tr>
<tr>
<td>Total</td>
<td>59</td>
<td>100.00</td>
<td>59</td>
</tr>
</tbody>
</table>

Source: Own elaboration

The table displays the level of foreign language students’ perception of knowledge (knowledge), knowing-being (attitudes), and know-how (abilities). On the dimension of knowing (knowledge), 6.78% of pupils demonstrated a low level, followed by 20.34 % with a medium level, and 72.88 % with a high level. On the dimension of knowing-being (attitudes), only 1.69 percent of pupils are observed to have a low level, 18.64 percent have a medium level, and 79.66 percent have a medium level. excellent caliber. In the dimension of knowledge (capabilities), only 3.39 percent of students are at a low level, followed by 16.95 percent at a medium level, and the plurality of students, 79.66 percent, are at a high level.

These results indicate that the dimension of abilities and attitudes has the greatest influence on students of the specialty, which demonstrates the students’ strong desire to be immersed in their research process, given that a substantial number of students have research projects. A thesis authorized during the tenth year of study. On the other hand, there is evidence of a significant proportion of students who present difficulties in developing their research; this can be confirmed by examining students who reintegrate into the academic environment after a number of years away.

Table 3. Level of formative research and achievement of competencies in higher education students.

<table>
<thead>
<tr>
<th>Formative research</th>
<th>Achievement of research competencies</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Low</td>
<td>Medium</td>
</tr>
<tr>
<td>Low</td>
<td>1</td>
<td>1.69</td>
</tr>
<tr>
<td>Medium</td>
<td>1</td>
<td>1.69</td>
</tr>
<tr>
<td>High</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td>2</td>
<td>3.39</td>
</tr>
</tbody>
</table>

Source: Own elaboration

The results show a high level of formative research and research skills in the students of the last cycle of the Specialty of Foreign Language, being corroborated through the research seedbed of the Specialty, which allowed a considerable percentage of students to make scientific publications in high impact journals and international academic conferences. However, a percentage of 17% of them still present difficulties, and the necessary mechanisms should be sought to recognize what are the weaknesses and challenges for them.
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Table 4. Correlation between formative research and research competencies.

<table>
<thead>
<tr>
<th>Coefficient</th>
<th>Variable</th>
<th>Correlations</th>
<th>Research skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rho of Spearman</td>
<td>Formative Research</td>
<td>Correlation coefficient Spearman's Rho correlation coefficient</td>
<td>0.705**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sig. (bilateral)</td>
<td>0.000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N</td>
<td>59</td>
</tr>
</tbody>
</table>

*Note.* ** Correlation is significant at the 0.01 level (bilateral). Values obtained from scores obtained from students of the Foreign language career.

Source: Own elaboration

Based on the results found, the general hypothesis proposed in this research was accepted, which suggests that there is a significant relationship between the variables: formative research and research competencies, since the value of rho=0.70, sustain an existing positive correlation between the two research variables.

4. Discussion

The results of the research show that there is a close and significant relationship between formative research and research competencies, since as seen in Table 7, the level of significance between both variables is high, demonstrating that a positive perception by students of formative research results in a positive view about the development of research competencies, proving this relationship through other research such as that of Montoya (2013), Vargas (2019) and Luna and Ramos (2018). However, such a positive result differs from the results found in countries such as Argentina, Colombia, and Ecuador; where, in the latter, only a tiny number of students perceived to have research knowledge, and only half of them translated that knowledge into action (Buenía-Arias et al. 2018, Gonzáles and Ostrovsky, 2020; Guamán et al., 2021). Consequently, it is inferred that there is a significant gradual advance in the research field of Peruvian students, specifically students from Tacna compared to neighboring countries.

Likewise, the formative research variable obtained a high level of perception with 83.05%, demonstrating that students feel capable, for the most part, of being able to plan and develop research. These results may be due to the inclusion of subjects related to research in the curriculum of the professional career such as Research Methodology, Educational Research, and Thesis Seminar; which allowed for strengthening the students’ confidence regarding their research skills. Likewise, Lanchipa (2017) and Gutiérrez (2018) reinforce the results since, according to their research in the same university studied, students seem to show their own interest in the development of research rather than carrying it out by guidelines or policies imposed by their house of studies, and also seem to be encouraged by the teaching example, who mostly have a doctoral degree.

