

Article

Analyzing Teachers' Perception of the Development of Lifelong Learning as Personal, Social and Learning to Learn Competence in University Students

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Abstract: In recent decades, European education systems and policies have prioritized the need for lifelong learning for all citizens, both within and outside the education system. This research is an observational study using a cross-sectional quantitative design involving 446 participants from Spain, Mexico and Chile. The objective of this study is as follows: To understand how active methodologies impact the development and mastery of Personal, Social and Learning to Learn competence (PSLL) throughout the life of university students. The INNOVAPRENDE questionnaire, previously validated by 17 university experts and comprised of 43 items, was implemented. It is considered essential for students to develop a series of competences, in addition to acquiring knowledge, since lifelong learning is a necessity. It has been shown that less experienced teachers (vs. more experienced teachers), men (vs. women), and teachers with PSLL training during their university studies (vs. teachers with training during their work experience or without experience) have a more negative perception of their students' overall development of PSLL. In conclusion, it should be emphasized that lifelong learning as PSLL is an educational paradigm open to any educational stage of teachers' and learners' lives.

Keywords: lifelong learning; personal; social and learning to learn competence; educational innovation; active methodologies; teacher perception; university students



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1. Introduction

In recent decades, European education systems and policies have prioritized the need for lifelong learning for all citizens, both within and outside the education system [1]. To meet these demands, citizens need to acquire or extend their skills and knowledge. In addition, they need to develop a range of competences (social, emotional, civic, ethical, intercultural, digital, communicative, problem-solving, lifelong learning, etc.), enabling them to become aware of a set of common values of respect, equality and solidarity and, at the same time, to successfully meet the social, personal and professional challenges they face [2].

One of the objectives of the European Education Area involves promoting key competences for lifelong learning [2,3]. Likewise, the United Nations Educational, Scientific and Cultural Organization (UNESCO) aims to develop a lifelong learning educational process in which citizens are guaranteed “the ability to learn to be, to learn to know, to learn to do and to learn to live together” [4] (p. 122869). These implications for education policy not only apply to Europe, but also to the situation in Latin America. Thus, Spain (member of UNESCO since 1953), Chile (member of UNESCO since 1953) and Mexico (member of UNESCO since 1946) conceive the educational process as lifelong. Furthermore, they consider lifelong learning as a practice oriented towards learning, coexistence, essence and action. In other words, a practice oriented towards the deployment of the aforementioned key competences [5].

In other words, UNESCO aims to enable citizens to meet the challenges of the 21st century through their holistic development, access to (and critical understanding of) information, the acquisition of practical life skills and the promotion of a range of values, among other things.

In this sense, this article arises from the University of Castilla-La Mancha (UCLM) 2021–2023 teaching innovation and improvement project: Forging Innovation in the University with active methodologies in the Bachelor's Degree Final Project (TFG) and Master's Final Project (TFM). Teaching staff's perception of the evaluation of teaching-learning processes in the development of the Learning to Learn competence. The general objective of the project is "to establish actions aimed at improving the planning and development of teaching leading to bachelor's and master's degrees, through horizontal and vertical coordination, encouraging the implementation of activities to improve student learning and teaching staff teaching" [6] (p. 202).

The competence Learning to Learn (LTL), established in the Organic Law 8/2013, of 9 December, for the improvement of educational quality (LOMCE), was replaced by the Personal, Social and Learning to Learn competence (PSLL), established in the Organic Law 3/2020, of 29 December, which amends Organic Law 2/2006, of 3 May, on Education (LOMLOE). In 2018, the Council of the European Union proposed such a modification due to the emergence of the following need: "that citizens have the set of competences necessary for their personal development, social inclusion, active citizenship and work" [2] (p. 135). Personal, Social and Learning to Learn competence is defined by the Ministry of Education and Vocational Training in the Spanish Education System Portal as "transversal competence essential for lifelong learning, which originates throughout life and takes place in different formal, non-formal and informal contexts. This competence integrates a referential framework from which the different specific competences of each domain, area or subject are summarized" [7] (p. 235).

On the one hand, LTL requires learners to acquire a series of cognitive, metacognitive, social and emotional learning strategies and to use them appropriately. In other words, LTL includes elements of cognitive (acquisition, encoding and retrieval of information), metacognitive (self-planning, self-monitoring, and self-evaluation) and even socio-emotional (procedures for managing interactions with contextual factors) origin [8,9]. On the other hand, PSLL includes different competences, grouped into three areas: Personal (self-regulation, flexibility and well-being), Social (empathy, communication and collaboration) and Learning to Learn (learning management, growth mindset and critical thinking) [10]. These competences are essential for personal and professional success in a constantly changing world.

It should be recalled that this research arises from the need to understand how active methodologies impact the development and mastery of transversal and specific competences, with a particular focus on Personal, Social and Learning to Learn competence. Active methodologies are a pedagogical approach that is naturally aligned with the principles of lifelong learning (social learning, collaboration, practical application, engagement, motivation, etc.), as they promote the active participation of students, the development of essential skills and adaptability to a constantly changing environment.

The research gap lies in the lack of studies investigating how active methodologies in higher education relate to the development of PSLL in students in the context of lifelong learning. Likewise, there is a notable lack of research that analyses university teachers' perceptions of the teaching-learning processes necessary for students to develop this competence throughout their lives.

Our research seeks to fill this gap by applying the INNOVAPRENDE questionnaire (composed of five dimensions and nine factors). The questionnaire, previously validated by seventeen experts, assesses the skills that university students have to develop PSLL and examines how university teachers perceive the principles of lifelong learning necessary for students to develop the aforementioned competence [6].

In the following section, the methodology of the study is described, and the analyzed findings are presented in detail. In addition, the main observations are summarized, and some limitations of the study are discussed, offering perspectives for future research.

2. Theoretical Framework

The 21st century has marked a significant transformation in the field of education, where Lifelong Learning is essential for the personal and social development of individuals [11,12]. This evolution is not limited only to the acquisition of technical skills for employability purposes, but encompasses three interconnected dimensions: Personal, Social and Learning to Learn dimensions.

Lifelong Learning, in its essence, implies the constant search for knowledge, skills and competencies throughout life. This concept has become essential in a world characterized by accelerated changes, technological advances, and global challenges. Learning is no longer a process limited to formal education but a crucial skill for integral development [2,13].

First, the Personal dimension in the Lifelong Learning framework focuses on self-regulation of learning. Individuals must be able to set educational goals, manage their time effectively, and maintain motivation as they progress along their learning paths. This dimension is not only about achieving academic goals but also about cultivating self-awareness and personal well-being during the process. Secondly, the Social dimension is essential in Lifelong Learning, as it involves the ability to interact, collaborate and communicate effectively with others. This goes beyond the educational context and extends to active participation in society. Empathy, conflict resolution and team collaboration are crucial components of this competency. Third, the Learning to Learn dimension is the cornerstone of Lifelong Learning. Individuals must be able to acquire new knowledge and skills independently and effectively throughout their lives. This includes critical thinking skills, metacognition and a growth mindset. The Learning to Learn Competency empowers individuals to apply their knowledge in diverse contexts and to learn continuously in an ever-changing world [10,14].

