

TRANSFER OF LEARNING IN POSTGRADUATE TEACHER EDUCATION,
MODERATING EFFECTS OF SEX, AGE, AND SOCIAL MOBILITY

*TRANSFERÊNCIA DE APRENDIZAGEM NA FORMAÇÃO DE PROFESSORES DE
PÓS-GRADUAÇÃO, EFEITOS MODERADORES DE GÊNERO, IDADE E
MOBILIDADE SOCIAL*

*TRANSFERENCIA DEL APRENDIZAJE EN LA FORMACIÓN DE PROFESORADO
DE POSTGRADO, EFECTOS MODERADORES DE SEXO, EDAD Y MOVILIDAD
SOCIAL*



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ABSTRACT: The objective of this research is to measure the transfer of learning in graduates of the Master's program in Teaching for Higher Education at Universidad Andrés Bello, Chile, through three related constructs: pedagogical competence, quality of perceived training and relevance of training received. In addition, they provide a moderate view by gender, age, and social mobility as sociodemographic factors. For this, a convenience sample of 333 participants is defined. A self-administered questionnaire was used as an instrument for data collection and a quantitative analysis of the data was performed. The results confirm that the construct "transference" can be established based on pedagogical competence, the quality of the training received and the relevance of the training received. Similarly, there is a significant relationship between the quality of training received and the social mobility of its graduates.

KEYWORDS: Learning transfer. Pedagogical competence. Quality of education. Continuing education.

RESUMO: O objetivo da pesquisa é medir a transferência de aprendizagem nos graduados do programa de Mestrado em Docência para o Ensino Superior da Universidade Andrés Bello, Chile, por meio de três construtos relacionados: competência pedagógica, qualidade da formação percebida e relevância da formação recebida. Além disso, fornecem uma visão moderada por sexo, idade e mobilidade social como fatores sociodemográficos. Para isso, define-se uma amostra de conveniência de 333 participantes. Utilizou-se como instrumento de coleta de informações um questionário autoaplicável e realizou-se uma análise quantitativa dos dados. Os resultados confirmam que o constructo "transferência" pode ser estabelecido a partir da competência pedagógica, da qualidade da formação recebida e da pertinência da formação recebida. Da mesma forma, existe uma relação significativa entre a qualidade da formação recebida e a mobilidade social dos seus diplomados.

PALAVRAS-CHAVE: Transferência de aprendizagem. Competência pedagógica. Qualidade da formação. Educação continuada.

RESUMEN: La investigación tiene como objetivo medir la transferencia del aprendizaje en los egresados del programa de Magister en Docencia para la Educación Superior de la Universidad Andrés Bello, Chile, a través de tres constructos relacionados: competencia pedagógica, la calidad de la formación percibida, y la pertinencia de la formación recibida. Además, entregar una visión moderada por sexo, edad y movilidad social como factores sociodemográficos. Para ello se define una muestra por conveniencia de 333 participantes. Se utilizó como instrumento para recabar información, un cuestionario de autoreporte y se hizo un análisis cuantitativo de los datos. Los resultados confirman que el constructo de "transferencia" se puede establecer a partir de la competencia pedagógica, la calidad de la formación recibida y la pertinencia de la formación recibida. Así también que existe una relación significativa entre la calidad de la formación recibida y la movilidad social de sus egresados.

PALABRAS CLAVE: Transferencia del aprendizaje. Competencia Pedagógica. Calidad de la formación. Educación continua.

Introduction

In Chile, continuing education has shown considerable growth in recent years, confirming the relevance of training and constant learning for professional and personal development at the higher education level (Canales, 2018; Espinoza; González, 2013).

Likewise, several institutions and universities in Chile offer continuing education programs, either in-person or online. These programs include diplomas, specialization courses, workshops, and seminars, among others (Centro Nacional Tuning Chile, 2013)

One of the objectives of continuing education is the training of educators, with the fundamental purpose of updating and providing greater specialization to teachers, since this process has an impact on the transfer of learning (Feixas; Martínez-Usarralde, 2022) which is understood as the quality of using attitudes, knowledge and skills obtained in one circumstance or context, for another (Osses; Jaramillo, 2008; Conde, 2022).

