Motivation to Choose the Teaching Profession: the case of early access to the pedagogical program in Chile

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ABSTRACT – Motivation to Choose the Teaching Profession: the case of early access to the pedagogical program in Chile. The article presents results of an investigation which aimed to characterize the declared motivations of students from an early access program, to choose the teacher career as a professional option. The research was developed from a qualitative methodology, considering a semi-structured interview as a source of information and condensation of meanings as a method of analysis. The information collected allows, from the intrinsic and extrinsic distinction of motivations, the construction of five meaning categories. In the case of intrinsic motivations: the social value of the teacher career, the personal fulfillment associated with teaching, and interest in school discipline. From extrinsic motivations, the benefits of the teacher career and the academy as a professional aspiration. The study also allows us to conclude that the intrinsic motivational components have a higher density in the teacher career choice.

Keywords: Pedagogy. Teacher Training. Motivations. Early Access Programs.

RESUMEN – Motivaciones para la Elección de la Profesión Docente: el caso de un programa de acceso temprano a pedagogía en Chile. El artículo presenta resultados de una investigación que tuvo como objetivo, caracterizar las motivaciones que declaran estudiantes de un programa de acceso temprano, para elegir la carrera docente como opción profesional. La investigación se desarrolló desde una metodología cualitativa, considerando la entrevista semi-estructurada como fuente de producción de información y la condensación de significados, como método de análisis. La información recabada permite, desde la distinción de las motivaciones intrínsecas y extrínsecas, el levantamiento de cinco categorías de sentido. Para el caso de las motivaciones intrínsecas: el valor social de la profesión docente, la realización personal asociada a la enseñanza e interés por una disciplina escolar. Desde las motivaciones extrínsecas, los beneficios de la profesión docente y la academia como aspiración profesional. También el estudio permite concluir que los componentes motivacionales intrínsecos poseen una mayor densidad en la elección de la profesión docente.

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Introduction

The effort to improve the quality of education has led to the implementation of policies that improve teacher training, considering the importance attributed to these training agents in improving education. In this regard, one of the policy measures that is strongly encouraged in the international context is to implement rigorous selection processes for admission to the teaching profession.

In this sense, countries such as Finland, Canada and Singapore, leading nations in education (OECD, 2018), have a selective path which demonstrates the importance of recruiting suitable candidates capable of developing their professional preparation in teacher training programs. Thus, candidates must demonstrate an exceptional academic career that allows them to pass tests of knowledge and academic sufficiency (NCB, 2014); also, demonstrate skills for the exercise of teaching, the latter evaluated through personal interviews that seek to investigate the motivations that lead them to choose a career in pedagogy as a professional option (Pérez, 2015).

In the case of Chile, over the past few years, various strategies have been implemented to attract students to teacher training careers. In 2011, the Teacher Vocation Scholarship implemented, an economic benefit that favors those with outstanding scores in the University Selection Test (PSU), granting economic incentives and exemption from payment of fees. Also, initiatives of a non-governmental nature have emerged, such as that of the Foundation Choose to Educate, which seeks through communication platforms to vindicate the teaching role in society, through enchanting advertising campaigns that attract young people with talent and a vocation for teaching, replicating with it the English experience developed by the state body Training and Development Agency for Schools or TDA (Agency for the training and development of schools), which through communication strategies and incentives, managed to position pedagogy among the careers with the highest demand in the country (Medeiros et al., 2012).

On the other hand, a recent strategy in the national context, and which seeks to ensure the entry of good applicants for the professional training of teachers, is what is indicated in Law 20,903 or Law of Professional Development of Teachers, which has provided an innovative initiative for the recruitment of young people interested in pursuing pedagogical studies. The strategy summons to Higher Education Institutions (HEIs), to establish special access programs to pedagogical training careers, which, through a process of candidate selection, constitute a group of students with an academic profile, outstanding and interested in projecting himself in the teaching profession. Thus, preparation programs and early access to pedagogy careers arise.

