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Critical Thinking and Attitudes towards Learning between Students from National and Private Universities in the Perù

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Resumen

El presente estudio tuvo como objetivo determinar las diferencias en el pensamiento crítico y las actitudes hacia el aprendizaje entre estudiantes de Universidades Nacionales y Privadas en Perú, su diseño fue descriptivo comparativo, la muestra estuvo conformado por 323 estudiantes de universidades públicas y 161 de universidades privadas, a quienes se les aplicó el cuestionario de CEVAPU para la evaluación de las Actitudes hacia el Aprendizaje, con confiabilidad de 0.70, de Gargallo, Pérez, Fernández y Jiménez (2007); y el Cuestionario de Pensamiento Crítico de Santiuste et al. (2001), con confiabilidad de 0.90. Se obtuvieron los siguientes resultados: Se ha demostrado que existe diferencias significativas en el pensamiento crítico entre estudiantes de Universidades Nacionales y Privadas, con tamaño del efecto intermedio mediante el d de Cohen de (0.54). En las Actitudes hacia el aprendizaje, los estudiantes de las universidades públicas presentan una media de 38.28 ligeramente mayor que los estudiantes de las Universidades privadas de 35.24, existiendo diferencias significativas con tamaño del efecto pequeño.

Palabras Clave: Pensamiento Crítico, Actitudes Hacia El Aprendizaje, Estudiantes Universitarios

Abstract

The objective of the study was to determine the differences in critical thinking, attitudes towards learning among students from National and Private Universities of Huánuco and Lima, it is descriptive comparative, the sample consisted of 323 students from public universities and 161 of private universities, to which the questionnaire of CEVAPU for the evaluation of Attitudes towards Learning was applied, with reliability of 0.70, designed by Gargallo, Pérez, Fernández and Jimenez (2007); and the Critical Thinking Questionnaire of Santiuste et al. (2001), with reliability of 0.90. The following results were: It has been shown that there are significant differences in critical thinking among students from National and Private Universities, with the size of the intermediate effect through the Cohen D of (0.54). In Attitudes towards learning, students from public universities present an average of 38.28 slightly higher than students from private universities of 35.24, there being significant differences with small effect size

Key Words: Critical Thinking, Attitudes toward Learning, University Students

Introduction

Contemporary authors point out that with the advance of scientific knowledge, a better understanding of the world is sought and with the help of education we can understand this complexity.

The study of the complex has also impacted in the most direct field of the interactions of human beings: education, the interpretation of society, politics, and the understanding of the current moment that humanity lives. In the words of Edgar Morin (1994), when talking about complexity refers to the ability to interconnect different dimensions of reality. Given the emergence of facts or objects multidimensional, interactive and random components, the subject is forced to develop a thought strategy that is reflective.

Lipman, Sharp and Oscanyan (1980) call critical thinking, higher order thinking, means a conceptually rich, coherently organized and persistently compulsory thinking, in other words, its features are wealth, coherence and inquiry capacity. Critical thinking would be the fusion between critical thinking and creative thinking, it is characterized by being ingenious, flexible and because it looks for the resources it needs and is able to deploy them freely to maximize its effectiveness.

In the same vein, Lipman points out that improving students' thinking depends on the ability to identify and give good reasons for the opinions they hold. Cognitive research has also generated extensive evidence about the dependence between thinking, problem solving and learning (Glacer and Baxter, 2002, cited by Castañeda, 2014), which generated

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the recommendation to anchor learning to environments of solving problems that support students to understand both the types of problems and the opportunities that the experts confront, so that students can see how they use knowledge to identify, represent and solve problems, rather than using rote practices that only produce inert knowledge, unable to support students to solve it and this has to do with complex learning, which integrate knowledge, skills and attitudes.

It is important to note the undeniable importance that is given to the formation of critical thinking at the level of higher or tertiary education. Thus, the World Conference on Higher Education in the 21st Century, given by the United Nations Educational, Scientific and Cultural Organization (UNESCO, 1999), when speaking about the quality of education points out the importance of reformulating curricula, not content with the mere cognitive domain of the disciplines and include the acquisition of skills to achieve adequate communication, creative and critical analysis, independent reflections and teamwork in multicultural contexts.

According to Kurland (1995), in a broad sense, thinking critically is related to reason, intellectual honesty and mental breadth as opposed to little emotional control, intellectual laziness and mental narrowness. For Lipman (1991), individuals use in a given context, critical thinking processes that allow them to distinguish the most relevant information from the least relevant in relation to their goals. Thus, critical thinking is a useful tool to combat unfounded opinions (non-critical thinking) and unthinking actions. In other words, the possibility of establishing a critical position protects individuals against the alienation that takes place when a person A seeks to influence a person B, or when he is not given the opportunity to participate in a personal search.