In this context, master's programs in Chile have positively impacted learning transfer and have professionalized activities in the country. An example of this are the master's degrees in higher education taught by several universities that seek to train teachers for higher education composed of professional institutes, technical training centers and universities. These programs focus on training teachers for higher education and seek to develop skills in curriculum planning and design, learning assessment, use of educational technologies, and research in the field of higher education (Campos de Vettori, 2021; Centro Nacional Tuning Chile, 2013).

Typically, the objective of master's programs for teacher training in Chile is to improve the quality of teacher training, promote research and critical analysis in the educational field, thus contributing to the substantive improvement of education in the country, in changing scenarios and in contexts of diversity (Montoya Vargas *et al.*, 2016; Vargas; Gonzalez, 2021; Zurita, 2020).

In this context, this study focuses on the Master's Degree in Teaching for Higher Education at the Andrés Bello University (UNAB), a postgraduate program designed to provide pedagogical training to professionals who work as teachers in higher education, lasting one and a half years, focused on professionals with work experience in different areas who teach at a higher level and who need to acquire and improve their pedagogical skills (Unab, 2021).

The objective of the program is "to provide formative experiences for the design, implementation and evaluation of autonomous and collaborative learning environments, providing spaces for reflection on teaching practice" (Unab, 2021, p. 2, our translation). The student-centered approach that emerges from the above is focused on continuous improvement

and innovation, through active learning, collaborative work and metacognitive reflection, which allows students to develop and improve pedagogical and didactic skills to design study plans, put into practice innovative teaching, learning, and assessment strategies and disseminate these experiences within the academic community.

This program, which already has more than a thousand graduates, has been taught since 2014 in person and online and is aimed at professionals from different areas who work in higher education institutions in Chile and abroad. It consists of eight subjects that are developed over three semesters, which contribute to the Learning Outcomes (AR) declared in the degree profile and which show a progression in the development of skills from simple to complex, advancing in the management of content quality teaching to then design curricular products and advance to higher thought processes, such as professional reflection.

It should be noted that this design has as its framework the achievement of Expected Learning within each of the disciplines arranged in the curricular network and that it also includes a progressive assessment mechanism to achieve the graduation profile.

As can be seen in the characterization of the program, the transfer of learning is essential in the case of teacher training, so that teachers can effectively put into practice in the classroom the skills and knowledge acquired in their training process (Escoto *et al.*, 2010; Pérez; Cubero, 2014).

The moderating effects of gender, age and social mobility are also relevant in the study of learning transfer in higher education teacher training. These factors can influence how teachers learn and apply what they learn in their training, and it is important to understand how they can affect learning transfer to improve teacher training.

In view of the above, this study seeks to measure the transfer of learning in graduates of the aforementioned course, through three related constructs: pedagogical competence, perceived quality of training and relevance of the training received. Furthermore, it aims to provide a view moderated by gender, age and social mobility as sociodemographic factors.

Pedagogical competence

When talking about learning transfer, one of the first relatable concepts is that of pedagogical competence. This construct has been widely studied not only in the field of school education, but also in higher education (Riquelme-Plaza; Cabero-Almenara; Marin-Diaz, 2022; Touriñán-López, 2022). In this sense, pedagogical competence is defined as the ability to plan,

develop and evaluate different teaching and learning processes in different contexts that can promote lasting and meaningful learning in students (Díaz Costa, *et al.*, 2022).

In the field of higher education, the pedagogical competence of teachers is not only related to an accumulation of knowledge of a specialty, but also to a set of skills and abilities to transmit information and knowledge to their students, using methodologies according to changing scenarios over time, and thus achieve learning results closely related to the profiles of graduates in the careers they serve (Canen, 2013; Juan-Lázaro, 2022).

In relation to the knowledge that teachers must transmit to their students, learning theories, didactics, assessment, use of information technologies and project development are covered (Cabero; Roig-Vila; Mengual-Andrés, 2017; Beltrán; Cuéllar, 2013; Sánchez-Rodríguez; Torres-Espon, 2022).

However, when it comes to the skills that teachers should develop, there is a certain consensus that effective communication, empathy, motivation, conflict resolution and classroom management are essential variables (Boizán-Mesa; Aguilera-Lahera; Rodríguez-Rondón, 2020; Luz; Moreira, 2019; Medina-González; Valcarcel-Izquierdo; Vialart-Vidal, 2018).