One of the areas that the recruitment process of the programs considers is the interest and motivation shown by young applicants to develop in the teaching profession. Currently, the field of motivations has become a relevant dimension in the study of access and develop-
ment in the teaching career, since the density and features of its presence are linked to the commitment, projection, and identity with the pedagogical profession (Pogré, 2012; Bilim, 2014). In this regard, the teaching profession is considered as one of the most complex, so the presence of motivated applicants would grant greater possibilities of success in the profession.

Recent studies, in the Chilean context, expose the importance of this dimension in the teaching profession, focusing their interest on the motivations present in students of pedagogy careers (Avendaño; González, 2012). Another investigation studies different motivational profiles of students who study pedagogy in primary education, identifying types of profiles according to the motivational variables that the study proposes (Valenzuela; Muñoz; Marfull -Jensen, 2018).

Considering the importance and topicality of the problem, it is that in this article we present the results of an investigation that had, as one of its objectives, to characterize the motivations declared by the students of an early access program to choose the teaching career as a professional option. For this case, we worked with students who were part of a program implemented by a state and public university located geographically in the center-south of Chile, specifically in the Ñuble region.

As most of the studies in the field of motivations has focused on the process of initial teacher training and with graduated professionals, this research comes to generate knowledge regarding an early stage of interest and motivation for the teaching profession; that which takes place in the final phase of secondary education or secondary education, as it is called in Chile.

**Motivations and Teaching Profession**

The complexity of the performance context in which the teaching staff operates makes it important to have highly motivated subjects for development in the profession.

Motivation is understood as a relevant human dimension “[...] in that it guides actions and thus forms a central element that drives what the person does and towards what goals he or she is directed” (Naranjo, 2009, p. 153), thereby satisfying the personal needs of the individual, whether they are of a sensitive nature, associated with the taste for carrying out a certain activity or the rationalization of the attributes or benefits that the choice of an activity considers.

Motivations can be varied and subject to intrinsic and/or extrinsic aspects, according to the research that has been studying them, including the theoretical proposal of self-determination by Ryan and Deci (2000). These authors propose differences and distinctive characteristics between one and the other, ensuring with this that the choice or professional definition is driven by affective factors, where the performance of activities is observed voluntarily, free of external rewards,
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oriented to the pleasure of doing something and personal satisfaction and, also, by obtaining material or external rewards, such as economic income, working conditions and social status.

In this context, the literature indicates that motivation, as a mobilizing energy, discovers in each subject particular reasons or natural reasons on which to base a choice. In this sense, motivations are making up of needs, desires, tensions, discomforts (Herrera; Zamora, 2014), among others, which, according to the referenced theory, are arranged as intrinsic and/or extrinsic motivational mobilizers. From this point of view, characterizing the motivations based on this dichotomy is relevant, since it allows us to understand the theory studied, applied to the context of the professional choice of teachers.

Altruistic-intrinsic motivations

In altruistic-intrinsic motivation, intimate components associated with personal sensitivity are recognizing as regulators in the choice of a specific activity, where the activities carried out are in themselves the reward for those who carry them out (Cano, 2008).

Ryan and Deci (2000) consider that a person who is involved in a task for his own value acts mobilized by an intrinsic motivation, since his self-determination becomes a psychological need and domination of his environment, generating positive feelings of interest and pleasure or happiness. On the other hand, it is based on the feeling of competence to be effective in a discipline, interacting with the environment to exercise their abilities, thus seeking to master the challenges of the task, giving them a feeling of confidence that influences their actions; In addition, support is generating from the environment capable of granting psychological well-being that contributes to the achievement of goals through effort and persistence.

This type of motivation is closely linking to a social dimension of the professional teaching exercise, in its purpose of helping others (Sánchez-Lissen, 2002). This is represented as the satisfaction and joy resulting from being able to teach so that others learn, and in which the teacher is gratifying by the opportunity to get involved in the growth of young people and in their school development (Ronnes, 2011).

In this way, motivations of an altruistic-intrinsic nature mobilize people to make decisions based on emotional factors, linked to taste and personal fulfillment through the development of activities in which they feel competent and skillful. In the case of the professional teaching choice, this is associated with factors such as the taste for teaching, for working with children, the taste for a discipline, the desire to help the development of others, among others.