Regarding the research planning dimension, students responded positively to most of the items, highlighting the item that consists of the derivation of specific problems starting from the general problem with 91.5% approval between always and almost always; similarly, essential aspects of research such as the formulation of objectives, elaboration of consistency matrices, and organization of the theoretical bases obtained high percentages. These results contradict the research of Castro et al. (2018) regarding students' self-perception about the management of scientific methodology. Likewise, such positive perception seems to be derived thanks to the curriculum of studies and the teaching of instructors in the professional career, which promote the elaboration of research through projects or articles oriented to the improvement of the educational field.

In that context, Medina (2017) argues the importance of teachers in the formative research process, highlighting that for students to have meaningful learning about research methods, processes, and techniques it is necessary for the teacher to work collaboratively and form research teams so that theory is applied and experienced.

By contrast, the items with the lowest percentages were the definition of variables and dimensions considering at least 3 authors and the citation of research within a range of no more than eight years old, with 55.9% and 59.45% approval between almost always and always. Concerning this result, Espinoza’s research (2020) argues that, although there is not only one way or strategy for searching and
The dimension research development obtained positive results in most of the items; on the other hand, the items with the lowest percentage of approval between always and almost always were those related to the use of study and organization techniques or the development of activities according to the schedule with 69.4% and 66.1% respectively. This last result is reinforced by the study conducted by Castro (2018) and Tamayo-Tejada (2021) where students from other Peruvian national universities perceived the lack of time as a constraint for scientific production also demonstrating a poor organization of their time. Likewise, the research developed by Llacsa (2010) about study habits and techniques by students of the UNJBG resulted in low rates of students who planned and determined a specific time for the completion of such tasks so it is also an antecedent to the results obtained.

The variable achievement of research competencies also obtained a high level of perception (81.35%) according to Figure 3, contrary to research such as that of Tamayo-Tejada (2021), Vargas (2019), or Cardozo & Cerecedo (2019) where the acquisition of research competencies obtained a low level in the Puno region, Lima and the country of Mexico, respectively. This significant result derives from dimensions such as knowing how to be and knowing how to do, which obtained a high level of approval with 79.66% in both cases displacing the dimension knowing how to know with 72.88% at the high level. Indeed, it can be observed that most of the students of the Foreign Language course comply, for the most part, with the fundamental characteristics that make up a competency: knowledge, attitude and action.

In relation to the dimension of knowing how to be, the item that obtained the highest percentage of approval was the one related to following the research scheme proposed by the university with 88.1(57x116)% between always and almost always. This result shows the interest that students have in obtaining their degree through the elaboration of the thesis and not through proficiency exams, contrary to what was obtained by Tamayo-Tejada (2021) where the elaboration of the thesis was the least chosen aspect among the degree modalities by the students. Likewise, this result contradicts what was stated by Ramos and Escobar (2020) y Turpo-Gebera et al. (2023) who generalize Peruvian students as subjects who have as a goal their degree as soon as they enter university, but that research development plans are not found as a priority in their future.

On the other hand, the items that obtained the lowest percentage of approval were creativity in writing and the ability to discuss results and compare answers with 62.7% and 64.4% respectively. That result is reaffirmed through the research of Vargas (2019) where students of a Lima university are considered to have a low to a very low level in specialized or specialized technical written communication regarding the research field, or through the research of Muñoz (2019) where education students of a Peruvian university demonstrated to have a poor level of scientific or academic writing. Therefore, a worrisome reality is shown regarding writing and creativity in scientific work, being an obstacle to scientific production and subsequent publication.

The know-how dimension obtained high approval in expected items such as the use of the Internet as a resource for information search and the use of a Word processor for research development with 95% and 89.8% respectively. About the use of the Internet, Castro (2018) expresses that today's students spend less time reading physical books since they prefer the use of the Internet as a resource for searching for information for the development of their research; however, as seen previously, students also have difficulties in the selection of appropriate and relevant information due to lack of knowledge of strategies. In this regard, Rubio (2015) argues that although students use the Internet search engine, they do not always analyze the quality of the information they find, therefore, they do not make adequate use of information search engines nor are they critical of the content they obtain, being these actions important for the research process (Percastre, 2017).