There is a certain consensus that pedagogical competence is related to three relevant aspects, which are pedagogical knowledge, pedagogical skills and abilities, which as a whole and from a technical and socio-emotional perspective should tend to fix learning in the student, so that are usable in a work context, in this case higher education (Bustos-Jaimes, 2022; Touriñán-López, 2022).

In terms of pedagogical competence, higher education teachers must have a combination of disciplinary knowledge and pedagogical skills for effective teaching as well as interpersonal relationships (Buenestado-Fernández, 2019). Furthermore, it highlights the need for university teachers to be in a constant process of updating their knowledge and pedagogical skills to guarantee quality education for their students, especially in a context in which the use of technology is preponderant and widespread (Feixas; Zellwegwe, 2019; Vallés-Rapp Martínez-Mínguez; Romero-Martín, 2018).

Pedagogical competence in higher education has been the subject of study in several studies that have taken into account gender and age differences. Studies carried out at the Ibero-American level show disparate results in relation to the variables gender and age regarding pedagogical competence, in the sense that age and gender produce different results depending on pedagogical competence depending on different educational contexts (Arredondo-Trapero;

Vázquez-Parra; González-Martínez 2020; Hernández-Ramos; Torrijos-Fincias, 2019; Rodríguez-Espinosa, 2016; Tapia-Silva; Sobrino-Morras, 2019). In this sense, it is necessary to investigate in more depth and with more studies the impact of gender and age on higher education teachers in Chile, with regard to their pedagogical competence.

Perception of the Quality of Training Received

In a scenario in which teacher training programs at master's level are under constant evaluation of their quality by the educational market and quality agencies, the concept of perceived quality of the training received generates interest as a variable in learning transfer processes (Rojas; López, 2016).

The concept of perceived quality of training received in higher education is multidimensional, as it considers aspects such as infrastructure, technological resources, quality of teaching, institutional prestige, employability capacity and future projection (Cruz, 2019; Ríos-Campos *et al.*, 2022).

Along these lines, the perceived quality of the training received is related to other constructs such as satisfaction, motivation and loyalty to an institution. Thus, it is an important variable correlated with the image and reputation of an institution and its consequent participation in the educational market (Huerta-Riveros; Gaete-Feres, 2018).

In line with institutional accreditation processes, the perceived quality of higher education training not only includes internal factors, such as quality of teaching and infrastructure, but is also subject to external scrutiny, such as the judgments of employers and the perception of citizens. In this sense, it can be an important indicator of the relevance of academic programs in relation to the needs of the job market (Ríos-Campos *et al.*, 2022; Rojas; López, 2016).

Relevance of the training received

Regarding the concept of relevance of the training received, there is a consensus that it is related to the correct adaptation of teaching and learning processes that take into account the needs of the environment and the role that students can play in the context of their contribution to society and on a personal level. (Leyva *et al.*, 2021).

Relevance would be related to the practical and tangible application of knowledge and skills so that they can be used in the world of work and develop personal potential thanks to the training received. In this sense, it would be up to educational institutions to provide the

appropriate tools for the correct labor insertion of graduates, so that they can contribute to the country's development (Gómez-Contreras; Monroy-Bermúdez; Bonilla-Torres, 2019).

The relevance of the training received would be related to several factors, such as market needs, the quality of study programs, a constantly changing technological landscape and a set of professional skills (Caichug-Rivera; Ruíz; Laurella, 2021; Lombana-Coy, 2022). Some authors relate the relevance of the training received with competitiveness and the ability to find quality jobs, whether in public and private companies or through personal ventures (Leyva *et al.*, 2021).

Along these lines, there are also studies that indicate that the relevance of the training received is a multidimensional factor in which not only educational actors are involved, but also the productive world, that is, the market must also be involved in the development of programs that fit to their needs and be agents of change (Alvarado, 2016; Iñiguez, 2018).

Therefore, the relevance of training must be constantly evaluated and best practices at national and international level must be considered. Today, teacher training in higher education is no exception to this reality and must be subjected to permanent processes of self-evaluation and critical reflection on their work (Ferro, 2007; Herrera-Rodríguez; Guevara-Fernández; Urías-Arbolaez, 2020).