This vision of Lifelong Learning as Personal, Social and Learning to Learn competence transcends mere employability. It is about empowering people to become autonomous learners and responsible citizens. The accumulation of technical skills is important, but the emphasis is on the formation of active and reflective citizens who contribute to the well-being of society [7,10].

In this particular case, innovative research has been proposed due to the scarcity of studies that address the relationship between active methodologies and lifelong learning with the development of PSLL in higher education students. This gap in the literature is relevant because it suggests that there is an area of knowledge unexplored in depth that can provide valuable insights and understandings about education in the 21st century.

The study has also found a strong rationale for the selection of the research factors, such as nationality, gender, teaching experience and PSLL experience. In previous research related to the educational domain, it has been observed, on the one hand, that nationality can have an impact on teaching and learning strategies. For example, in a multicultural context, pedagogical approaches may vary according to the needs and values of teachers and students of different nationalities. Adapting to these approaches ensures equal opportunities, contributing to a more inclusive and enriching educational environment [15,16]. On the other hand, it is evident that teaching experience can influence the choice of one or another pedagogical approach in the classroom. Some studies reflect that PSLL training can improve teachers' ability to design learning activities that foster the development of these competencies [17,18]. In addition, teachers with experience in PSLL may be more aware of their importance and be more effective in promoting them.

Ultimately, gender differences in the perception of social, emotional and learning competences could influence the way teaching and learning approaches are addressed. At the same time, the development of PSLL is essential in everyday and working life and can influence a person's ability to solve problems, make effective decisions and collaborate in a

variety of contexts. Therefore, it is essential for teachers to be trained in this competence to be able to promote it successfully. Similarly, teaching experience can impact an individual's ability to develop and apply personal, social and learning competences [15–18].

3. Materials and Methods

This is an observational study using a quantitative cross-sectional design that forms part of a teaching innovation and improvement project. The main reason for carrying out an observational study is that it allows us to analyze and understand the perceptions and behaviors of the participants in their natural environment and without external manipulation.

It is an original and innovative proposal that aims to find out the teachers' perceptions of the evaluation of the teaching-learning processes in the development of Personal, Social and Learning to Learn competence. The choice of this methodological approach allows us to more realistically capture the attitudes and beliefs of teachers and how they relate to lifelong learning as PSLL.

This article will analyze the dimension D1 = Teacher perception of the overall development of the PSLL by students.

3.1. Participants

In this study, 446 individuals from Spain, Mexico and Chile participated. The selection was made by convenience based on availability and accessibility, considering those individuals who agreed to undergo research. The representation of participants from Mexico and Chile was lower compared to Spain. This is largely due to the practical limitations associated with the availability and accessibility of individuals willing to participate in our research.

The participants belonged to the educational sector (regardless of their university of origin), and participation was anonymous and voluntary. Specifically, 260 women (58.29%) and 186 men (41.70%) participated. The age of the members was mainly between 36 and 45 years old. The members' years of teaching experience were mainly between 16 and 25 years. The degrees that participated in the responses were Bachelor's, Master's and Doctorate degrees related to the education sector. The distribution of the participants is defined in the section on the results of the research.

3.2. Variables

The final INNOVAPRENDE questionnaire [6] was made up of 44 items: 22 items corresponding to dimension D1 = Teacher perception of the global development of PSLL by students, 6 items corresponding to dimension D2 = Initiate learning, 5 items corresponding to dimension D3 = Manage time, 5 items corresponding to dimension D4 = Manage information and 5 items corresponding to dimension D5 = Manage self-regulated learning. Item 44 is not integrated into any of the dimensions as it asks the respondent to rank the 4 skills according to the level of student readiness (ability to initiate learning, ability to manage time, ability to manage information and ability to manage self-regulated learning).

The response option for each item was a Likert scale from 1 to 5, indicating the degree of agreement of the participant with the corresponding question; thus, there were 43 ordinal variables for each of the items in the questionnaire.

The dependent variable S1–S22t, corresponding to D1 = Teacher perception of the global development of PSLL by students, was constructed by summing the individual ordinal scores for each of the participants and dividing them by 22 to typify. The dependent variable S23–S28t, corresponding to D2 = Initiate learning, was constructed by summing the individual ordinal scores for each of the participants and dividing them by 6 to typify. The dependent variables S29–S33t, S34–S38t and S39–S43t, corresponding to D3 = Manage time, D4 = Manage information and D5 = Manage self-regulated learning, were constructed by summing the individual ordinal scores for each of the participants and dividing by 5 to typify. The dependent variable S1–S43t was constructed by adding the individual ordinal scores for each of the participants and dividing them by 43 to typify it. In this way, we had

a quantitative dependent variable for each dimension (in this case, S1–S22t) and a total quantitative dependent variable S1–S43t that represented the degree of agreement of each participant with the 43 items of the questionnaire, which would allow us to carry out the inferential analysis for each of the independent variables or factors of the research.

1. Nationality: independent polytomous variable with 3 options C = Chilean, E = Spanish, M = Mexican.
2. Age: independent polytomous variable with 5 options E1 = Under 25, E2 = Between 26 and 35, E3 = Between 36 and 45, E4 = Between 46 and 55, E5 = Over 56.
3. Sex: independent dichotomous variable with 2 options H = Male, M = Female.
4. Qualification: independent polytomous variable with 4 options D = Doctorate or equivalent, G = Graduate or equivalent, M = Master or equivalent, O = Other.
5. Teaching experience: independent polytomous variable with 4 options D1 = 0–5 years, D2 = 6–15 years, D3 = 16–25 years, D4 = Over 26 years old.
6. Employment status: independent polytomous variable with 3 options I = Indefinite contract, T = Temporary contract, O = Other.
7. Position held in the university center: independent polytomous variable with 5 options D = Director, O = Other, P = University Professor, C = Secretary, S = Subdirector.
8. Training in active methodologies: independent polytomous variable with 4 options N = No, L = Yes. During my Work Experience, U = Yes. During my university studies, O = Yes. Other.
9. Training in PSLL: independent polytomous variable with 4 options N = No, L = Yes. During my Work Experience, U = Yes. During my University Studies, O = Yes. Other.

3.3. Instrument

The INNOVAPRENDE questionnaire was used, developed specifically for this research, focused on making the importance of educational innovation visible and reflecting on the teachers' perception of the development of Personal, Social and Learning to Learn competence by university students as a result of following the principles of lifelong learning: social learning, collaboration, practical application, engagement, motivation, etc. [6].

