RES MILITARIS
REVUE EUROPEENNE D ETUDES EUROPEAN JOURNAL OF MILITARY STUDIES
Social Science Journal

Attributive Styles and Motivation for Scientific Research in Postgraduate's Student of a Peruvian University

By

Johnny Félix Farfán Pimentel
Universidad César Vallejo, Perú

Yolanda Josefina Huayta Franco
Universidad César Vallejo, Perú

Raúl Delgado Arenas
Universidad César Vallejo, Perú

Sebastián Sánchez Díaz
Universidad César Vallejo, Perú

Rommel Lizandro Crispín
Universidad César Vallejo, Perú

Enaidy Reynosa Navarro*
Universidad César Vallejo, Perú

Abstract

This research aims to determine the influence of attributional styles and motivation towards scientific research in students of the graduate program at Cesar (Vallejo, Daher, & Rincón, 2020). **Methodology:** basic type quantitative approach, non-experimental design, causal correlational level, and cross-sectional scope. **Population:** 1188 students. **Sample:** 290 students. For data collection, the survey was used. Two questionnaires were used as instruments: one for each variable, which was validated through Expert Judgment and validated by Cronbach's Alpha with a value of $\alpha \geq 0.9$ for both variables, denoting high reliability. The Attributive Styles questionnaire was used for the first variable, which consists of seven dimensions and 42 items. The Motivation towards scientific research questionnaire was applied for the second variable, consisting of three dimensions: Affective, Cognitive, and Behavioral, and 34 items. **Data processing:** SPSS software, version 25, was used, which allowed a descriptive analysis with frequency tables to be established, taking into account the scale and its levels for the variables. **Results and Conclusion:** the attributions that motivate graduate students towards scientific research are shown as controllable and uncontrollable, internal (stable and unstable) and external (stable and unstable), without the individual ability or effort prevailing as a determining condition for scientific research.

Keywords: Learning; Motivation; Attitude; Scientific Research; Behavior.

1. Introduction

Academic achievement causes are multifactorial and long-standing; they continue to raise questions and demand new studies. These causes are expressed through external and internal factors, commonly used to explain academic failure or success. They are also based on the levels of motivation or lack of motivation of the students. Thus, Bernard Weiner, developer of the attribution theory, argued that this theory allows explaining both learners' motivation to face the learning processes (Weiner, 2010), opening a field of study that allows answering the

reason for excellent or low academic performance. It also provides a framework for study and debate, incorporating causal concepts, expectations of success, various effects and disparate phenomena, and the tools for its application (Weiner, 2010).

From another perspective, Alonso Tapia, in his doctoral dissertation, presented a general model where attributions respond to a stimulus that is then expressed through affective reactions and expectations that give rise to attributional behaviors (Tapia, 1983). The author himself highlights a causal relationship between attributions and affective reactions, attributions and expectations, and attributions and performance after failure, demonstrating that attributional styles serve as a basis for rationally explaining human motivation in general and the motivation with which students face learning and academic success.

The present study assumes the Attributional Theory of (Weiner, 1979, 1986) and the instruments "Attributional Styles" (Tapia, 1983) and "Motivation towards scientific research" (Aldana de Becerra & Joya Ramírez, 2011). Because in the field of research, given its complexity and the discipline and rigor required by the student, the student's behavior is reflected in a continuum of sequential episodes, dependent on each other, which help to understand to what internal or external reasons they attribute success or failure in the development of scientific research.

1.1. Attributive Styles: instrument systematization

Thus, the Attributional Styles instrument allows us to scrutinize to what extent learners perceive that luck influences their academic achievement, how lack of effort can negatively influence academic success, what importance learners attach to the ability to achieve academic success. Also, how learners attribute their academic failure to the teacher and not to their lack of management and ability, what value learners attribute to effort as an internal and controllable characteristic in order to achieve academic success, to what extent learners perceive that bad luck affects their academic achievement, and what perception learners have of how lack of ability limits their possibilities of academic success (Tapia, 1983). Likewise, the instrument is structured by seven scales.

Fundamentally success and Externalization and uncontrollability of academic failure due to its attribution to bad luck; respond to how learners attribute success to external and uncontrollable causes that overflow their management and academic failure to adverse events caused by external and unstable situations. Therefore, it is relevant to establish a dichotomy between success and failure that leads to positive and negative emotional responses (Matalinares Calvet et al., 2014). Learners recognize that effort, task difficulty, and luck are elements to interpret and predict their academic results (University of Murcia, 2011). Also, they are aware that academic failure could be attributed to a lack of effort and that their school success results from the internal skills developed (Guzmán–Zamora & Gutiérrez–García, 2020). These arguments highlight a behavioral component supported by continuous episodes dependent on each other, leading to positive and negative emotional responses (Tueros, Calvet, & Raymundo, 2013) expressed as external and uncontrollable factors.