Social mobility

Traditionally, education is associated with social mobility. This is understood as the series of changes that occur in the social position of a person or a group of people over time in socioeconomic and professional terms in relation to previous generations. Social mobility can be upward in terms of an individual being able to improve their socioeconomic status relative to, for example, their parents or descendants, as when an individual today worsens their socioeconomic status compared to a previous family context (Flores- Crespo; Rodríguez-Arias, 2021).

There are a variety of factors that can influence social mobility, including access to healthcare and education. In the Latin American context, gender and age can be factors negatively related to social mobility (Espinoza; Barozet; Méndez, 2013). Even so, in a complex scenario like Latin America, education continues to be a factor of social mobility and is influenced by state policies, the quality of the educational system in general, institutional strength and other macroeconomic factors.

According to international statistics, Chile continues to be a country that provides social mobility through education and has made significant changes to achieve greater inclusion of students in the higher education system. These changes have a positive impact in terms of reducing poverty and increasing opportunities (Castillo, 2016; Espinoza; González; Uribe, 2010; Morgavi; Augusto, 2017).

In the specific case of master's students in teacher training, the concept of social mobility is related to the graduate's ability to improve their economic and working conditions in relation to their situation prior to entering the program (Espinosa-Espinosa; Arrieta-Flórez, 2022). In this context, social mobility must be reflected in higher income and positions of greater responsibility within an organization. That said, there is evidence at the Latin American level that, in general, postgraduate programs generate upward social mobility, but with some differences in terms of age and gender (Morgavi; Augusto, 2017).

Sample

The sample for this study is made up of 333 graduates of the Master's in Teaching for Higher Education program at the Andrés Bello University of Chile, who responded to a survey carried out using a Google form. This is a convenience sample, representing a subset of the population above 900 people. The sample was obtained from the records of graduates between 2019 and 2023.

The sample inclusion criteria correspond to people who graduated from the Master's Degree in Higher Education Teaching and who were willing to respond to the survey. People who did not complete the program, did not respond to the survey or provided incomplete responses were excluded from the sample.

The sample has a gender distribution of 60.4% women and 39.6% men. The research shows a mean score of 49.017857142857, a standard deviation of 13.036300467162, and a variance of 169.94512987013.

Methodology

Sociodemographic Variables

To establish gender, two options are given to answer (1 = male; 2 = female). To measure age, participants are asked how old they are (in years) at the time of answering the questionnaire. They are then grouped into age groups (1:27-35 years, 2:36-59 years and 3:≥60

years). Finally, postgraduate students are grouped according to the socioeconomic mobility experienced during graduation, considering: changes in economic income (No=0, 1=Yes), modification of the type of contract (indefinite=1, term or other =0) and moving to a position of greater responsibility or status (No=0, 1=Yes). The average of the scores for these three aspects is considered a summary measure. Finally, mobility is understood as a score obtained by the subject greater than 0.

Pedagogical competence

To establish Pedagogical Competence (PC), a self-completion questionnaire is used. Its construct and content validation was carried out by experts. The instrument consists of a total of 5 items that aim to understand the knowledge and skills generated in postgraduate studies for the work environment. Indicators such as: "I improved my skills to be a reflective professional who generates innovative educational experiences", "I improved in the design and development of teaching materials". Responses on a Likert scale range from "Strongly agree" (5 points) to "Strongly disagree" (1 point). To analyze the structural validity of the construct formed by these 5 items, a Confirmatory Factor Analysis (CFA) is performed. The CFA presents an acceptable fit for this model [$\chi^2(5, N = 337) = 9.178, p = 0.102; IFC = 0.994, RMSEA = 0.048, RMRS < 0.001$] (Hooper et al., 2008). Furthermore, this part of the scale's Cronbach's alpha reliability score was 85, which is considered satisfactory (George; Mallery, 2020).

Quality of Training

To establish Training Quality (QF), a self-completion questionnaire is used, whose validation, both construct and content, was carried out by experts. The instrument has a total of 6 items that aim to understand the contribution of the master's degree to improving key skills for your current professional development. Indicators such as: "Training in the higher master's degree helped me to better understand some aspects of my work", "Training in the master's degree helped me to broaden my ideas, generate new ideas and develop skills related to my work." Responses on a Likert scale range from "Strongly agree" (5 points) to "Strongly disagree" (1 point). To analyze the structural validity of the construct formed by these 5 items, Confirmatory Factor Analysis (CFA) was performed. The CFA presented an acceptable fit for this model [$\chi^2(6, N = 337) = 7.490, p = 0.586; CFI = 1.00, RMSEA < 0.01, SRMR < 0.01$] Furthermore, this part of the scale's Cronbach's alpha reliability score was .88, which is considered satisfactory (George; Mallery, 2020).