The questionnaire was subjected to a judgment of 17 experts, which allowed us to calculate the IVC Content Validity Index = of Lawshe = which suggested an IVC = 0.51 when using 14 experts, so there was no need to remove any items from the initial questionnaire [19]. Even so, we considered it appropriate to consider the most relevant impressions of the experts at a qualitative level, and we modified some words in the items by other synonymous words.

The questionnaire was also validated through exploratory factor analysis. The result of the Kaiser–Meyer–Olkin (KMO) test was 0.917, revealing the sample adequacy for conducting the factor analysis. The Bartlett's Sphericity test result yielded a significance level of 0.000, implying adequacy for factor analysis. The component matrix did not come out completely "clean", with some items correlating in two or more factors, and the factor structure obtained did not coincide with the preliminary dimensional structure before (42 items) and after the expert judgment (44 items) [20,21]. After validation by expert judgment, the questionnaire consisted of 44 items, of which the 43 items containing a Likert scale were included in the factor analysis.

The reliability of the questionnaire, in the sense of stability of the results, was calculated through the Cronbach's Alpha α coefficient. Specifically, the index obtained for the first dimension was 0.919. Both the index for the first dimension and the total (0.995) are well above the 0.70 limit for acceptable consistency [22]. The high consistency of the instrument is evident. Table 1 shows the structure of the instrument.

3.4. Procedure

The questionnaire used in this research was developed between March and May 2022. After validation, it was applied between 17 June and 20 July 2022. The questionnaire was administered remotely through the following survey management software: Google

Forms 0.8. There was no time limit, although respondents usually took between 15 and 20 min. The anonymity and confidentiality of participants' data was always guaranteed.

Table 1. Structure of the instrument.

Dimension	α	IVC
D1 = P1–P22 = Teacher's perception of students' overall development of PSLL	0.919	0.97
D2 = P23–P28 = Initiate learning	0.818	0.93
D3 = P29–P33 = Time management	0.772	0.93
D4 = P34–P38 = Manage information	0.810	0.99
D5 = P39–P43 = Manage self-regulated learning	0.811	0.97
<i>Average</i>	0.826	0.96

Source: own elaboration.

Given the non-compliance with the assumptions of parametric methods, given that the sampling distribution did not conform to the normal distribution, it was decided to use statistical techniques of null models by means of resampling techniques through the Monte Carlo Simulation Method using the bootstrap procedure [23].

To analyze whether statistically significant differences existed, an ANOVA test for the independent samples was performed for each of the independent variables or research factors. The values of the F statistic, significance level p and effect size measured by eta squared were obtained using the Multivariate General Linear Model analysis of the SPSS statistical program in its version 26. The post-hoc tests were carried out assuming non-equal variances using Tamhane's T2, Dunnett's T3, Games–Howell and Dunnett's C statistics, all yielding similar results that served to determine the direction column in the ANOVA tables corresponding to the seven factors analyzed.

4. Results

The results are specified in accordance with the research objectives. Table 2 shows the descriptive statistics obtained for the 22 items corresponding to dimension D1 = Teacher perception of the global development of PSLL by students.

The table shows that the mean score of the first dimension was as follows: D1 = Teacher perception of students' overall development of PSLL ($M = 3.31$, $SD = 0.57$). In this paper, we focus more broadly on dimension D1 = Teacher perception of students' overall development of PSLL; therefore, only the descriptives of the items corresponding to this dimension are given.

The correlational analysis of the questionnaire is included below and only the results that affect dimension D1 are analyzed, with the independent variables: Nationality, Gender, Teaching Experience and Training in the PSLL.

4.1. Correlational Analysis

Given the non-compliance with the premises of the parametric methods, in Table 3 we include Pearson's parametric bivariate correlation matrix by factors and the correlation indices, using the bootstrap procedure, in which we can observe that the factors Nationality, Sex, Employment status, Position held at the university do not correlate significantly with any of the other factors in the study, while we observe a significant positive correlation between the factors Age and Teaching experience as well as Training in active methodologies and Training in PSLL. We can also observe a significant negative correlation between the factors Qualification and Age, as well as between the factors Qualification and Teaching experience. All the correlations, presenting in absolute value a correlation coefficient between 0.10 and 0.30, can be considered to have a small effect size, except the correlation between the factors Teaching experience and Age, which, presenting a correlation coefficient greater than 0.50, can be considered to have a large effect size and the correlations between the factors Training in active methodologies and Training in PSLL, Qualification and Age and Qualification and Teaching experience, which, presenting a correlation coefficient greater than 0.30, can be considered to have a moderate effect size.

Table 2. Descriptions of the items after the application of the questionnaire.

Dimension	Item	Media	Lower 95%	Upper 95%	SD	Lower 95%	Upper 95%
D1 = Teacher's perception of students' overall development of PSLL	P1 = They are aware of their needs for personal self-fulfilment.	3.321	3.247	3.400	0.834	0.775	0.891
	P2 = Can identify the social and personal opportunities available in the learning process.	3.445	3.355	3.537	1.020	0.950	1.089
	P3 = They are able to define objectives and prioritise them.	3.238	3.160	3.317	0.792	0.747	0.837
	P4 = They develop the ability to adopt different roles (social, action...).	3.622	3.528	3.712	0.947	0.872	1.018
	P5 = They are able to successfully overcome the different obstacles they face.	3.243	3.160	3.328	0.880	0.823	0.935
	P6 = They obtain new learning skills in a meaningful way.	3.544	3.470	3.616	0.809	0.725	0.877
	P7 = They understand how they develop their ability to learn.	3.425	3.342	3.515	0.933	0.863	0.995
	P8 = They show an awareness of their learning process.	3.247	3.160	3.333	0.936	0.878	0.989
	P9 = They regulate their learning process.	3.175	3.094	3.252	0.857	0.795	0.916
	P10 = Discriminate between what is important and what is secondary	3.088	3.004	3.178	0.972	0.912	1.024
	P11 = They build their knowledge from previous experiences and learning.	3.515	3.434	3.600	0.889	0.810	0.959
	P12 = They memorise information to construct knowledge.	3.115	3.025	3.207	0.981	0.919	1.036
	P13 = They learn knowledge in a meaningful way.	3.391	3.308	3.474	0.930	0.869	0.986
	P14 = Solve problems they have never had to face before.	3.317	3.238	3.398	0.852	0.807	0.896
	P15 = They organise their time efficiently.	2.984	2.903	3.067	0.892	0.838	0.943
	P16 = They use Information and Communication Technologies (ICT) appropriately.	3.517	3.422	3.611	1.037	0.971	1.097
	P17 = They optimise their performance in learning and/or assessment tasks.	3.229	3.139	3.317	0.955	0.903	1.003
	P18 = They are aware of their learning processes and evaluate them in order to initiate improvement processes	3.065	2.973	3.162	1.023	0.964	1.072
	P19 = They enhance intrinsic motivation, demonstrating self-confidence.	3.130	3.052	3.218	0.921	0.872	0.966
	P20 = They work on the ability to accept and learn from mistakes.	3.398	3.299	3.494	1.036	0.979	1.091
	P21 = They are resilient in their learning process.	3.135	3.054	3.222	0.940	0.891	0.988
	P22 = They enjoy understanding something they did not previously understand.	3.697	3.604	3.793	1.061	0.987	1.127
	S1–S22	3.311	3.260	3.366	0.568	0.516	0.618

Source: own elaboration.