Concerning the scales Attribution of academic failure to lack of effort and attribution of success to effort and Attribution of failure to the teacher, it is common for students to recognize these scales as predictive pillars of good academic results. This is expressed through objective and concrete reasoning that allows them to recognize successes and failures as conditioned facts with a strong internal and controllable support; and, at the same time, to establish strategies to sustain success when it has been achieved, but when it has failed, it allows

them to determine the type of efforts needed to overcome (Matalinares Calvet et al., 2014). The lack of effort prevents the learner from sustaining an evolutionary development consistent with his innate abilities, leading him to academic failure. On the contrary, success is usually attributed to personal effort and ability when an effort is consciously present. The student's judgments to attribute their successes to the teacher's capacity or effort indicate that an assertive and respectful treatment should be favored because when this is not done in this way, it could be stimulating maladaptive patterns that inhibit motivation or decrease academic performance (Tueros et al., 2013). Three stages involved in both processes stand out: 1) the belief over time as a way to solve problems; 2) a stage of hope in the learning processes, whether at home or school; 3) the valuation of personal effort as a driver of change (Falcón et al., 2016). The first factor warns a subject with limitations to establish concrete actions motivated by a need for improvement. The second, not so distant from the first, but the learner begins to visualize new opportunities for improvement, even though these constitute external factors whose concretization is elusive. In the third factor, the learner is in a reflective process that recognizes personal effort as a definitive factor in transforming their reality. In synthesis, the motivations that contribute to the learner's weighting of this third factor are multifactorial. This idea could also be based on the human need for admiration, recognition, esteem and valuation, and high hierarchy conditions within their socio-cultural context.

Concerning the scales of Attribution of academic success to ability and Attribution of failure to lack of ability, a conceptual disquisition should be made to systematize the abilities that intervene in the learner's integral development and predictive of his or her success or failure. In this sense, education objectives are classified into three fundamental dimensions: affective, psychomotor and cognitive (Bloom B, 1956). The cognitive dimension is based on the ability to think about objects of study; its purpose is to access the knowledge necessary to understand from a complex dimension and comprises six levels: knowing, understanding, applying, analyzing, creating and evaluating (Bloom B, 1956). In the "knowing" level, the learner develops the ability to remember previously learned information, such as facts, essential dates, theorems, definitions, processes, among others, demonstrating the ability to write, define, and memorize. In "understand," the learner has developed the ability to demonstrate what has been learned through the application of knowledge in diverse contexts, develops the ability to find and establish conceptual relationships, support facts and establish their causes and consequences; demonstrating the ability to classify, describe, exemplify, paraphrase, among others. In "apply," the learner demonstrates the ability to give utility to what has been learned, applying it to foreseen or unforeseen situations; demonstrating a cognitive backgroundnecessary to respond to situations or problems that are manifested in their immediate or mediate environment, thus demonstrating the ability to calculate, determine, establish, demonstrate, relate, among others. To do this, learners need to understand and master the environment around them and their own life, making both somewhat predictable and controllable (Tueros et al., 2013). In "analyze," the learner demonstrates the ability to break down the generality of information into specific subsets and use the knowledge already acquired to solve problems and conflicts through reflective and conscious processing of information, demonstrating the ability to categorize, compare, specify, prioritize, question, among others. In "creating," the learner demonstrates the ability to externalize and concretize thought through the integration and combination of ideas, achieving a concrete product; therefore, he/she demonstrates the ability to plan, elaborate, invent, reconstruct, structure, among others. This ability allows to create, invent and even innovate. Finally, in "evaluating," the learner shows the ability to make value judgments about a given product, demonstrating the ability to contrast, evaluate, criticize and interpret.

1.2. The motivation for scientific research: the systematization of the instrument

In general, the instrument Motivation towards scientific research allows determining the perception that students have about the importance of scientific research in their education, measuring the behavior and attitudes of students towards scientific research in education, as a transversal axis of their formative process and knowing what importance students give to the primary and complex skills necessary to communicate effectively in academic development environments and thus, measuring the expectations and moods of students towards academic activities (Aldana de Becerra & Joya Ramírez, 2011).