Lipman (1991) defines critical thinking as those processes, strategies and mental representations that people use to solve problems, make decisions and learn new concepts. A conception of critical thinking that complements that given by Lipman would be reasonable and reflective thinking that focuses on the decision of what is believed and done. Critical thinking has a series of characteristics that distinguish it from other types of thinking, hence it is affirmed that critical thinking is a thought that: 1) facilitates judgment because, 2) it is based on criteria, 3) it is self-correcting and 4) context sensitive.

The variables that condition students' learning are multidimensional and the attitudes that students maintain towards learning are one of the fundamental variables that influence academic performance that integrates various components such as cognitive, affective-evaluative and behavioral and specifically the interest shown by learning. It is known that, until recently, young people with a university education were incorporated in an almost natural and fluid way into the work market.

At present, they are immersed in complex and multiple forms of transition to active life, so expectations of students to the world of work are diverse, in this sense to know the expectations as well as the different factors or variables that can influence their perceptions of the labor market and feasible possibilities to access it once their initial training is completed, should be Priority to advance in the development, improvement and functionality of Higher Education.

Boza and Toscano (2012), in the research on Motivation, Attitudes and Strategies of Motivated Learning in university students, found as results that stand out as distinguishing features of motivated learning in university students the cognitive, social and task goals, the attitude towards the learning oriented to success, the attribution of success to themselves and reasons to study related to future work. They also stand out for being competent in the study, combining individual work capacity and teamwork, using more learning strategies and getting involved in the study.
On the other hand, Izaguirre (2016), noted that the conditioning factors of academic performance constitute a complex network that prevents weighing the specific influence of each factor, assumes that the attitude of the teachers towards learning is an important variable that influences the results academics, hence its relevance in the educational field.

The study indicates that 54% of the teachers had a very favorable attitude towards learning, while for 57% their academic performance was excellent and very good. As conclusions they stated that the favorable attitude toward learning was not reflected in the best academic performance, while the teachers who had an indifferent attitude had a good academic performance.

Likewise, he points out that the way to acquire and develop cognitive skills proper to critical thinking is not to practice them one by one in an additive way, but to directly practice higher order thinking in a context. The most appropriate context to develop this type of thinking, according to Lipman, is the social context called "research community", in this context different skills are developed and potentiated. While the teaching of critical thinking has generated skepticism in some researchers, others have been interested in the possibilities offered at the level of higher education, and have even investigated the way in which changes in thinking are linked to the type of discipline that they study the students. McPeck (1981), affirmed that generalizable abilities do not exist and that therefore the thought is always relative to a domain of knowledge; He ratified his position indicating that in each discipline what is considered "good reason" varies. In this same sense are the approaches of Glaser (1984), and Ennis (1989).

At the other extreme are those who affirm that there are general principles of critical thinking and that these can be taught separately from specific areas of knowledge. Being one of the competences of the educational Model of the National University Hermilio Valdizán (UNHEVAL), in the Complex Thought it is important to know how that thought is characterized, the ability to solve problems and the creativity of the students. Likewise, it is very important to know the attitudes of the students at present, due to the multiple stimuli that students face today such as the development of knowledge and technology.

From the methodological contribution, the adaptation of the instruments for the study will be a contribution to be applied in the diagnosis of the study variables in other contexts, for this we propose the following objectives:

- Determine the differences in critical thinking, attitudes towards learning among students from National and Private Universities of Huánuco and Lima.

- Establish differences in critical thinking among students from National and Private Universities of Huánuco and Lima

- Establish differences in attitudes towards learning among students from National and Private Universities of Huánuco and Lima.

Methodology

The present study had a comparative descriptive design, because it describes the fact in the context, circumstances and characteristics of the moment to draw preliminary conclusions leading to a quantitative work (Hernández, 2012). The aim was to establish the differences between the variables complex thinking, attitude toward learning and job expectations of students from national and private universities in Huánuco and Lima. The sample consisted of 483 students from State and Private Universities of Huánuco and Lima, the sampling was intentional non-probabilistic.

The survey technique and the following instruments were used:

Critical Thinking Questionnaire, elaborated by Santiuste et al. (2001), consisting of 30 questions aimed at addressing two dimensions of critical thinking: the Substantive Dimension and the Dialogical Dimension. Each of the dimensions addresses one of the basic thinking skills (Lipman, 1998): reading, writing and oral expression, which are basic to any educational process. The Reliability index of the test was 0.90.