Table 3. Pearson's bivariate correlation matrix for questionnaire factors.

		Nationa-lity_N	Age_N	Sex_N	Title_N	Teaching Experien-ce_N	Employment Status_N	Position in the Centre_N	Training in Active Methodologies_N	Training at PSLL_N
Nationa-lity_N	Correlation Index	1	−0.007	0.025	0.056	−0.011	0.114	−0.007	−0.034	−0.061
Age_N	Correlation Index	−0.007	1	−0.003	−0.431	0.636	−0.089	0.115	−0.211	−0.168
Sex_N	Correlation Index	0.025	−0.003	1	0.147	−0.032	0.118	−0.032	−0.098	0.054
Title_N	Correlation Index	0.056	−0.431	0.147	1	−0.373	0.233	−0.276	0.168	0.084
Teaching experien-ce_N	Correlation Index	−0.011	0.636	−0.032	−0.373	1	−0.14	0.166	−0.278	−0.159
Employment status_N	Correlation Index	0.114	−0.089	0.118	0.233	−0.14	1	−0.214	0.11	0.005
Position in the centre_N	Correlation Index	−0.007	0.115	−0.032	−0.276	0.166	−0.214	1	−0.204	−0.189
Training in active methodologies_N	Correlation Index	−0.034	−0.211	−0.098	0.168	−0.278	0.11	−0.204	1	0.311
Training at PSLL_N	Correlation Index	−0.061	−0.168	0.054	0.084	−0.159	0.005	−0.189	0.311	1

The correlation is significant at the 0.01 level (bilateral). $|C| > 0.6$ $|C| > 0.3$. Source: own elaboration.

Furthermore, in Table 4, we can see that the dimensions with a correlation coefficient greater than 0.70 are D1 = S1–S22 = Teacher’s perception of the overall development of PSLL by students, D2 = S23–S28 = Initiate learning, and D4 = S34–S38 = Manage information. We observed a significant positive correlation of the dimension D1 = S1–S22 = Teacher perception of students’ overall development of PSLL with the dimension D2 = S23–S28 = Initiate learning and with the dimension D4 = S34–S38 = Manage information. The dimensions D3 = S29–S33 = Manage time and D5 = S39–S43 = Manage self-regulated learning do not correlate significantly with any other dimension. All dimensions correlate with the dependent variable S1–S43 which was constructed by adding the individual ordinal scores for each participant and dividing by 43 to typify it and representing the degree of agreement of each participant with the 43 items of the questionnaire.

Table 4. Pearson’s bivariate correlation matrix by dimensions and questionnaire total.

		S1–S22	S23–S28	S29–S33	S34–S38	S39–S43	S1–S43
S1–S22	Correlation index	1	0.746	0.633	0.71	0.691	0.954
S23–S28	Correlation index	0.746	1	0.569	0.613	0.684	0.844
S29–S33	Correlation index	0.633	0.569	1	0.646	0.526	0.751
S34–S38	Correlation index	0.71	0.613	0.646	1	0.689	0.825
S39–S43	Correlation index	0.691	0.684	0.526	0.689	1	0.811
S1–S43	Correlation index	0.954	0.844	0.751	0.825	0.811	1

The correlation is significant at the 0.01 level (bilateral). $|C| > 0.7$. Source: own elaboration.

4.2. Analysis of Incidence by Nationality in D1

The total number of respondents by nationality of the participating is unevenly distributed: 6 Chileans, 436 Spanish and 4 Mexicans. Table 5 shows the distribution of the participants for these 4 nationalities in D1.

Table 5. Nationality count of the participants.

Nationality	C = Chilean					E = Spanish					M = Mexican				
Item	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
P1	1	0	3	2	0	16	45	165	200	10	0	0	3	1	0
P2	0	1	1	4	0	31	38	115	209	43	0	1	1	2	0
P3	0	1	2	3	0	2	77	185	158	14	0	1	2	1	0
P4	1	0	2	3	0	18	44	60	269	45	0	2	1	1	0
P5	1	1	1	3	0	16	69	150	192	9	0	1	2	1	0
P6	0	0	2	3	1	18	16	133	251	18	0	1	0	3	0
P7	0	0	1	5	0	17	55	123	209	32	0	1	1	2	0
P8	0	1	1	4	0	17	77	147	173	22	0	1	1	1	1
P9	1	0	3	2	0	20	44	231	117	24	0	1	3	0	0
P10	0	0	2	3	1	24	100	148	147	17	0	1	1	1	1
P11	0	0	3	3	0	20	33	111	245	27	0	1	0	3	0
P12	0	1	2	3	0	27	82	165	137	25	0	2	2	0	0
P13	0	1	2	2	1	9	60	161	160	46	1	1	1	1	0
P14	0	3	1	2	0	4	83	129	206	14	0	1	2	1	0
P15	0	2	3	0	1	16	112	184	109	15	0	2	2	0	0
P16	2	1	0	3	0	19	48	122	177	70	0	1	0	3	0
P17	1	2	0	2	1	18	82	136	180	20	0	1	1	2	0
P18	1	2	2	1	0	34	96	126	164	16	0	1	0	3	0
P19	0	2	2	2	0	16	105	130	177	8	0	0	1	3	0
P20	1	1	2	2	0	17	79	99	192	49	0	1	2	0	1
P21	1	0	1	3	1	16	100	144	160	16	0	2	2	0	0
P22	2	1	1	2	0	19	38	93	186	100	0	0	1	2	1

Source: own elaboration.

As can be seen in Table 5, the distribution of participants by Nationality is unequal. The percentage of E = Spain (97.76%) is two orders of magnitude higher than the percentage of the other nationalities analyzed, C = Chile (1.35%) and M = Mexico (0.9%), which are of the same order of magnitude. In order to analyze whether there are differences according to nationality in the questionnaire, an ANOVA for independent samples was performed. The results are shown in Table 6.

Table 6. ANOVA for independent samples by Nationality.