The Cognitive dimension helps to elucidate the perception of students about the need to teach research and whether they should learn to do research or whether this ability is reduced exclusively to individual will as a decisive internal factor. Current studies highlight the importance of research as a tool in the training process (undergraduate and graduate), also as a support for the solution of specific and general problems that arise during a professional performance (Serra Valdés & González de la Oliva, 2017); (Caballero García & Invernizzi Mendoza, 2020). This dimension also allows energizing self-knowledge and critical reflection necessary to formulate relevant projects (Medina & Suaréz, 2017), as well as promoting scientific research as one of the most complex and challenging objectives of teaching, which had been subjected to traditional education (Vallejo et al., 2020). The results of this dimension serve as support to understand what importance students attribute to teamwork, strengthen listening skills and humility to achieve the proposed objectives, solve social problems, and detect errors attributable to science and common sense. These attributes are fundamental and support the formative development of students (Xin & Sánchez, 2021).

The Behavioral dimension helps to measure the students' perception of updating courses, the search for truth, scientific curiosity, updating needs, the writing of academic texts, the need for scientific research, the need to promote innovation, as well as the need to socialize the results of their research. Recent studies highlight the need for students and teachers to commit themselves to educational innovation as a central theme for the development of skills planned in the classroom and energized to change the current reality, ideas, attitudes, and methods (Xin & Sánchez, 2021), as well as to cultivate attitudes and values to develop in significant aspects such as axiological strengthening before the world in general and the surrounding socio-cultural environment; making viable the intellectual maturity and the development of reasoning capacities necessary for their effective insertion in the social dynamics (Quintero, Burgos, & Aristega, 2020).

The affective dimension helps determine students' socioemotional and motivational competencies to establish communicative links with other professionals related to scientific research, train and acquire research skills, interpret the surrounding reality, and have the courage and willingness to initiate, develop, and complete scientific research projects. As a whole, these characteristics are a motivational factor for the formation of research competencies in students. Coincidentally, training in research competencies is a new challenge for modern universities, which have the social task of training professionals capable of participating in science and technology's rapid progress (Tinoco-Cuenca et al., 2020).

1.3. Motivation: epistemological foundations

It is convenient to point out the epistemological foundations of motivation as a transversal variable of the attributional process; it is a word that comes from the Latin *motus*. It means "movement," where human behavior results from achieving interrelated events, passing through attributions, expectations, and emotions until reaching action (Matalinares

Calvet et al., 2014). Motivation is understood as the force that drives the pursuit of complex objectives pre-established in mind, whose rationality focuses on achieving them (Perret, 2016). Therefore, it is a phenomenon, a vision or a human need that feeds on spirit and optimism to transform needs, difficulties and problems into success opportunities.

Daniel (Goleman, 1998), in *Working with Emotional Intelligence*, grouped these dimensions into Personal Competencies and Social Competencies (Goleman, 1998). He classified personal competencies into three groups: self-awareness, self-regulation and motivation. Motivation, the author breaks it down into three cardinal points: achievement motivation, commitment and optimism. The author believes that people should systematically strive to transform their reality based on excellence criteria that allow them to improve or satisfy their own needs and those of others. Likewise, to contribute to objectives that may not be personal (of a group or organization), but which, on the one hand, require motivation to achieve them and, on the other, initiative and self-determination to act promptly, consequently and conscientiously.

Abraham (Maslow, 1958) proposed his theory of Human Motivation in which he hierarchized human needs in a pyramid whose base contains the most basic needs. As these needs are satisfied, he defined that people develop other needs and other much higher aspirations located at the top of the pyramid (Maslow, 1958). Thus, he placed a basic need physiological need closely related to breathing, food, rest, sex and homeostasis. Then comes the need for security, linked to physical security, employment, resources, morals, family, health and private property, followed by affiliation, sustained by friendship, affection and sexual intimacy. This is followed by recognition, characterized by self-recognition, trust, respect and success. At the top, self-realization is the most complex need, comprising central elements of human behavior such as morality, creativity, spontaneity, lack of prejudice, acceptance of facts, and problem-solving. The latter is fundamental for understanding human attributions' nature and their relationship with attributional styles and motivation towards scientific research.