Relevance of Training

To establish Training Relevance (RF), a self-completion questionnaire is used. The instrument has a total of 5 items that aim to understand the degree of coherence between the master's degree training and the interests and needs of professionals. Questions such as: "The objectives of the Master's Degree in Teaching for Higher Education were clear to me", "The explanations and thematic developments developed in the Master's Degree were understandable to me". Responses on a Likert scale range from "Strongly agree" (5 points) to "Strongly disagree" (1 point). To analyze the structural validity of the construct formed by these 5 items, a Confirmatory Factor Analysis (CFA) is performed. The CFA presented an acceptable fit for this model [$\chi^2(5, N = 337) = 4.297, p = 0.367; CFI = 1.00, RMSEA = 0.015, RMR < 0.01$]. Furthermore, this part of the scale's Cronbach's alpha reliability score was .89, which is considered satisfactory (George; Mallery, 2020).

Training Transfer

Training Transfer (TF). The instrument consists of a total of 16 items that aim to understand the pedagogical skills, quality and relevance of the master's training. Indicators such as: "Training in the master's degree helped me expand my ideas, generate new ideas and develop skills related to my work", "The activities proposed in the master's degree allowed me to exercise my skills related to the topic of study", "I improved in the design and development of teaching materials." Responses on a Likert scale range from "Strongly agree" (5 points) to "Strongly disagree" (1 point). To analyze the structural validity of the construct formed by these 16 items, Confirmatory Factor Analysis (CFA) was performed. The CFA presents an acceptable fit for this model [$\chi^2(5, N = 337) = 4.297, p = 0.367; CFI = 1.00, RMSEA = 0.015, RMR < 0.01$]. That said, this part of the scale's Cronbach's alpha reliability score was .89, which is considered satisfactory (George; Mallery, 2020).

Results

The variables were described in terms of mean and standard deviation. Differences in distribution by sex, age group and mobility are established by Student's t test, one-way ANOVA after demonstrating the assumption of normality (Kolmogorov–Smirnov) and homoscedasticity (Levene Test) respectively. Furthermore, post hoc analysis is taken into account for multiple comparisons. The effect size is analyzed according to Cohen's (1992) recommendations.

Subsequently, the adjustment of each of the TF subscales (CP, QF and RF) and the instrument called "Transfer", through confirmatory factor analysis (CFA). The results already described in the Instruments section used Chi-square, CFI (Comparative Correction Index), RMSEA (Mean square error of approximation) and SRMR (Standardized mean square residual) as adjustment indices. Results greater than .9 are assumed as CFI and results below .05 for RMSEA and SRMR as excellent, in line with Batista-Foguet and Gallart (2000) and Arbuckle (2010). All analyzes are developed using SPSS® 21.0 software and the AMOS v.23 tool for CFA. The main calculations consider a significance level of $p < 0.05$.

Table 1 – Descriptive characteristics of the sample (N=337)

Variable	n (%)
Gender	
Women	203 (60.2)
Men	134 (39.8)
Age groups	
27 -35 years	84(24.9)
36 -59 years	228(67.7)
≥ 60 years	25(7.4)
Social mobility	
Yes	200 (59.3)
No	137 (40.7)

Source: Prepared by the authors.

Table 2 shows the distribution of items and dimensions that make up training transfer. For the group, it is observed that the quality of training is the dimension with the greatest dispersion and lowest average value. This dispersion is also observed in the reagents that compose it.