Extrinsic Motivations

Another area of motivation is related to professional choice according to extrinsic factors or factors unrelated to affectivity or personal
satisfaction based on supportive help. This type of external motivation is determined according to the behavioral approach that is sought through the performance of an activity or profession, the obtaining of external rewards, whether these are goods, scores/qualifications, remuneration, prestige, good employment positions, among others (Cano, 2008).

Extrinsic motivation implies that whoever chooses an activity or profession rationalizes in the first instance the benefits and consequences associated with their professional choice. In relation to this, the evaluation or assessment of these aspects favors in the subjects a weighted and coherent choice with the aspirations or ideals that they pursue in their personal and professional future (Cano, 2008). In this sense, factors such as duration and cost of studies, possibilities of insertion in the labor market and employability are relevant to define the professional choice (Gratácos, 2014); in addition, the prestige or social value of the profession.

In relation to the choice of the pedagogical career, García and Organista (2006) state that this type of motivation is associated with the pretense of social mobility, especially for those students from popular or socially disadvantaged sectors, and who see in the profession of teacher a means or possibility of social advancement and access to higher education. In this sense, those pedagogy students who have directed their professional orientation for extrinsic reasons, it is because they have seen in the field of teaching benefits such as economic remuneration, recess periods and all kinds of privileges that the teaching profession can offer (Roness, 2011).

However, a conscious choice of the teaching profession involves the subject valuing personal aspects associated with taste, their skills, and personal competencies for the development of the activity, as well as the recognition of factors of remuneration and social value of the profession, of so that the motivations arise from reflexive processes and base the professional choice over time.

**Methodology**

The research presented was carried out from the comprehensive-interpretive paradigm, based on a research design framed in qualitative methodology. This methodology is pertinent to us, since it seeks to achieve understanding of a reality investigated from the understandings-meanings of the subjects themselves who participate in the phenomenon under study (Flick, 2012; Ruiz Olabuenaga, 2012).

The qualitative research method used is the phenomenological one, since it allows knowledge to be generated from the subjective experience of the subjects, for which it considers the inquiry into understandings in order to describe and interpret the common meanings provided by the research participants (Rodríguez; Gil; García, 1999).
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Participants

The study participants were 16 students from a universe of 80 students from the 2018 and 2019 cohorts of the program for early access to pedagogy careers Future Professor UBB, who voluntarily agreed to participate in the research and with the ethical safeguards of working with people. This program was implemented in 2018 at a state university in the central-southern area of the country, specifically in the Nuble region, and within the framework of Chilean educational regulations that mandate the institutionalization of special entry routes for pedagogy careers in universities that offer teacher training programs. The program offers a total of 40 slots by cohort, and where students are selecting based on three criteria such as: good academic performance, test of pedagogical potentialities and personal interview to investigate the reasons and/or motives for choosing a pedagogy career. University admission is generating after the academic and vocational approval of the students in the program and with the rendering of the PSU university selection test.

Regarding the selection of research participants, a total of 2 students per career was considered, considering that the pedagogical offer contemplates a total of 8 pedagogies, namely: Pedagogy in Early Childhood Education, Pedagogy in Basic General Education, Pedagogy in Physical Education, Pedagogy in Natural Sciences with mention Chemistry, Physics o Biology, Pedagogy in Spanish and Communication, Pedagogy in Mathematics Education, Pedagogy in English and Pedagogy in History and Geography. Regarding the inclusion criteria, the following were considered: a) to participate in the UBB Future Professor program, b) to show interest in a career in general or disciplinary pedagogy and c) to be willing to participate in the research. Being underage students, participation was formalized through a letter of informed consent and a letter of informed assent.

Instrument of production and technical analysis of information

The technique used to produce information was the semi-structured interview, validated by the judgment of experts, whose research areas correspond specifically to education and psychology and whose research seniority ranges from 5 to 15 years. The script was organized based on six guiding questions; those that at the time of their application were formulated according to convenience and the context in which the conversation took place (Beltrán, 2018), promoting a dynamic and flexible dialogue. These were developed considering the objective of the research, to identify the intrinsic and/or extrinsic motivations that motivate students to choose a pedagogy career.