The concept of motivation finds application in all spheres of life development, and an interpretation that presents motivation from two complementary approaches: intrinsic and extrinsic, has gained much strength. Intrinsic motivation responds to that internal force that moves people to practice their abilities to develop specific tasks that are not indifferent to them, being the prototype of self-determined behavior (Deci & Ryan, 2008; Ryan & Deci, 2000). Extrinsic motivation is a kind of reinforcement or stimulus that the person perceives from their mediate or immediate socio-cultural environment, driving them to perform specific tasks that support the innate needs to feel connected, practical, and an agent is exposed to new ideas. These perspectives also support the relationship between attributional styles and motivation toward scientific inquiry.

This research's objective was to determine how attributional styles and motivation influence the development of scientific research competencies in graduate students at Cesar (Vallejo et al., 2020). It is argued that there is a close relationship between attributional styles and motivation for scientific research. This relationship impacts the scientific and research performance of students during their formative stage.

2. Methodology:

The study was basic quantitative approach research, non-experimental design, causal correlational level, cross-sectional scope. The population consisted of 1188 graduate students

at Cesar (Vallejo et al., 2020). The sample was 290 students, which was determined using the formula for finite populations. The sampling applied was simple random probability sampling. Before applying the instruments, the purposes and scope of the study were socialized with the participating students. To protect the participants' integrity, they were asked to sign a Letter of Informed Consent in which the scope and limits of the research were explained.

For data collection, the survey was used, and two questionnaires were used as instruments: one for each variable, which was validated through Expert Judgment and validated through 'Cronbach's Alpha with a value of $\alpha \geq 0.9$ for both variables, which means that the instruments have high reliability. The Attributive Styles questionnaire was used for the first variable, which consists of 7 dimensions and 42 items (Tapia, 1983). The Motivation towards scientific research was applied for the second variable, consisting of three dimensions and 34 items (Aldana de Becerra & Joya Ramírez, 2011). In both cases, Likert frequency scale responses were used. The application of both questionnaires lasted approximately 20 minutes.

For data processing, SPSS software, version 25, was used, which allowed establishing a descriptive analysis with the frequency tables, taking into account the barring and its levels for the variable Attributive Styles in the beginning, in-process and achieved, and for the variable Motivation towards scientific research, high, medium and low. For the inferential statistics, the Kolmogorov Smirnov normality test was performed, resulting in a value of 0.000 lower than the significance level of 0.05, which shows that the data of the variables do not follow a normal distribution; therefore, a nonparametric ordinal regression test was applied to contrast the hypothesis.

Selection criteria: only responses from graduate-level students at Cesar (Vallejo et al., 2020) who freely and voluntarily agreed to participate in the research were taken into account. Selection criteria: the participation of those who did not prove to be graduate-level students of the mentioned institution or who, being so, did not wish to participate in the research process were not considered. To organize the discussion and conclusions of this study, the adaptation by type of Controllability, Locus and stability in achievement contexts (Gómez, 2020, adapted by Gabriela (Sánchez & Peña, 2015) in "Attribution of achievement motivation and academic performance in mathematics" (Sánchez & Peña, 2015).

3. Results:

Table 1. Externalization and uncontrollability of academic outcomes, primarily success*Motivation towards scientific research.

			The motivation for scientific research			Total
			Poor	Fair	Good	
Outsourcing and in contractability of academic results	Start	Recount	15	123	3	141
		% of total	5,2%	42,4%	1,0%	48,6%
	Process	Recount	0	114	34	148
		% of total	0,0%	39,3%	11,7%	51,0%
	Completed	Recount	0	1	0	1
		% of total	0,0%	0,3%	0,0%	0,3%
Total		Recount	15	238	37	290
		% of total	5,2%	82,1%	12,8%	100,0%

Table 1 shows that 39.3% of the participants are at a regular level of Motivation towards

scientific research, attributing to the dimension Externalization and uncontrollability of academic results, mainly success, a total percentage of 51.0% located within the process level.

Table 2. Attribution of academic failure to lack of effort*Motivation towards scientific research

			The motivation for scientific research			Total
			Poor	Fair	Good	
Attribution of academic failure to lack of effort	Start	Recount	8	28	0	36
		% of total	2,8%	9,7%	0,0%	12,4%
	Process	Recount	7	160	6	173
		% of total	2,4%	55,2%	2,1%	59,7%
	Completed	Recount	0	50	31	81
		% of total	0,0%	17,2%	10,7%	27,9%
Total		Recount	15	238	37	290
		% of total	5,2%	82,1%	12,8%	100,0%

Table 2 shows that 55.2% of the participants are at a regular level of Motivation towards scientific research, attributing to the dimension Attributing academic failure to lack of effort, a total percentage of 59.7%, which is located within the process level.