Table 2 – Descriptions of Transference and its dimensions (N=337)

	Min.	Max.	Average	IN
Quality of training	1	5	4.14	0.75
R35 I incorporated the knowledge and/or skills into my daily work...	1	5	4.23	0.86
R36 I have taken on new responsibilities at my job as a result of...	1	5	3.36	1.36
R40: The topics studied in the master's degree helped me see the work I do from another point of view...	1	5	4.35	0.84
R42 The master's degree helped me to better understand some aspects of my work.	1	5	4.29	0.82
R43 Master's training helped me expand my ideas. generate new ideas and/or develop skills related to my work.	1	5	4.33	0.81
R44 After completing my master's degree, I feel that I have a more solid foundation to solve problems...	1	5	4.26	0.85
Relevance	1.17	5	4.30	0.64
R50: The objectives of the Master's in Teaching for Higher Education were clear to me.	1	5	4.36	0.78

R51 The explanations and thematic developments developed in the master's degree were understandable to me.	1	5	4.40	0.71
R52 The activities proposed in the master's degree provided a better understanding of the object of study.	1	5	4.40	0.71
R53 The activities proposed in the master's degree allowed me to exercise my skills related to the object of study.	1	5	4.36	0.76
R54: During the master's degree, I received feedback about my performance that allowed me to improve my knowledge...	1	5	4.12	0.96
R55 Nowadays I remember precisely the main ideas of the topic studied during training...	1	5	4.13	0.82
Pedagogical competence	1	5	4.17	0.73
R67 I improved my skills to be a caring professional and generator of innovative educational experiences.	1	5	4.33	0.78
R71 I improved in learning assessment strategies and instruments.	1	5	4.39	0.78
R72 I improved in the use of new technologies applied to teaching.	1	5	3.87	1.11
R74 I improved in the design and development of teaching materials.	1	5	4.27	0.86
R76 I improved teaching-learning strategies to serve specific groups of students	1	5	3.99	1.02
Transfer	1.39	5	4.20	0.62

Source: Prepared by the authors.

Figure 1 presents the analysis of the variables studied, considering the differences between the sociodemographic control variables (gender, age group and social mobility). The results reveal statistically significant differences by gender in the perception of Teaching Competence. In this sense, it is observed that the average score for men is higher than that for women. On the other hand, the results also show significant differences with regard to the quality of training perceived in professionals according to social mobility, those who experienced an improvement in their economic and social conditions have a higher average perception of the quality of training.

Figure 1 – Analysis of the variables studied, considering the differences between the sociodemographic control variables (gender, age group and social mobility)

Gênero	Mulheres (n = 203)	Homens (n=134)	Teste (p-value)	SE
Qualidade Formação	4.19± 0.72	4.17 ± 0.80	t=-0, 567 (0, 571)	
Pertinência formação	4.28 ± 0.65	4.33 ± 0.62	t=-0, 645 (0, 519)	
Concorrência	4.09 ± 0.74	4.29 ± 0.70	t=-2, 405 (0, 017)	
Pedagógica				
Transferência	4.16 ± 0.62	4.26 ± 0.63	t=-1.380 (0.168)	
	27-35 anos (n = 84)	36 -59 anos (n = 228)	260 anos (n = 228)	
Qualidade Formação	4.12 ± 0.74	4.16 ± 0.76	3.95 ± 0.66	F= 0, 899 (0, 408)
Pertinência formação	4.28 ± 0.60	4.31 ± 0.65	4.2 ± 0.66	F= 0, 384 (0, 681)
Concorrência	4.23 ± 0.70	4.17 ± 0.75	3.99 ± 0.64	F= 1, 049 (0, 352)
Pedagógica				
Transferência	4.21 ± 0.59	4.21 ± 0.64	4.05 ± 0.58	F= 0, 799 (0, 450)
Mobilidade social	Se (n=200)	Não (n=137)		
Qualidade Formação	4.20 ± 0.76	4.04 ± 0.72	t=-1, 977 (0, 049)	
Qualidade Formação	4.27 ± 0.67	4.33 ± 0.60	t=0, 864, (0, 388)	
Pertinência formação	4.16 ± 0.75	4.19 ± 0.70	t=0, 315, (0, 753)	
Concorrência	4.21 ± 0.65	4.19 ± 0.58	t=-0,370, (0.712)	
Pedagógica				

Source: Prepared by the authors.

Figure 2 establishes the correlations between the variables examined. Positive and significant correlation between the constructs can be observed in all cases. This supports the theoretical position on their close relationship and allows the coherent establishment of the construct called "Transfer" based on pedagogical skills and the quality and relevance of training.