For its part, the technical analysis of information was the so-called condensation of meanings (Kvale, 2011). This procedure allows the meanings contributed by the participants to be delimited, generating brief phrases, which lead to the formation of codes which, later, are grouped into categories of meaning.
Results

For purposes of presenting results, the categories of meaning raised from the technical analysis process were characterized and classified according to the type of motivations that the theory has already identified. Our contribution in this study is to give content to the type of motivations that are expressed in the choice of the teaching profession.

Altruistic-intrinsic motivations for choosing a teaching career

The motivational components of the altruistic-intrinsic type that motivate students to choose pedagogy as a professional career, consider three dimensions or categories of meaning: social value of the teaching profession, personal fulfillment associated with teaching, and interest in a school discipline.

Social value of the teaching profession

The social value of the teaching staff, given the scope that it can affect with a view to the full development of students, is presented as a motivational aspect for entering the profession. Furthermore, if it is not a profession that grants important economic remuneration, the social benefit that it brings to people constitutes a transcendent value. For this reason, economic compensation is considering a secondary or unimportant aspect for most of the participants:

[...] the teacher affects the person, that is what most strikes me about being a teacher and the idea, obviously, of becoming a teacher who affects the students well and who obviously gives all the skills so that the student can develop in whatever he wants (student 16).

[...] other teachers that I have, they are very cool, they teach you to be a person [...] to help students in how they should be (student 15).

[...] my teacher [...] he has always told me that being a teacher is like a great vocation, so to speak, because he helps many people, literally every day, and he does not receive anything in return, not even monetarily, he does it because he really has a vocation and I admire that about him (student 13).

Closely linked to the social value of the teaching profession is the vocational dimension, which is perceived as a humanitarian attitude closely linked to philanthropy or disinterested generosity that leads its bearer to make oversized deliveries. This attitude or will to do good is understanding as a teaching vocation, which is linked to aspects such as sacrifice, detachment, and commitment to the student body. The participants visualize in the actions of their teachers these attitudes that serve as a mobilizing example to be interested in studying pedagogy. Also, the vocation is representing in relation to the level of involvement with the other-student in the framework of academic activities where the teacher’s willingness to meet requirements outside the professional...
spaces, constitutes an indicator of pedagogical vocation. In general, the continuous and generous presence of the teacher is valuable, beyond the spaces and working times of the school system:

[…] because being a teacher is always being […], with my friend I still see the vocation in my teacher, because once she went on vacation and kept answering messages from students with common doubts, so that left me inside—hey, but you’re on vacation—and he told me—what’s wrong—and there you kind of learn and reflect […] I’m still going to be like that (student 15).

[…] my English teacher is the same, he is one of those teachers who love their work, who would give everything for it, I see a vocation in them (student 9).

[…] one can reach them and ask if they have a question, they do not have much difficulty in saying no or yes I can, I can even ask the teacher through WhatsApp (student 2).

The idea of a teaching vocation is related to the notion of social commitment of those who choose the pedagogical profession, a commitment that is reflected in the concern to provide permanent answers to the concerns and requirements of the students. In this sense, being a teacher is seeing as a professional activity of high social value, which constitutes a mobilizing inspiration to enter pedagogy careers.

**Personal Achievement Associated with Teaching**

The performance of activities that are of personal taste, considers for those who exercise them to put into practice certain skills and competencies, thus generating emotional states of fulfillment and happiness for the task performed. In this sense, the exercise of teaching is viewed by the participants as an activity that generates feelings of personal satisfaction that derive from the idea of helping and contributing to the improvement of others, an issue that is reflected in the following reports:

[…] more than anything I want to study pedagogy because it is what I like, and I feel that this way I can fulfill myself as a person (student 2).

[…] with this, I want to make a change and go to rural schools […], to be able to generate a change for people who do not have the opportunities to be in a quality school (student 16).

[…] I feel the need to contribute to raising happy children (student 1).