Another result that should be noted in the know-how dimension is related to the items with lower approval such as the use of the SPSS program and the use of the virtual library database provided by the university with 57.6% and 40.7% between almost never and never. Ramos & Escobar (2020) mention that statistics is one of the pillars of the research process, however, many students reject it and consequently, such perception negatively influences the development of research. Along the same line, researchers Avila-Toscano et al. (2022) reveal that there is no promotion of statistical culture and that
the negative attitudes developed in basic education regarding statistics tend to last until the university period, generating little interest in the subject. In relation to the use of the virtual library, aspects such as the poor updating of the contents and poor organization of it can play against its use (Del Valle & Fatuly, 2019) and causally force students to look for other alternatives to search for information.

Finally, the knowledge dimension had the item related to the knowledge of data collection techniques and study techniques as an outstanding item in approval with 83% and 81.4% of approval between always and almost always; however, it had been noted in the section of the formative research variable that not all students used study techniques for the development of research, so it can be deduced that although students have knowledge of certain strategies, they do not always put them into practice. In addition, the knowledge dimension reaffirms the students' poor knowledge of the SPSS program with 57.6% of responses between almost never and never.

The research had certain limitations, for example, the sample used is not sufficient to generalize the results to the entire region of Tacna and it would be necessary to know if the positive level of perception would also mean good performance in scientific production by students. Consequently, it is suggested to conduct research to help complement the results found through research on the same topic in other universities in the region, whether national or private and to conduct research to evaluate the level of efficiency and quality of the scientific production of the student population.

Nowadays it is inconceivable not to recognize the importance of research as a factor in the achievement of a quality university education and, that is why one of the missions of any university is to develop research skills in students so that they can respond to social demands through the knowledge acquired in their learning (Guamán et al., 2021; Salazar & Tobón, 2018; Padierna, 2016). Through the research, it was possible to demonstrate that there are fertile possibilities to take advantage of the potential of students regarding the research field, and, therefore, it is necessary for the university to provide better research policies and guidelines, to encourage and expedite the development of seedbeds in the School of Education, and to include subjects in the curriculum about the writing of scientific texts and research-oriented statistics, so that students can contribute significantly and solve problems that Peruvian society demands.

5. Conclusions

The relationship between formative research and research skills is undeniable and crucial for the academic and professional development of prospective English teachers. Throughout the course of this study, we were able to demonstrate that the continuous practice of formative research in the university environment significantly enhances the students' research skills and abilities through research workshops, research courses, and the continuity in their professional careers due to a greater command of the English language. The results of this study support the hypothesis that formative research fosters critical thinking, analytic skills, and problem-solving in students of the professional career when they conduct research projects to qualify for their degree and research projects to find solutions to local issues. Through direct engagement with research projects, students are exposed to a variety of research methodologies and develop a comprehensive comprehension of the processes of inquiry and knowledge production.

In addition, formative research contributes to the development of fundamental academic and professional competencies, such as the appropriate handling of information sources, data collection, and interpretation of results. It has also been demonstrated that students who actively participate in formative research projects demonstrate a higher interest in science and the production of new knowledge, thereby fostering a research culture within the university setting. However, this is still being accomplished slowly, as it is recommended that education professionals comprehend what formative research is and how it can be implemented in the various curriculum subjects.

On the other hand, formative research also encourages students' creativity and innovation by encouraging them to pose novel questions and pursue original solutions to complex problems. In a world that is constantly changing and transforming, this capacity for divergent and purposeful thought is crucial.

This research has demonstrated, as a conclusion, that foreign language professional students' formative research and research competencies are closely linked. The promotion of formative research in the academic curriculum can result in the integral formation of students, enriching their learning,
enhancing their critical thinking, and preparing them more effectively to confront the challenges of the modern world. Universities must encourage and support formative research as a critical instrument for the academic and professional development of their students.
References