Item	C = Chilean				E = Spanish				M = Mexican				F	p	Stage 2	Direction
	M	SD	L	U	M	SD	L	U	M	SD	L	U				
P1	3.00	1.10	1.85	4.15	3.33	0.83	3.25	3.41	3.25	0.50	2.45	4.05	0.472	0.624	0.002	
P2	3.50	0.84	2.62	4.38	3.45	1.02	3.35	3.54	3.25	0.96	1.73	4.77	0.082	0.921	0.000	
P3	3.33	0.82	2.48	4.19	3.24	0.79	3.17	3.32	3.00	0.82	1.70	4.30	0.225	0.799	0.001	
P4	3.17	1.17	1.94	4.39	3.64	0.94	3.55	3.73	2.75	0.96	1.23	4.27	2.472	0.086	0.011	
P5	3.00	1.26	1.67	4.33	3.25	0.88	3.17	3.33	3.00	0.82	1.70	4.30	0.394	0.675	0.002	
P6	3.83	0.75	3.04	4.62	3.54	0.81	3.46	3.62	3.50	1.00	1.91	5.09	0.397	0.673	0.002	
P7	3.83	0.41	3.40	4.26	3.42	0.94	3.33	3.51	3.25	0.96	1.73	4.77	0.646	0.524	0.003	
P8	3.50	0.84	2.62	4.38	3.24	0.93	3.16	3.33	3.50	1.29	1.45	5.55	0.368	0.693	0.002	
P9	3.00	1.10	1.85	4.15	3.19	0.86	3.10	3.27	2.75	0.50	1.95	3.55	0.639	0.528	0.003	
P10	3.83	0.75	3.04	4.62	3.08	0.97	2.98	3.17	3.50	1.29	1.45	5.55	2.169	0.116	0.010	
P11	3.50	0.55	2.93	4.07	3.52	0.90	3.43	3.60	3.50	1.00	1.91	5.09	0.002	0.998	0.000	
P12	3.33	0.82	2.48	4.19	3.12	0.98	3.02	3.21	2.50	0.58	1.58	3.42	0.938	0.392	0.004	
P13	3.50	1.05	2.40	4.60	3.40	0.92	3.31	3.49	2.50	1.29	0.45	4.55	1.903	0.150	0.009	
P14	2.83	0.98	1.80	3.87	3.33	0.85	3.25	3.41	3.00	0.82	1.70	4.30	1.282	0.279	0.006	
P15	3.00	1.10	1.85	4.15	2.99	0.89	2.90	3.07	2.50	0.58	1.58	3.42	0.596	0.551	0.003	
P16	2.67	1.51	1.09	4.25	3.53	1.03	3.43	3.63	3.50	1.00	1.91	5.09	2.066	0.128	0.009	
P17	3.00	1.55	1.37	4.63	3.23	0.95	3.14	3.32	3.25	0.96	1.73	4.77	0.178	0.837	0.001	
P18	2.50	1.05	1.40	3.60	3.07	1.03	2.98	3.17	3.50	1.00	1.91	5.09	1.280	0.279	0.006	
P19	3.00	0.89	2.06	3.94	3.13	0.92	3.04	3.22	3.75	0.50	2.95	4.55	0.966	0.381	0.004	
P20	2.83	1.17	1.61	4.06	3.41	1.03	3.31	3.50	3.25	1.26	1.25	5.25	0.946	0.389	0.004	
P21	3.50	1.38	2.05	4.95	3.14	0.93	3.05	3.23	2.50	0.58	1.58	3.42	1.370	0.255	0.006	
P22	2.50	1.38	1.05	3.95	3.71	1.05	3.61	3.81	4.00	0.82	2.70	5.30	4.082	0.018	0.018	C < E.M
S1–S22	3.19	0.58	2.59	3.79	3.32	0.57	3.26	3.37	3.16	0.62	2.17	4.15	0.292	0.747	0.001	
S1–S43	3.13	0.58	2.51	3.74	3.29	0.56	3.24	3.35	3.19	0.69	2.08	4.29	0.324	0.723	0.001	

Source: own elaboration.

Statistically significant differences only appear in item P22= They enjoy understanding something they previously did not understand, although the effect size measured in the ANOVA test by eta squared being less than 0.06 has to be considered weak.

The post-hoc tests show that in item P22 the mean of nationality C = Chilean is below that of nationality E = Spanish; therefore, it could be inferred that citizens from Chile, as opposed to citizens from Spain, in general, have a more negative perception of the fact that their students enjoy understanding something they did not previously understand. In other words, Chilean nationals have a more negative perception of their pupils' overall development of PSLL than Spanish nationals.

4.3. Analysis of Incidence by Gender in D1

Table 7 shows the number of respondents by gender.

Table 7. Number of Respondents by Gender.

Sex	N	%
H = Male	186	41.7
M = Female	260	58.3

Source: own elaboration.

Table 8 shows the distribution of respondents by sex: H = Male and M = Female.

Table 8. Sex count of participants.

Sex	H = Male					M = Female				
Item	1	2	3	4	5	1	2	3	4	5
P1	7	22	93	60	4	10	23	78	143	6
P2	15	26	50	81	14	16	14	67	134	29
P3	1	38	67	75	5	1	41	122	87	9
P4	11	31	22	102	20	8	15	41	171	25
P5	9	34	61	77	5	8	37	92	119	4
P6	7	7	68	91	13	11	10	67	166	6
P7	10	29	56	81	10	7	27	69	135	22
P8	11	43	67	59	6	6	36	82	119	17
P9	14	14	117	33	8	7	31	120	86	16
P10	12	44	51	70	9	12	57	100	81	10
P11	11	15	57	92	11	9	19	57	159	16
P12	16	32	78	49	11	11	53	91	91	14
P13	5	27	73	61	20	5	35	91	102	27
P14	2	41	57	76	10	2	46	75	133	4
P15	6	55	70	47	8	10	61	119	62	8
P16	14	14	62	66	30	7	36	60	117	40
P17	10	33	63	72	8	9	52	74	112	13
P18	13	48	55	66	4	22	51	73	102	12
P19	9	50	53	71	3	7	57	80	111	5
P20	11	46	38	73	18	7	35	65	121	32
P21	11	52	57	62	4	6	50	90	101	13
P22	13	20	43	72	38	8	19	52	118	63

Source: own elaboration.

As can be seen in Table 8, the gender distribution of the participants is similar; the percentage of H = Male (41.7%) is of the same order of magnitude as the percentage of M = Female (58.3%). To analyze whether there are differences according to gender in the questionnaire, an ANOVA for independent samples was performed. The results are shown in Table 9.

Table 9. ANOVA for independent samples by Sex.