A professional projection associated with an intention to influence the generation of changes for their future students is visualizing, through the benefits that they can grant through teaching. Also, they are motivated by the interest in assuming responsibilities of emotional containment and educational support for the younger generations from sectors with high poverty in society, in which behaviors of abandonment and vulnerability require great efforts from teachers: “[…] so I prefer to have a job in which […] at least I will come home saying, today I did
a good deed, I helped a child or something like that” (student 9). In this sense, the motivation of the student body to pursue pedagogical studies is configured in a kind of “idealization” of the teaching profession, since the teaching staff is conceived as a manager of opportunities that contributes to the realization of others and consequently to the realization of own staff. In general, those who express their interest in studying pedagogy from these interests do so from perspectives that are closely intertwined with a vocational dimension of the teaching profession.

**Interest in a school discipline**

The interest or affinity for a specific school area or discipline is associating with the student’s capacity and ability to understand it and apply it effectively within the context of school performance. For its part, the (self) perception of the student and his environment is a fundamental aspect, since this reaffirms the competences and mastery of a certain subject that makes him creditor of a certain prestige in front of his peers and teachers, and in the case of This research was established as a relevant dimension to continue pedagogical studies:

 [...] I like science, I’m doing well in it and that’s why I’m interested in this area in particular (student 5).

 [...] math is the easiest, I read what I wrote down in my notebook for five minutes and I take the test, that’s why I’m going to that race (student 8).

In this regard, the innate abilities and skills of the student in relation to a specific subject within their academic career, directs the professional choice towards a career in pedagogy, from the link generated in the taste for a certain school discipline.

**Extrinsic motivations for choosing a teaching career**

The extrinsic motivational components that motivate students to choose pedagogy as a professional career, consider two categories of meaning: benefits of the teaching profession and the academy as a professional aspiration.

**Benefits of the teaching profession**

It is knowing that the teaching profession is one of those that cannot be classified as high income, rather its characteristic has been its precarious salary and low professional status. However, it shows certain “privileges” or benefits that are of interest to some students when defining their professional choice, in relation to other higher education options, such as recess times and/or vacations that occur in the teaching exercise:

One thing that catches my attention is the vacations that teachers have. It’s two months, right? And in no other profession do they give you two months of vacation (student 8).
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[...] the teachers themselves deserve it (holidays) because all the effort they have involved in that time during the year and apart from teaching they have to do things outside the classroom, so it is a good incentive to work there (student 12).

The students value this break time as a professional benefit, but they also recognize the hard effort shown by the teachers during the academic year. Although it seems that the choice of the teaching profession from extrinsic motivations, considers a more strategic, instrumental or technical perspective, it can be said that the visualization of these more practical aspects, evidences the rationalization of the choice, considering advantages and benefits. In the case of a pedagogy career, although the immediate choice is not given due to aspects associated with recess times, this can be considered as an attraction that arouses interest in the student body when choosing the profession.

The academy as a professional aspiration

Although the teaching career is not valued in the common social discourse as a prestigious profession, there is evidence of knowledge on the part of the students of spaces or professional contexts that escape classroom teaching in educational establishments and that receive a positive assessment. This is the case of university teaching or professional development within the academy, which constitutes a mobilizing source to enter to study pedagogy:

[...] I think I would like to be a university professor, that motivates me (student 8).

[...] I would love the idea of being a university professor, being able to inquire on those sides (student 9).

I see greater prestige working at the university, yes I think there is a little more prestige, because at the university it is different, it is like something more superior perhaps, not everyone can get there (student 14).

This projection of the academy is also seen as a restricted and distant space, which is conceived as an aspirational ideal, reserved only for a group of teachers privileged by their continuous academic preparation, which is also understood as an elite professional circle. In this sense, students are clearly aware that this prestige associated with university teaching is a consequence of subsequent training that complements and deepens the knowledge acquired in initial teacher training, and is associated with the acquisition of academic degrees that grant this prestige. professional: “I want to become a university professor, I want to later get a master’s degree in philosophy and then a doctorate in education to be able to teach at a university” (student 16).