Table 3. Attribution of academic success to ability*Motivation towards scientific research

			The motivation for scientific research			Total
			Poor	Fair	Good	
Attribution of academic success to an ability	Start	Recount	11	27	2	40
		% of total	3,8%	9,3%	0,7%	13,8%
	Process	Recount	4	144	7	155
		% of total	1,4%	49,7%	2,4%	53,4%
	Completed	Recount	0	67	28	95
		% of total	0,0%	23,1%	9,7%	32,8%
Total		Recount	15	238	37	290
		% of total	5,2%	82,1%	12,8%	100,0%

Table 3 shows that 49.7% of the participants are at a regular level of Motivation towards scientific research, attributing to the dimension Attribution of academic success to the ability of 53.4%, which is located within the process level.

Table 4. Attribution of failure to the teacher*Motivation towards scientific research

			The motivation for scientific research			Total
			Poor	Fair	Good	
Attribution of failure to the teacher	Start	Recount	8	23	2	33
		% of total	2,8%	7,9%	0,7%	11,4%
	Process	Recount	5	149	9	163
		% of total	1,7%	51,4%	3,1%	56,2%
	Completed	Recount	2	66	26	94
		% of total	0,7%	22,8%	9,0%	32,4%
Total		Recount	15	238	37	290
		% of total	5,2%	82,1%	12,8%	100,0%

Table 4 shows that 51.4% of the participants are at a regular level of Motivation towards scientific research, attributing to the dimension Attribution of failure to the teacher a total percentage of 56.2%, which is located within the process level.

Table 5. Attribution of success to effort*Motivation towards scientific research

			The motivation for scientific research			Total
			Poor	Fair	Good	
Attribution of success to effort	Start	Recount	8	33	1	42
		% of total	2,8%	11,4%	0,3%	14,5%
	Process	Recount	6	142	8	156
		% of total	2,1%	49,0%	2,8%	53,8%
	Completed	Recount	1	63	28	92
		% of total	0,3%	21,7%	9,7%	31,7%
Total		Recount	15	238	37	290
		% of total	5,2%	82,1%	12,8%	100,0%

Table 5 shows that 49.0% of the participants are at a regular level of Motivation towards scientific research, attributing to the dimension Attributing success to effort a total percentage of 53.8%, which is located within the process level.

Table 6. Externalization and uncontrollability of academic failure due to attribution to bad luck*Motivation towards scientific research

			The motivation for scientific research			Total
			Poor	Fair	Good	
Externalization and uncontrollability of academic failure due to bad luck	Start	Recount	8	30	3	41
		% of total	2,8%	10,3%	1,0%	14,1%
	Process	Recount	6	146	8	160
		% of total	2,1%	50,3%	2,8%	55,2%
	Completed	Recount	1	62	26	89
		% of total	0,3%	21,4%	9,0%	30,7%
Total		Recount	15	238	37	290
		% of total	5,2%	82,1%	12,8%	100,0%

Table 6 shows that 50.3% of the participants are at a regular level of Motivation towards scientific research, attributing to the dimension Externalization and uncontrollability of academic failure to bad luck a total percentage of 55.2%, which is located within the process level.

Table 7. Attribution of failure to lack of ability*Motivation towards scientific research

			The motivation for scientific research			Total
			Poor	Fair	Good	
Attribution of failure to lack of ability	Start	Recount	10	47	2	59
		% of total	3,4%	16,2%	0,7%	20,3%
	Process	Recount	5	147	18	170
		% of total	1,7%	50,7%	6,2%	58,6%
	Completed	Recount	0	44	17	61
		% of total	0,0%	15,2%	5,9%	21,0%
Total		Recount	15	238	37	290
		% of total	5,2%	82,1%	12,8%	100,0%

Table 7 shows that 50.7% of the participants are at a regular level of Motivation towards scientific research, attributing to the dimension Attribution of failure to lack of ability a total percentage of 58.6%, which is located within the process level.

4. Discussion:

Concerning the Externalization and uncontrollability of academic results, success and its relationship with Motivation towards scientific research, it is found that when Externalization and uncontrollability of academic results, success increases, motivation towards scientific research increases. 51.0% of the students surveyed are located at the process level, while 1.0% at the achieved level, for 52.2% of the total, consider luck an external and uncontrollable motivational factor. They also attribute luck to have achieved good academic results, motivating them to focus better on scientific research and achieve academic success. At the level of process and achievement, it was also found that when students obtained good grades in the research areas, this was attributed to the fact that the teachers awarded high grades very quickly without demanding more significant efforts from the students. It is essential to consider stimulating students' interest and effort to obtain good academic results and minimize attributions to luck or the teacher. The uncontrollable attributions make it impossible for students to set new strategies and goals to improve their academic performance (Durán-Aponte & Pujol, 2013).