	H = Male				M = Female				F	p	Stage 2	Direction
	M	SD	L	U	M	SD	L	U				
P1	3.17	0.80	3.17	3.18	3.43	0.84	3.43	3.43	10.662	0.001	0.023	H < M
P2	3.28	1.06	3.28	3.29	3.56	0.97	3.56	3.57	8.114	0.005	0.018	H < M
P3	3.24	0.82	3.24	3.25	3.24	0.77	3.24	3.24	0.002	0.964	0.000	
P4	3.48	1.07	3.47	3.48	3.73	0.83	3.73	3.73	7.785	0.005	0.017	H < M
P5	3.19	0.93	3.18	3.19	3.28	0.84	3.28	3.29	1.304	0.254	0.003	
P6	3.52	0.83	3.51	3.52	3.56	0.79	3.56	3.56	0.342	0.559	0.001	
P7	3.28	0.97	3.28	3.28	3.53	0.89	3.53	3.53	7.990	0.005	0.018	H < M
P8	3.03	0.96	3.03	3.04	3.40	0.89	3.40	3.41	17.755	0.000	0.038	H < M
P9	3.04	0.85	3.03	3.04	3.28	0.85	3.28	3.28	8.804	0.003	0.019	H < M
P10	3.11	1.03	3.10	3.11	3.08	0.93	3.07	3.08	0.107	0.743	0.000	
P11	3.41	0.94	3.41	3.42	3.59	0.85	3.59	3.60	4.375	0.037	0.010	H < M
P12	3.04	1.01	3.03	3.04	3.17	0.95	3.17	3.17	1.960	0.162	0.004	
P13	3.34	0.94	3.34	3.35	3.43	0.91	3.42	3.43	0.861	0.354	0.002	
P14	3.27	0.90	3.27	3.28	3.35	0.81	3.35	3.35	0.859	0.355	0.002	
P15	2.98	0.92	2.97	2.98	2.99	0.87	2.99	2.99	0.014	0.907	0.000	
P16	3.45	1.08	3.45	3.46	3.57	1.00	3.56	3.57	1.309	0.253	0.003	
P17	3.19	0.96	3.18	3.19	3.26	0.95	3.26	3.27	0.640	0.424	0.001	
P18	3.00	0.99	3.00	3.00	3.12	1.05	3.12	3.12	1.465	0.227	0.003	
P19	3.05	0.95	3.04	3.05	3.19	0.89	3.19	3.20	2.660	0.104	0.006	
P20	3.22	1.10	3.22	3.23	3.52	0.96	3.52	3.53	9.446	0.002	0.021	H < M
P21	2.98	0.97	2.97	2.98	3.25	0.90	3.25	3.25	9.226	0.003	0.020	H < M
P22	3.55	1.14	3.54	3.55	3.80	0.99	3.80	3.81	6.372	0.012	0.014	H < M
S1–S22	3.22	0.63	3.22	3.22	3.38	0.51	3.38	3.38	8.740	0.003	0.019	H < M
S1–S43	3.17	0.61	3.17	3.18	3.37	0.51	3.37	3.38	13.892	0.000	0.030	H < M

Source: own elaboration.

The post-hoc tests show that the mean for males is below that of females in all dimensions and items of the questionnaire, so it could be inferred that males, in general, have a more negative perception of the overall development of PSLL by their students compared to females.

Statistically significant differences appear in the overall average of the questionnaire S1–S43; and in items P1, P2, P4, P7, P8, P9, P11, P20, P21 and P22, although as the effect size measured in the ANOVA test by eta squared is less than 0.06, it has to be considered as weak in the overall average of the questionnaire S1–S43.

4.4. Analysis of Incidence by Teaching Experience in D1

Table 10 shows the number of respondents by teaching experience.

Table 10. Number of Respondents by Teaching experience.

Teaching Experience	N	%
D1 = 0–5 years	59	13.23
D2 = 6–15 years	79	17.71
D3 = 16–25 years	255	57.17
D4 = Over 26 years old	53	11.88

Source: own elaboration.

Table 11 shows the distribution of the participants by teaching experience: D1 = 0–5 years, D2 = 6–15 years, D3 = 16–25 years, and D4 = Over 26 years old.

Table 11. Count by teaching experience of the participants.

Experience		D1 = 0–5 Years					D2 = 6–15 Years					D3 = 16–25 Years					D4 = Over 26 Years				
Dim	Item	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
D1	P1	7	16	19	17	0	1	9	30	35	4	7	18	94	131	5	2	2	28	20	1
	P2	17	3	18	18	3	4	12	13	44	6	7	19	74	126	29	3	6	12	27	5
	P3	0	8	34	15	2	1	16	26	32	4	0	45	106	99	5	1	10	23	16	3
	P4	9	3	3	37	7	1	12	14	44	8	7	24	37	161	26	2	7	9	31	4
	P5	7	7	23	22	0	3	13	28	33	2	7	41	82	119	6	0	10	20	22	1
	P6	8	1	11	38	1	1	5	27	42	4	7	7	80	149	12	2	4	17	28	2
	P7	8	5	15	26	5	1	6	30	34	8	5	33	64	138	15	3	12	16	18	4
	P8	9	5	15	25	5	1	17	27	30	4	5	39	92	106	13	2	18	15	17	1
	P9	11	1	26	17	4	1	9	45	19	5	6	28	136	71	14	3	7	30	12	1
	P10	10	12	27	6	4	3	19	19	32	6	8	59	84	96	8	3	11	21	17	1
	P11	9	4	12	31	3	0	7	33	35	4	9	20	51	158	17	2	3	18	27	3
	P12	10	15	18	16	0	5	10	32	29	3	10	44	104	77	20	2	16	15	18	2
	P13	2	13	13	16	15	1	10	25	35	8	7	34	98	96	20	0	5	28	16	4
	P14	0	13	21	25	0	2	19	17	40	1	1	40	75	127	12	1	15	19	17	1
	P15	2	14	35	6	2	1	20	38	15	5	10	58	100	79	8	3	24	16	9	1
	P16	12	0	12	27	8	2	10	19	37	11	5	32	75	101	42	2	8	16	18	9
	P17	9	8	14	25	3	1	15	25	35	3	8	50	79	106	12	1	12	19	18	3
	P18	11	10	16	19	3	6	21	24	25	3	17	51	71	108	8	1	17	17	16	2
	P19	9	10	19	21	0	1	32	12	32	2	5	57	77	110	6	1	8	25	19	0
	P20	9	10	12	20	8	2	22	5	44	6	5	40	71	112	27	2	9	15	18	9
	P21	8	7	15	24	5	2	28	10	35	4	6	56	99	86	8	1	11	23	18	0
	P22	12	2	20	13	12	1	10	25	31	12	7	23	35	130	60	1	4	15	16	17

Source: own elaboration.