Scale of Attitudes towards Learning (CEVAPU), for the evaluation of attitudes towards the learning of university students, developed by Gargallo, Pérez, Fernández and Jiménez in Salamanca-Spain in 2007. Evaluates three dimensions: The 1st dimension, Valuation and positive attitude towards deep, critical learning, with understanding, relating contents. Willingness to active learning: to expand the information, to extract consequence. Taste for in-depth study. In the 2nd Dimension (Factor II): Positive assessment and positive attitude towards teamwork. And in the 3rd Dimension (Factor III): Internal attributions: the results and qualifications depend on the effort itself. The questionnaire resulting from the reliability and validity tests was 11 items. Its reliability was Cronbach's α of 0.70

Results

After having processed the data, the results are presented considering the objectives and hypothesis of the study. It is

Table 1: Comparative results on Critical Thinking among students of public and private universities of Huánuco and Lima-Peru

	Public	Private
Media	131.4241486	145.0621118
Variance	950.5431417	333.446118
Observations	323	161
Hypothetical difference of the means	0	
Degrees of freedom	468	
Statistic t	6.090590928	
P (T <= t) a queue	1.17432E-09	
Critical value of T (a queue)	1.648116038	
P (T <= t) two queue	2.34865E-09	
T critical value (two queues)	1.965045852	

Source: Self Made

Table 2: Comparative results on Attitudes towards learning among students from public and private universities in Huánuco and Lima-Peru

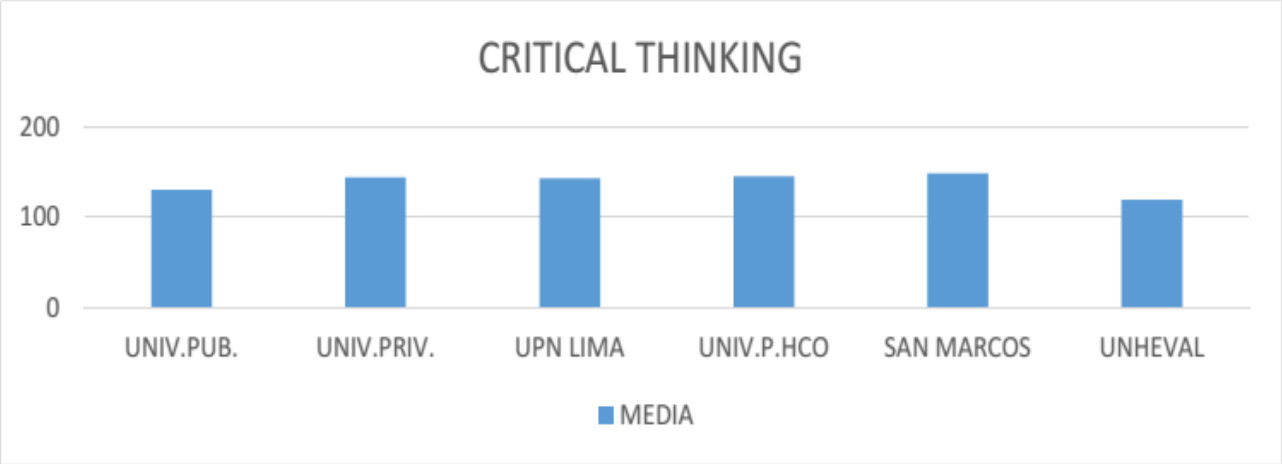
	Public	**Private**
Media	38.28173375	35.24223602
Variance	56.9483299	109.559705
Observations	323	161
Hypothetical difference of the means	0	
Degrees of freedom	245	
Statistic t	3.283678682	
P (T <= t) a queue	0.000587077	
Critical value of T (a queue)	1.65109682	
P (T <= t) two tailsP (T <= t) two queue	0.001174155	
T critical value (two queues)	1.969693921	

Source: Self Made

observed in Table 1, that the results on critical thinking in students of public universities with an average of 131.42, unlike the students of private universities of Huánuco and Lima, which have an average of 145.06.