The possibility of accessing teaching in the academy is established, then, as a potential mobilizing force to access the teaching profession. In this sense, the distinction in students between “teacher training” and “teacher training” is noted, as a future possibility of pro-
Discussion

In the first place, it is worth highlighting the predominance of the altruistic-intrinsic motivational components in the professional choice of the young people who participate in the early access to pedagogy program. In their stories, they declare that their professional aspirations are based on social aspects that are very sensitive to the reality that surrounds them. In this sense, the school context of origin, mostly municipal high schools with high levels of socioeconomic vulnerability, can be read as an explanatory factor of the understanding they have regarding the professional role and the relevant socio-educational contribution that teachers can make to the schools. That is, in the need to contribute to social transformation through teaching and, for this, teachers are attributed the responsibility of contributing to the formation of the person, not only from the academic but also from the values. In this sense, the professional choice of young people attributes a transforming meaning to teaching, from which the altruistic dimension of motivational theory is understood, since it focuses its behavior on the opportunities for change that education is capable of producing in generations. In favor of their personal and/or socio-affective development.

On the other hand, an aspect that affects the pedagogical choice, especially the disciplinary one, turns out to be the students' school experience, while the presence and pedagogical imprint of certain teachers constitutes a significant aspect that mobilizes the professional choice, based on the admiration for the commitment and teaching capacity displayed by certain teachers in their daily work. In this way, the school biography has an impact on how pedagogical work is conceived, since from this perspective the characteristics that students assign to being a good teacher and the idea that is built on the meaning of being a teacher can be understood. This idea is complemented by that proposed by Gimeno Sacristán and Pérez (1996), who highlight the importance of teachers within the school biography of the student body, considering that the early interest in following pedagogical studies is generally awakened from the admiration of the educational-school referents, who through their educational practices socialized within the school environment generate motivation for choosing the teaching profession, becoming a mobilizing component to opt for a pedagogy career.

Another interesting aspect to consider, too, is the presence of extrinsic motivational components in choosing a teaching career. As is known, historically, the pedagogical profession in the Latin American context has been considered to have a low social status, although with the recent professional development policies for teachers, certain labor guarantees and an improvement in salary conditions have been made visible and promoted, which society and young people are perceiving.
as attractive to develop personally and materially. Also, the interest of young people to project themselves in postgraduate studies, to access contexts or spaces of professional performance of greater prestige (the academy), speaks of the knowledge that exists today regarding the possibilities and projections of the teaching profession. In this regard, the information that is available today on the labor fields and possibilities of development of the teaching profession, favor the emergence of extrinsic motivational components among the applicants to the pedagogical career.

Conclusions

The study has made it possible to demonstrate the prevalence of intrinsic motivations over those of an extrinsic nature, in a program for early access to pedagogy careers. In this sense, the social value attributed to the teaching profession leads to mobilize an interest and attraction for the profession from an altruistic dimension due to the character of social transformation that is visualized in the daily work of teachers. In the gestation of this interest and motivation to project themselves in the teaching career, those referent or memorable teachers who marked the school trajectory of the students and who allowed to visualize the educational work as a professional possibility play a gravitating role.

According to the results, the predominance of intrinsic-altruistic motivations in choosing a teaching career should be associated with a greater commitment and identity with the pedagogical profession, in accordance with what is postulated by educational theory. However, more information and longitudinal studies are required to relate this type of motivation, at an early stage, with projections and success in professional development.

Finally, it is interesting to investigate the scope and projections of the early access program for pedagogy careers, with the presence of a group of young people interested in following the teaching profession from a predominance of intrinsic motivations. This is because the self-perception of the research participants regarding their abilities and aspirations is a relevant fact, considering that they recognize their own potentialities, directing them to the professional field with the intention of disposing them to improve the educational system. However, it is not possible to predict whether the initial motivations are stable enough to determine their predominance over time, as required by teacher attraction initiatives. Also, it should be considered that the study addressed the specific reality of one of the existing early access programs in the country, so its results need to be complemented with other research that allows broadening, triangulating and deepening the proposed categories.

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References


HERRERA, José; ZAMORA, Noemi. ¿Sabemos Realmente lo que Es Motivación?. Punto de Vista, Correo Científico Médico, Cuba, v. 18, n. 1, p. 126-128, enero/marzo 2014.


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