

## **Attitudes towards research of pedagogy students from an innovation project**

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**Summary.** This research reports the results of an educational innovation project whose target was to design, implement and evaluate strategies of authentic evaluation through the use of ICTS, feedback between peers was specifically incorporated, that allowed to diversify the teacher's evaluation and feedback through the usage of a virtual platform. 23 special education students of the Universidad Central de Chile, region of Coquimbo, who were studying their graduate seminar, participated in this project. A mixed methodology with a sequential design was used to obtain a better understanding of the results. In this first report, the findings and conclusions of the quantitative stage of the study are presented. In coherence with the above, a questionnaire of attitudes towards research was applied before and after the execution of the project. The main results show a global rise in the educational research attitudes of the students. A greater increase is shown in the dimensions of research activities and context investigation.

**Key words:** Educational research, feedback, pedagogical innovation.

### **1 Introduction**

This research derives from a pedagogical innovation project designed and implemented by Special Education students, in the undergraduate seminar course. The project and its subsequent empirical research begin from the need to incorporate more flexible strategies of teaching and learning in the educational investigation training and also a greater interaction between forming teachers and undergraduate students (Korthagen, 2010; Perines, 2016), to improve learnings in the area. Now, a part of the work is described, consisting of the implementation of the project and the application of a questionnaire to measure attitudes and learnings towards educational research.

## **2 Theoretical framework**

Educational research presents multiple challenges, one of them is related to the need to strengthen training of future teachers and improve their learning curve through didactic strategies of innovation. In that sense, future teachers point out that they have few possibilities of knowing the educational research throughout their training (Perines, 2018). Plus, the main focus that is given to the educational research courses is not relevant for the students to learn through the training process (Muñoz & Garay, 2015).

To offer better learning opportunities in educational research is required to install strategies that favor interaction between trainers and students. Therefore, in this project is chosen to seek feedback, considering the diverse studies that conclude that students are more unsatisfied with the feedback that they get in comparison with other points of their learning experience (Boud & Molloy, 2013).

The value of the feedback lies in that this is characterized for generating a dialogue (García-Jimenez, 2015) and in the greater leadership of the student in his training process (Contreras & Zúñiga, 2017). For this and other reasons, it influences in a great manner and also positive manner in learning (Hattie & Timberley, 2007; Ibarra et al., 2012; Gómez & Quesada, 2017). Besides, it is important to point out that feedback to be effective, must be specific and fast. In this, the CIT can contribute in an important manner, given that, according to Mañez (2020), one of the good things of feedback is virtuality that allows feedback in real time.

## **3 Method**

The experience of educational innovation was implemented in the second semester of the year 2022. The target was to design, implement and evaluate the strategies of feedback through the usage of CIT to improve attitude and learnings related with educational research of pedagogy students. Research teams were conformed composed by 4 to 6 students using the Padlet platform, considered as an online tool that allows to create murals and to work in a collaborative way. A weekly training activity was presented in this platform in which each research group performed a specific type of feedback.

To analyze the first step data, a quantitative methodology was used, with a non-experimental research design of the transactional type (Hernandez-Sampieri & Mendoza, 2018; Hernández et al., 2014). The participants of the experience were 23 students of the Special Education career, that were coursing the undergraduate seminar of a private university in the region of Coquimbo, Chile.

The questionnaire research attitude in vocational education was applied (Griffioen, 2018), translated and validated in Spanish speaking students by Perines & Hidalgo (2020), with a Cronbach alpha of .93. The questionnaire was applied to the students at the beginning and at the end of the experience through an online form. The

participation was volunteer, a consent was signed and the guard of their anonymity was guaranteed. Data was analyzed using the statistical software SPSS, v25.

## 4 Results

In descriptive terms, the results of the pre-test reveal that all dimensions got an average above the theoretical media expected in a 5-point scale. In terms of the “attitudes towards research”, an average of 4,5 (DS = 0,507) was registered. Regarding the dimension of “educational research activities”, an average of 3,9 (DS = 0,548), while in the dimension of “context of educational research” an average of 4,0 (DS = 0,717). In the post-test, a generalized rise was shown in the results. Specifically, the average of the “activities of educational research” dimension was (M = 4,4; DS = 0,544) showed an increase.

Despite of existing differences in the averages, at the moment of doing the test of U Mann -Whitney, no statistically significant differences were shown in the moments of appliance and the tested dimensions ( $p > .05$ ) (Fig 1).

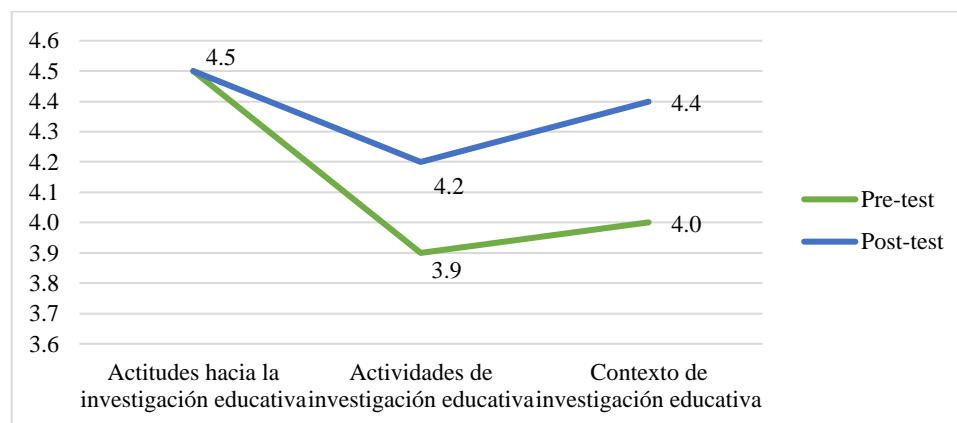


Fig. 1 Averages of dimension in educational research.

Relating the specific results of the scale, in the attitudes towards research, pre and post-test were highlighted with high average, the subdimensions of “importance of research” (M= 4,7). On the contrary, the subdimension of “positive affection attitude towards research” (M = 4,8) and “perceptions of professional development research”, shows a lower average (M=4,1and M=4,2) pre and post-test, respectively. In the research activities dimension, the highest subdimension is related to the “intention to investigate” (M=4,6) and the lowest subdimension, is associated to the “activities to interact with researchers” (M=3,2 and M=3,8) pre and post-test respectively. Finally, regarding the “research student context” dimension, the three subdimensions get

averages above 4,0 (quality of research in my education, activities of teachers research and culture research).

## **5 Discussion**

The obtained results in the pre-test are similar to the findings by Perines & Hidalgo (2020) in their study, who showed high averages in the three dimensions. In this sense, the dimension that gets the highest average is “attitude towards research”, while “activities of educational research” is the evidence that shows the lower average percentage, that is “interacting with researches”.

## **6 Conclusion**

Regarding of the first stage of the Pedagogical innovation project, it can conclude that the participants had a favorable attitude towards research from the beginning of the study. Also, the provided intervention between pre-test and post-test seem to have influenced positively in the “activities of research” and in “context of research”, given that significantly improves were shown in these dimensions in the post-test. Based in the statistically analysis, it can be pointed that there are no statistically differences in the tested dimensions in the pre-test and post-test.

## **7 Limitations and Future Research**

. To continue with the investigation, the sample can be expanded, this would get more representative and generalized results. Instead of evaluating just the pre-test and post-test moments, a long-term following to analyze the length of the effects of the innovation project in the tested dimensions could be carried out.

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