Figure 2 – Correlation matrix for the variables studied (N=337)

Correlação	CP	PF	CF	TF
Competência Pedagógica (CP)	1	0.665**	0.659**	0.881**
Relevância da formação (PF)		1	0.681**	0.874**
Qualidade da formação (CF)			1	0.891**
Transferência da formação (TF)				1

Source: Prepared by the authors.

Figure 3 shows the relationship of the variables of interest in relation to the sociodemographic factors examined in the study. The results show a relationship between the quality of training and social mobility, along with the relationship between gender and

pedagogical competence. Master's affiliation and transfer are not related to any sociodemographic factors.

Figure 3 – Correlation matrix of training transfer and other study variables based on sociodemographic variables

Correlação	Gênero	Grupos etários	Mobilidade social
Qualidade Formação	0.031	0.025	0.107*
Pertinência	0.035	0.005	0.047
Concorrência Pedagógica	0.130*	0.072	0.017
Transferência	0.075	0.040	0.020

Toda correlação corresponde aos coeficientes de Pearson (r). Mobilidade social (0=não, 1 = SIM). ** A correlação é significativa no nível de 0,01 (duas caudas). * A correlação é significativa no nível de 0,05 (duas caudas).

Source: Prepared by the authors.

Simple moderation analysis

For the simple moderation analyses, only the study variables that previously showed a relationship with the sociodemographic variables (quality of training and pedagogical competence) were selected.

The models consider pedagogical competence as an independent variable and the quality of training as a dependent variable. For the model, a confidence interval based on the belt method (5000 resamples) is considered to determine the significance of the moderating effect.

When analyzing gender, it is possible to observe that the effect of Pedagogical Skills is greater in the case of men. As can be seen in the figure, the moderation analysis shows the interaction between gender and pedagogical competence to be statistically significant ($p < 0.01$). Gender has a moderating effect on the relationship between pedagogical competence and perception of the quality of training. The difference in the level of association between CP and HR reaches 22.01%, comparing men and women. Furthermore, the variation in the R² value when including the interaction component is 1.1%.

Figure 4 – Regression analysis of pedagogical competence (x) and training quality (y), considering the moderating effect of gender

Model Summary							
	R	R-sq	MSE	F	df1	df2	p
	,669	,448	,311	90,160	3,000	333,000	,000
Model							
	coeff	se	t	p	LLCI	ULCI	
constant	4,127	,031	134,611	,000	4,066	4,187	
CP	,692	,042	16,346	,000	,609	,775	
@2.Sexo	-,095	,063	-1,515	,131	-,219	,028	
Int_1	,221	,087	2,529	,012	,049	,393	

Source: Prepared by the authors.

When we analyze the case of social mobility, the moderation analysis carried out shows that the interaction between pedagogical competence and social mobility is not statistically significant in predicting the quality of training. Mobility, in this case, does not have a moderating effect on the relationship between CP and QF.

Figure 5 – Regression analysis of training quality (x) and pedagogical competence (x) and (y), considering the moderating effect of social mobility

OUTCOME VARIABLE:						
CF						
Model Summary						
	R	R-sq	MSE	F	df1	df2
	,672	,452	,309	91,423	3,000	333,000
						p
						,000
Model						
	coeff	se	t	p	LLCI	ULCI
constant	4,138	,030	136,564	,000	4,078	4,197
CP	,677	,042	16,150	,000	,594	,759
MOVILIDA	,180	,062	2,915	,004	,058	,301
Int_1	,117	,087	1,354	,177	-,053	,287

Source: Prepared by the authors.

Discussion

The positive and significant correlation observed between the constructs, as mentioned, supports the theoretical approach on the close relationship between them. Consequently, it can be coherently stated that the "transfer" construct can be established based on pedagogical skills, the quality of the training received and the relevance of the training received, which constitutes an open invitation to strengthen these areas at the macro and micro curricular level. The results also suggest incorporating these variables into quality standards and measuring and considering them in accreditation processes as management indicators.

The results of this study reinforce the importance of pedagogical skills in the ability of program graduates to transfer their knowledge and skills to their students, effectively contributing to the fulfillment of the learning outcomes currently proposed in the programs and, consequently, to completing the graduates' profiles.