About the Attribution of academic failure to lack of effort and its relationship with Motivation towards scientific research, it is found that when the Attribution of academic failure to lack of effort increases, motivation towards scientific research improves. 59.7% of the students surveyed are at the process level, while 27.9% are achieved. Of the total, 87.6% are at the process and achieved levels, attributing academic failure to lack of effort and work as an internal factor. Responding to the fact that the students have not made sufficient effort or adequate time management in individual academic preparation and a lack of commitment. It is also found that students are aware of the importance of effort, commitment and dedication as internal determinants of academic success. This result differs from that proposed by (Guzmán–Zamora & Gutiérrez–García, 2020), who refers that although students are aware that failure may be due to a lack of effort, they are not aware of it.

When analyzing the Attribution of academic success to ability with Motivation towards scientific research, it is found that when the Attribution of academic success to ability increases, motivation towards scientific research improves. In that sense, 53.4% of the surveyed learners are located at the process level, while 32.8% at a level of achieved for 86.2% of the total, attributing academic success to internal factors such as the natural ability to study, understanding of content, ability to assimilate new content, as well as natural intelligence to explain certain specific areas of knowledge. Therefore, they recognize that conscious study and the natural ability to study, retain and apply knowledge is an essential motivational factor in achieving academic success. This result also corresponds with (Guzmán–Zamora & Gutiérrez–García, 2020), who found a directly proportional correlation between attributional styles and 'students' academic performance ($r=0.364$, $p=0.002$, $\alpha<0.01$.; therefore, it corroborates the results of the present research. In summary, the development of skills relevant to academic development is determinant to focus on scientific research and achieve encouraging results. Even among those students who present academic failure, the attributions of success and failure are focused on theeffort made or, on the contrary, on the lack of effort (University of Murcia, 2011).

The Attribution of failure to the teacher with the Motivation towards scientific research showed that the deficit of theoretical, methodological or practical strategies on the teacher's part decreases the motivation towards scientific research. Of those surveyed, 56.2% were at the process level, while 32.4% were at the achieved level, for a total of 88.8%, attributing academic failure to external factors directly related to the teacher's role in the pedagogical process. Thus, they attribute the low grades to the teacher's low scores and not to his or her ability, to thethe lack of preparation of the teacher, and deficient explanations of the contents by the teacher. They even attribute the failure to the fact that the teacher does not make the subject exciting and fails to motivate them. This last attribution is highlighted in the study developed by (Pereyra Hinostroza, 2019), who found a direct relationship between academic motivation, teacher and ease of the subject being evaluated. In contrast, the study by (Matalinares Calvet et al., 2014) found a greater preference of attribution to success in interpersonal relationships and a lower perception of attribution of failure to the teacher.

Regarding the Attribution of success to effort with Motivation towards scientific research, it is found that when the Attribution of success to effort increases, motivation towards scientific research improves. In this way, 53.8% of the respondents are located in the process level, while 31.7% in the achieved level for 85.5% of the total, attributing academic success to internal factors related to effort. In this sense, there is a firm attribution to personal effort, studying with great intensity, the effort shown in the face of the difficulty and complexity of certain contents, and hard work. This result is congruent with those obtained by (Pereyra Hinostroza, 2019), who found a direct and significant correlation between academic motivation and effort.

When observing Externalization and uncontrollability of academic failure by its attribution to bad luck with Motivation towards scientific research, it is found that if Externalization and uncontrollability of academic failure to bad luck increases, motivation towards scientific research decreases. 55.2% of the respondents are located at the process level. In comparison, 30.7% in the achieved level for 85.9% of the total, the students attribute the academic failure to external factors such as bad luck: causal mistakes, low scores by the teacher– facing - p–ecisely - those questions that they had not studied and even to chance. These findings were also systematized by (Pereyra Hinostroza, 2019), who found a direct and significant relationship between academic motivation and the attributional style referred to luck-chance. Also, in their study, (Navarrete & Cuadro, 2007) found that students with low academic performance attribute their achievements more to luck or chance; highlighting an external-unstable-controllable attribution; compared to students with a high academic performance whose attribution points more to internal- stable-controllable attributions.