As can be seen in Table 11, the distribution of the participants by teaching experience is similar; the percentages of teaching experience groups D1 = 0–5 years (13.23%), D2 = 6–15 years (17.71%), D3 = 16–25 years (57.17%) and D4 = Over 26 years old (11.88%) are of the same order of magnitude.

In order to analyze whether there are differences according to teaching experience in the questionnaire, an ANOVA for independent samples was performed. The results are shown in Table 12.

The post-hoc tests show that the mean of the teaching experience group D1 = 0–5 years is below the teaching experience group D3 = 16–25 years in the dimension D1 = S1–S22 = Teachers' perception of pupils' overall development of PSLL; therefore, it could be inferred that teachers with 0–5 years of experience have a more negative perception of their pupils' overall development of PSLL compared to teachers with 16–25 years of experience.

Table 12. ANOVA for independent samples by teaching experience.

	D1 = 0–5 Years				D2 = 6–15 Years				D3 = 16–25 Years				D4 = Over 26 years				F	p	Stage 2	Direction
	M	SD	L	U	M	SD	L	U	M	SD	L	U	M	SD	L	U				
P1	2.780	0.993	2.772	2.788	3.405	0.804	3.399	3.411	3.427	0.768	3.424	3.430	3.302	0.742	3.296	3.308	10.590	0.000	0.067	D1 < D4 < D2 < D3
P2	2.780	1.290	2.769	2.790	3.456	1.004	3.449	3.463	3.592	0.885	3.589	3.596	3.472	1.002	3.463	3.480	10.844	0.000	0.069	D1 < D2 < D4 < D3
P3	3.186	0.700	3.181	3.192	3.278	0.885	3.272	3.285	3.251	0.762	3.248	3.254	3.189	0.870	3.181	3.196	0.241	0.868	0.002	
P4	3.508	1.226	3.499	3.518	3.582	0.909	3.576	3.589	3.686	0.879	3.683	3.690	3.528	0.944	3.520	3.536	0.888	0.447	0.006	
P5	3.017	0.983	3.009	3.025	3.228	0.885	3.222	3.234	3.298	0.862	3.295	3.301	3.264	0.781	3.258	3.271	1.656	0.176	0.011	
P6	3.390	1.058	3.381	3.398	3.544	0.743	3.539	3.549	3.596	0.745	3.593	3.599	3.453	0.837	3.446	3.460	1.295	0.275	0.009	
P7	3.254	1.159	3.245	3.264	3.532	0.824	3.526	3.537	3.490	0.863	3.487	3.494	3.151	1.035	3.142	3.160	2.984	0.031	0.020	D4 = D1 = D3 = D2
P8	3.203	1.190	3.194	3.213	3.241	0.889	3.234	3.247	3.325	0.863	3.322	3.329	2.943	0.940	2.935	2.951	2.529	0.057	0.017	
P9	3.034	1.149	3.025	3.043	3.228	0.779	3.222	3.233	3.231	0.805	3.228	3.234	3.019	0.812	3.012	3.026	1.576	0.194	0.011	
P10	2.695	1.078	2.686	2.704	3.241	1.021	3.233	3.248	3.145	0.915	3.142	3.149	3.038	0.910	3.030	3.045	4.298	0.005	0.028	D4 = D1 < D3 < D2
P11	3.254	1.159	3.245	3.264	3.456	0.726	3.451	3.461	3.604	0.861	3.601	3.607	3.491	0.838	3.483	3.498	2.689	0.046	0.018	D1 < D2 = D4 = D3
P12	2.678	1.049	2.670	2.686	3.190	0.929	3.183	3.196	3.208	0.950	3.204	3.212	3.038	0.971	3.029	3.046	5.076	0.002	0.033	D1 < D2 = D3 = D4
P13	3.492	1.184	3.482	3.501	3.494	0.884	3.488	3.500	3.345	0.902	3.342	3.349	3.358	0.755	3.352	3.365	0.779	0.506	0.005	
P14	3.203	0.776	3.197	3.210	3.241	0.917	3.234	3.247	3.427	0.822	3.424	3.431	3.038	0.868	3.030	3.045	3.969	0.008	0.026	D1 = D2 = D4 < D3
P15	2.864	0.769	2.858	2.871	3.038	0.863	3.032	3.044	3.067	0.903	3.063	3.070	2.642	0.892	2.634	2.649	3.871	0.009	0.026	D1 = D2 = D4 < D3
P16	3.322	1.308	3.311	3.333	3.570	0.964	3.563	3.576	3.561	0.972	3.557	3.565	3.453	1.056	3.444	3.462	0.984	0.400	0.007	
P17	3.085	1.169	3.075	3.094	3.304	0.862	3.298	3.310	3.251	0.929	3.247	3.255	3.189	0.912	3.181	3.196	0.686	0.561	0.005	
P18	2.881	1.194	2.872	2.891	2.975	1.019	2.968	2.982	3.153	0.996	3.149	3.157	3.019	0.921	3.011	3.027	1.495	0.215	0.010	
P19	2.881	1.059	2.873	2.890	3.025	0.981	3.018	3.032	3.216	0.884	3.212	3.219	3.170	0.746	3.163	3.176	2.570	0.054	0.017	
P20	3.136	1.282	3.125	3.146	3.380	1.047	3.372	3.387	3.455	0.944	3.451	3.459	3.434	1.073	3.425	3.443	1.556	0.199	0.010	
P21	3.186	1.171	3.177	3.196	3.139	1.040	3.132	3.146	3.133	0.871	3.130	3.137	3.094	0.783	3.088	3.101	0.092	0.965	0.001	
P22	3.186	1.359	3.175	3.197	3.544	0.939	3.538	3.551	3.835	0.976	3.832	3.839	3.830	1.023	3.821	3.839	7.115	0.000	0.046	D2 = D1 < D4 < D3
S1–S22	3.092	0.765	3.086	3.098	3.322	0.570	3.318	3.326	3.377	0.490	3.375	3.379	3.232	0.585	3.227	3.237	4.533	0.004	0.030	D1 < D3 = D4 = D2
S1–S43	3.062	0.744	3.056	3.068	3.313	0.558	3.309	3.317	3.352	0.491	3.350	3.354	3.214	0.585	3.209	3.219	4.750	0.003	0.031	D1 < D3 = D4 = D2

Source: own elaboration.

Statistically significant differences appear in the overall average of the questionnaire S1–S43; and in items P1, P2, P7, P10, P11, P12, P14, P15 and P22, although as the effect size measured in the ANOVA test by eta squared is less than 0.06 has to be considered as weak in the overall average of the questionnaire S1–S43, in all dimensions and in all items except in P1 = They become the aware of their personal self-realization needs and P2 = They know how to identify the social and personal opportunities available in the learning process which, being eta squared higher than 0.06, can be considered as having a medium effect.

4.5. Analysis of Incidence by PSLL Training in D1

Table 13 shows the number of respondents according to PSLL training.