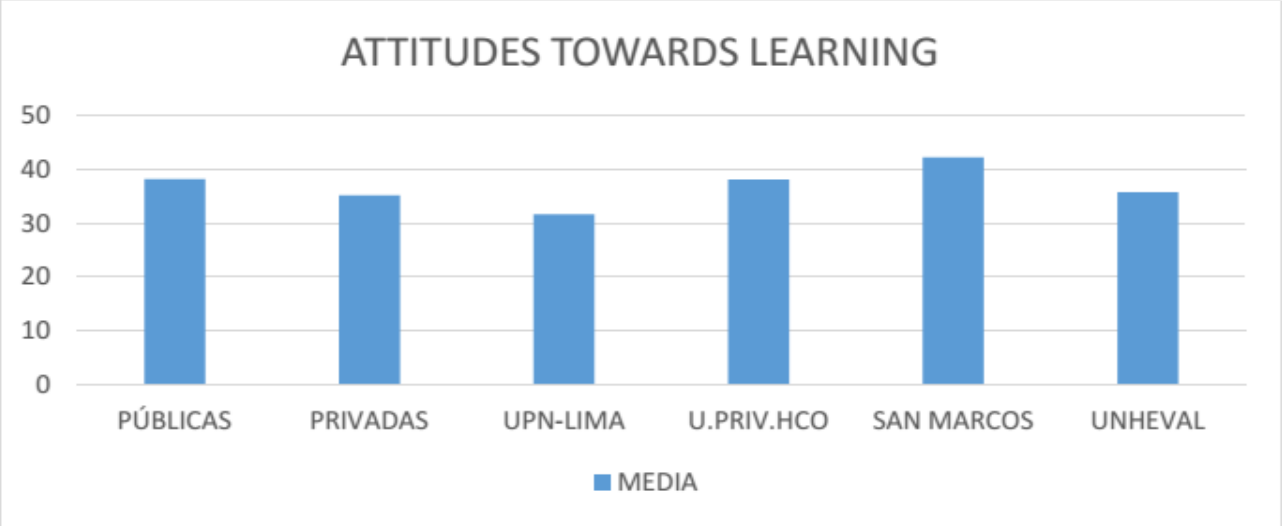
There are significant differences being the size of the intermediate effect by the Cohen d of (0.54).

Table 2 shows the results on Attitudes towards learning, where the students of the public universities of Huánuco and Lima present an average of 38.28 slightly higher than the students of the private Universities of 35.24. Regarding the differences, the "t" of 3.28 is observed higher than the critical value of 1.96 with a significance level of 95%, so there are significant differences.



Source: Self Made

Figure 1: Averages of critical thinking in students of Public and Private Universities of Huánuco and Lima



Source: Self Made

Figure 2: Average scores on attitudes towards learning in students of Public and Private Universities of Huánuco and Lima

According to Figure 1, it is observed that in the critical thinking the average in the students of the private Universities is of 145.06, slightly higher than the students of the public Universities of 131.42.

Figure 2 shows that the students of the National University of San Marcos have the highest average of 42.30 unlike the UNHEVAL students of 35.80. Also the students of the public Universities show an average of 38.28 higher than the students of the private Universities of 35.24.

Discussion

Considering the general hypothesis, it has been verified that there are significant differences in critical thinking among students from National and Private Universities of Huánuco and Lima. Likewise, statistically significant differences were found between public and private universities, the size of the intermediate effect being by Cohen's d of (0.54). According to the analysis of the Universities that were considered in the sample, the students of the National University of San Marcos show higher scores in critical thinking, as noted in the World Conference on Higher Education in the XXI Century (1999) , when talking about the quality of education, he points out the importance of reformulating the curricula, not being content with the mere cognitive domain of the disciplines and including the acquisition of competences for communication, creative and critical analysis, independent reflection and Teamwork in multicultural contexts.

Ferreira de Araujo and Sastre (2008) point out that the university system is not exempt from the socio-political and economic changes of the last decades and, therefore, university studies require the elaboration of complex syntheses, with contributions from different academic sources and cultures, to achieve a full analysis and development of new courses and scientific research that promote critical thinking in the face of reality.

In relation to the hypothesis about attitudes towards learning in university students of public and private universities of Huánuco and Lima, the results show statistically significant differences with a small effect size of Cohen of 0.3 in a range of (0.154-0.513) As we know, the variables that condition students' learning are multidimensional and attitudes towards learning influence academic performance.

Boza and Toscano (2012) in a study on Motivation, Attitudes and Learning Strategies motivated in university students that aims to assess the factors associated with motivated learning of university students, concluded that an attitude towards learning oriented towards success predominated, an attribution of this to themselves, and some reasons to study related to future work.

Díaz Pareja (2004) describes the attitude as a lasting and learned internal disposition that sustains favorable or unfavorable responses of a person towards a specific object, be it social or of another order. It is constructed as a product of all the experiences of the individual, direct or mediated with that object according to the social and educational influence that surrounds it.

Baron and Byrne (2005), explain that the attitude is a mental disposition which is organized from acquired experiences that exert a direct or dynamic action on the reactions of an individual through the application of mental knowledge around everything that is and it surrounds it: this attitude will be positive or negative depending on the trace that these experiences leave in the subject, according to the degree of overcoming that it has developed.

Conclusions

It has been shown that there are significant differences in critical thinking, attitudes towards learning among students from National and Private Universities of Huánuco and Lima in Peru.

Regarding attitudes towards learning, there are significant differences between students from both private universities.

Finally, the results on the attitudes toward student learning of the University of San Marcos in Lima present an average of 42.30 higher than the students of the UNHEVAL of Huánuco of 35.80.

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