Finally, in the Attribution of failure to the lack of ability with Motivation towards scientific research, it is found that the lack of specific cognitive skills and other general skills diminishes th' student's motivation towards scientific research. 58.6% of the students are located in the process level, while 21.0% in an achieved level for 79.6% of the total. Attributing the academic failure to internal factors such as not being motivated to pass the assigned subjects satisfactorily, the lack of talent necessary for the comprehension of contents, and the recurrent thoughts about the lack of capacity or intelligence to study, retain, and apply knowledge in the development of research skills. This result is consistent with the study (Ibarra Tancara, 2019), which found that individual academic ability is a determinant of academic failure and success.

5. Conclusions:

The attributions that motivate the learner to be interested in scientific research are shown in two essential approaches: controllable and uncontrollable and are expressed internally (stable and unstable) and externally (stable and unstable) as they are manifested in people (Sánchez & Peña, 2015).

In terms of externalization and uncontrollability of academic results, mainly success, the attributions are controllable, external and stable type, and not uncontrollable, internal and stable (ability or individual effort does not prevail). On the contrary, they attribute good grades to factors such as the lack of teaching demands, easily solved questions, and even luck in taking the exams.

Academic failure's attribution to lack of effort is presented as controllable, internal and stable, and not uncontrollable, internal and stable (ability or individual effort does not prevail). Because, as in the previous case, their results do not depend on ability or effort; on the contrary, they attribute academic failure to lack of effort and work, poor time management and lack of personal commitment.

The attribution of academic success to ability is presented as uncontrollable, internal and stable. The natural ability to study, the comprehension of content, the capacity to assimilate new content, the natural intelligence to explain specific areas of knowledge are found as success factors.

Attribution of failure to the teacher is presented as controllable, external and stable, and not as uncontrollable, internal and stable (ability or individual effort does not prevail). Contrarily, they attribute this result to the teacher's low grades, lack of preparation, and the fact that he does not motivate well to awaken interest in the class contents.

The Attribution of success to the effort is presented as an uncontrollable, internal and stable attribution. Students attribute academic success to ability, effort, intense study, commitment and hard work to understand simple to complex content.

Externalization and uncontrollability of academic failure due to its attribution to bad luck are presented as a controllable, external attribution. However, which can be stable or unstable, and not uncontrollable, internal and stable (ability or individual effort does not prevail). They attribute failure to involuntary mistakes, low scores, teacher malice, lack of help from their friends at the most complicated moment or other reasons such as lack of time or primary conditions for study.

Attribution of failure to lack of ability is presented as an uncontrollable, internal and stable attribution, attributing failure to lack of motivation to study, lack of talent, and lack of capacity and intelligence to study and take excellent advantage of it.

Limitations: Although certain attributional studies appear fundamentally in regular basic education, no study of this type was developed at the postgraduate level. Although undergraduate thesis-type studies related to attributional styles are found, not many master's or doctoral theses address this issue in depth. It is impossible to find book chapters or original articles, systematic reviews, case studies or related meta-analyses.

6. References:

Aldana de Becerra, G. M., & Joya Ramírez, N. S. (2011). Actitudes hacia la investigación científica en docentes de metodología de la investigación. *Tabula Rasa,* (14), 295-309. https://doi.org/10.25058/20112742.428

Bloom B, S. (1956). Taxonomy of educational objectives : The classification of educational goals. *Cognitive domain*. https://cir.nii.ac.jp/crid/1573105975722025344

Deci, E. L., & Ryan, R. M. (2008). Self-determination theory: A macrotheory of human motivation, development, and health. *Canadian psychology/Psychologie canadienne, 49*(3), 182-185. https://psycnet.apa.org/doi/10.1037/a0012801

Durán-Aponte, E., & Pujol, L. (2013). Attribution Scale of General Achievement Motivation (EAML-G): Adaptation and analysis of its psychometric properties. *Estudios pedagógicos (Valdivia), 39*(1), 83-97.

Falcón, C., Orejudo, S., Fernández-Turrado, T., & Zarza, F. J. (2016). The emergence and evolution of optimistic expectations in schoolchildren. *Anales de Psicología/Annals of Psychology, 32*(2), 492-500. https://doi.org/10.6018/analesps.32.2.239351

Goleman, D. (1998). *Emotional Intelligence.*

Guzmán–Zamora, N., & Gutiérrez–García, R. A. (2020). Motivación escolar: metas académicas, estilos atribucionales y rendimiento académico en estudiantes de educación media. *Archivos Venezolanos de Farmacologia y Terapéutica, 39*(3), 290-295.