This is extremely important in the different quality management processes carried out by certifiers in Chile and internationally. Universities are increasingly under social scrutiny and standards of responsibility and sustainability. Trying to meet graduation profiles implies fulfilling a promise made to students and promoting social change through education.

There is clear evidence in this research that professionals who receive quality and relevant training in their master's program in teaching for higher education will be able to

contribute in a tangible way to the teaching and learning processes with different methodologies and methods, therefore, these findings are consistent with the literature that indicates that pedagogical skills today are essential to improve the quality of training in all areas and, mainly, in higher education. The above reaffirms the indications from specialized literature that improving skills also improves the quality of education. Graduates of the program in question receive training to work as teachers in higher education, with tangible impacts in areas such as health education, vital for the development of a country.

The findings of this study suggest that there is a significant relationship between the quality of the training received in the master's degree and the social mobility of its graduates. The results confirm the importance of quality training in a master's program in university teaching to generate opportunities for social mobility in graduates. Along these lines, it can be said that training and improving skills can facilitate the integration of graduates into better jobs and also develop the skills that allow them mobility, even within the institutions where they work.

In practical terms, these results suggest that educational policies and postgraduate programs should prioritize the quality of training, due to the significant impact on the social mobility of graduates.

The research results suggest that there is a relationship between gender and pedagogical competence in graduates of the master's degree in teaching at UNAB in favor of men, however, it is necessary to delve deeper into other factors that may be related to this result in this particular context. This can be interpreted as a factor generating disparity, which suggests the incorporation of a gender perspective in programs and equality as a transversal value. On the other hand, more research is needed on gaps in the perception of skills between men and women in order to offer a more democratic scenario for development.

Other relevant findings suggest that the relevance and transfer of master's training in university teaching at UNAB are not related to sociodemographic factors such as age, sex, and social mobility. This could be interpreted as encouraging, as factors such as quality of training and transfer would not depend on variables such as age or socioeconomic status, where empirical evidence has shown significant differences. Along these lines, at least in these variables, there would be evidence in this research that these personal factors would not affect the effectiveness of pedagogical training. These results can be classified as relevant for universities that are able to offer quality education equally, regardless of determining factors in many other contexts, such as gender, age and social mobility.

This suggests that UNAB was able to develop a master's program in university teaching that offers quality training to all students, which could be a differentiating factor.

The results obtained also indicate that there is a significant relationship between the quality of training and pedagogical competence in the master's degree in university teaching at UNAB. What stands out, however, is that gender has a moderating effect on the relationship between these two variables. In this regard, it should be noted that the different governments in Chile since the return to democracy have sought to reduce the differences between men and women in terms of equity, equal rights and opportunities. It is society as a whole that must create spaces for professional development with a gender perspective and respect for diversity.

Specifically, the simple moderation analysis shows that men tend to have greater pedagogical competence than women in the master's degree in university teaching, while women have a higher perception of the quality of education than men. This suggests once again that gender is a factor of singular importance that influences the perception of the quality of training and pedagogical competence in this program.

Conclusion

It is important to keep in mind that the results obtained cannot necessarily be generalized to other higher education programs in Chile, as this requires an in-depth investigation of these programs and their characteristics and market orientations. Even so, the data obtained can be valuable input in the creation of new teacher training programs in the country.

Along these lines, it is necessary to highlight that more empirical studies are necessary to deepen the relationships studied, as well as other aspects that currently influence the training of teachers for higher education in Chile, both from a technical and socio-emotional point of view, given their importance for the job market.

Although the variables sex and age are not necessarily determining factors in some relationships today, it is advisable to promote greater inclusion of women in the world of university teaching and in the development of programs, therefore, the gender approach could be useful for consolidating a more comprehensive program. inclusive and relevant to modern society.

As for the development of pedagogical skills, it is one of the essential variables for postgraduate students to be able to transfer learning in their own contexts and realities. In this way, they will be able to provide solutions to problems that plague their own organizations or

environment; on the other hand, they will have the ability to make consensual, socialized and collaborative decisions, in order to advance the formation of better human beings.

As for the limits of this research, the sample is small, but these results will allow us to adjust or make changes to the master's program, according to the needs and priorities they require, with the aim of implementing authentic activities and seeking effective strategies with the teaching staff, academics, and managers through co-construction to achieve learning transfer and continue investigating these programs according to their characteristics and market conditions.

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