Ibarra Tancara, J. (2019). Atribucional styles in the perception of academic achievement and interpersonal relations in pregrado students of psychology. *Revista de Investigacion Psicologica,* (21), 73-88.

Maslow, A. H. (1958). A Dynamic Theory of Human Motivation. *50*(4), 26-47. https://psycnet.apa.org/doi/10.1037/11305-004

Matalinares Calvet, M., Yaringaño, J., Sotelo, L., Sotelo, N., Arenas, C., Díaz, G., Dioses, A., Encalada, M., Tipacti, R., & Bázan, M. (2014). Relationship between attributional style and learning styles with students in school of Lima Metropolitana. *13*(2), 101-116. https://doi.org/10.15381/rinvp.v13i2.3716

Medina, J. E. C., & Suaréz, J. I. P. (2017). Importancia de la investigación en la formación de estudiantes en la modalidad a distancia. *Educación y Humanismo, 19*(32), 31-52. https://doi.org/10.17081/eduhum.19.32.2530

Navarrete, I., & Cuadro, A. (2007). Estilos atribucionales causales y rendimiento académico en estudiantes de ciclo básico de Montevideo. *XIV Jornadas de Investigación y Tercer Encuentro de Investigadores en Psicología del Mercosur* (pp. 182-384). Facultad de Psicología-Universidad de Buenos Aires.

Pereyra Hinostroza, C. E. (2019). Motivación Académica y los Estilos Atribucionales en el Aprendizaje de la Asignatura Estadística de los Estudiantes de la Carrera de Administración de Empresas en la Modalidad de Working Adult en la Universidad Científica del Sur. *Universidad Nacional de Educación,* 12-20.

Perret, R. (2016). *El secreto de la motivación*.

Quintero, C. E. V., Burgos, N. D. P., & Aristega, A. M. M. (2020). Educación de la conducta social en los estudiantes universitarios. *Opuntia Brava, 12*(3), 193-199.

Ryan, R. M., & Deci, E. L. (2000). Intrinsic and extrinsic motivations: Classic definitions and new directions. *Contemporary educational psychology, 25*(1), 54-67. https://doi.org/10.1006/ceps.1999.1020

Sánchez, G. R., & Peña, A. Q. (2015). Atribución de motivación de logro y rendimiento académico en matemática. *PsiqueMag, 4*(1), 234-251. https://doi.org/10.18050/psiquemag.v4i1.124

Serra Valdés, M. Á., & González de la Oliva, G. (2017). La investigación en la formación de profesionales y en el profesorado de las ciencias médicas. *Educación Médica Superior*, *31*(4), 1-14.

Tapia, J. A. (1983). Attribution of causality and achievement motivation. I: Developmental study of information use in giving attribution judgements. *Studies in Psychology, 4*(16), 12-27. https://doi.org/10.1080/02109395.1983.10821365

Tinoco-Cuenca, N. P., Damián-Nuñez, E., Isla-Alcoser, S., & Morales Bedoya, M. A. (2020). Research and Socio-Educational Impact Competences in the Degree Work of a University in Ecuador. *Producción científica-tecnológica del país, 8*(3), 1-9. https://doi.org/10.20511/pyr2020.v8n3.442

Tueros, R., Calvet, M. L. M., & Raymundo, O. (2013). Los valores interpersonales y su relación con los estilos atributivos en estudiantes de quinto de secundaria. *Revista de investigación en psicología, 16*(1), 105-126. https://doi.org/10.15381/rinvp.v16i1.3922

Vallejo, L., Daher, N., & Rincón, R. (2020). Research and creativity for the development of scientific competences in university students of health. *Revista Cubana de Educación Médica Superior*, *34*(3).

Weiner, B. (1979). A theory of motivation for some classroom experiences. *Journal of educational psychology*, *71*(1), 3-25. https://psycnet.apa.org/doi/10.1037/0022-0663.71.1.3

Weiner, B. (1986). Attribution, emotion, and action. In *Handbook of motivation and cognition: Foundations of social behavior*. (pp. 281-312). Guilford Press.

Weiner, B. (2010). Attribution Theory. *The Corsini Encyclopedia of Psychology*, 1-2. https://doi.org/10.1002/9780470479216.corpsy0098

Xin, S., & Sánchez, M. C. (2021). Cooperation in the Training of Graduates in Spanish Language for non-Spanish Speakers at University of Havana. *Revista Cubana de Educación Superior, 40*(1 Ene-Abr), 1-13.