Table 13. Number of respondents by PSLL training.

PSLL Training	N	%
N = No.	51	11.43
L = Yes. During my work experience	350	78.48
U = Yes. During my university studies	41	9.19
O = Yes. Other	4	0.9

Source: own elaboration.

Table 14 shows the distribution of the participants according to training in PSLL: N = No, L = Yes. during my work experience, U = Yes. during my university studies and O = Yes. Other.

Table 14. Count by training in PSLL of the participants.

PSLL Training		N = No.					L = Yes. Work Experience					U = Yes. University Studies					O = Yes. Other				
Dim	Item	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5	1	2	3	4	5
D1	P1	1	4	19	27	0	7	25	140	168	10	8	15	10	8	0	1	1	2	0	0
	P2	3	2	16	25	5	10	36	89	179	36	17	1	12	9	2	1	1	0	2	0
	P3	1	5	19	26	0	1	70	140	126	13	0	4	28	8	1	0	0	2	2	0
	P4	2	2	9	34	4	6	44	53	212	35	9	0	1	26	5	2	0	0	1	1
	P5	3	5	17	24	2	7	62	127	147	7	6	3	9	23	0	1	1	0	2	0
	P6	3	1	16	29	2	8	16	118	193	15	7	0	0	33	1	0	0	1	2	1
	P7	3	5	12	28	3	6	50	103	164	27	7	1	9	22	2	1	0	1	2	0
	P8	3	10	18	20	0	4	68	125	132	21	9	1	4	25	2	1	0	2	1	0
	P9	3	4	25	16	3	4	41	198	88	19	12	0	12	15	2	2	0	2	0	0
	P10	3	5	20	20	3	9	87	116	123	15	11	9	13	7	1	1	0	2	1	0
	P11	3	2	12	30	4	6	31	90	201	22	10	1	11	18	1	1	0	1	2	0
	P12	4	11	15	18	3	11	60	146	111	22	11	14	6	10	0	1	0	2	1	0
	P13	2	7	16	24	2	8	38	143	128	33	0	15	4	10	12	0	2	1	1	0
	P14	1	6	14	30	0	3	67	102	165	13	0	11	16	14	0	0	3	0	0	1
	P15	1	14	19	14	3	15	90	145	88	12	0	10	24	6	1	0	2	1	1	0
	P16	4	4	21	18	4	6	44	96	148	56	10	2	4	16	9	1	0	1	1	1
	P17	3	8	20	19	1	6	72	112	143	17	9	5	4	20	3	1	0	1	2	0
	P18	4	13	9	23	2	20	84	103	130	13	10	1	15	14	1	1	1	1	1	0
	P19	3	12	9	26	1	5	88	107	143	7	8	6	14	13	0	0	1	3	0	0
	P20	5	5	14	20	7	4	66	80	162	38	8	8	8	12	5	1	2	1	0	0
	P21	3	10	11	25	2	5	89	126	118	12	7	3	9	19	3	2	0	1	1	0
	P22	3	3	11	25	9	7	34	66	156	87	10	1	18	8	4	1	1	0	1	1

Source: own elaboration.

As can be seen in Table 14, the distribution of the participants by training in PSLL is unequal; the percentages of group L = Yes. During my work experience (78.48%) is of the same order of magnitude as the percentage of the group N = No (11.43%), one order of magnitude higher than group U = Yes. During my university studies (9.19%) and two orders of magnitude higher than group O = Yes. Other (0.9%).

To analyze whether there are differences according to PSLL training in the questionnaire, an ANOVA for independent samples was performed. The results are shown in Table 15.

Table 15. ANOVA for independent samples by PSLL training.

	N = No				L = Yes. Work Experience				U = Yes. University Studies				O = Yes. Other				F	p	Stage 2	Direction
	M	SD	L	U	M	SD	L	U	M	SD	L	U	M	SD	L	U				
P1	3.412	0.719	3.406	3.418	3.426	0.751	3.423	3.428	2.439	1.013	2.429	2.449	2.250	0.829	2.224	2.276	22.331	0.000	0.132	O = U < N = L U < N = L
P2	3.529	0.936	3.521	3.538	3.557	0.911	3.554	3.560	2.463	1.345	2.450	2.476	2.750	1.299	2.710	2.790	16.362	0.000	0.100	
P3	3.373	0.740	3.366	3.379	3.229	0.817	3.226	3.231	3.146	0.607	3.140	3.152	3.500	0.500	3.485	3.515	0.834	0.476	0.006	
P4	3.706	0.824	3.699	3.713	3.646	0.885	3.643	3.649	3.439	1.344	3.426	3.452	2.750	1.786	2.695	2.805	1.849	0.137	0.012	
P5	3.333	0.922	3.325	3.341	3.243	0.836	3.240	3.246	3.195	1.087	3.185	3.206	2.750	1.299	2.710	2.790	0.637	0.592	0.004	
P6	3.510	0.849	3.502	3.517	3.546	0.750	3.543	3.548	3.512	1.150	3.501	3.523	4.000	0.707	3.978	4.022	0.474	0.700	0.003	
P7	3.451	0.956	3.443	3.459	3.446	0.889	3.443	3.449	3.268	1.169	3.257	3.280	3.000	1.225	2.962	3.038	0.732	0.533	0.005	
P8	3.078	0.904	3.071	3.086	3.280	0.882	3.277	3.283	3.244	1.284	3.231	3.256	2.750	1.090	2.716	2.784	1.074	0.360	0.007	
P9	3.235	0.899	3.227	3.243	3.220	0.764	3.217	3.223	2.878	1.310	2.865	2.891	2.000	1.000	1.969	2.031	4.620	0.003	0.030	O < L = N U < L = N U < L = N U < N < L
P10	3.294	0.935	3.286	3.302	3.137	0.925	3.134	3.140	2.463	1.128	2.452	2.474	2.750	1.090	2.716	2.784	7.152	0.000	0.046	
P11	3.588	0.911	3.580	3.596	3.577	0.806	3.574	3.580	2.976	1.239	2.964	2.988	3.000	1.225	2.962	3.038	6.355	0.000	0.041	
P12	3.098	1.053	3.089	3.107	3.209	0.907	3.206	3.212	2.366	1.121	2.355	2.377	2.750	1.090	2.716	2.784	9.792	0.000	0.062	
P13	3.333	0.900	3.326	3.341	3.400	0.885	3.397	3.403	3.463	1.251	3.451	3.476	2.750	0.829	2.724	2.776	0.792	0.499	0.005	
P14	3.431	0.773	3.425	3.438	3.337	0.856	3.334	3.340	3.073	0.777	3.066	3.081	2.750	1.299	2.710	2.790	2.098	0.100	0.014	
P15	3.078	0.926	3.070	3.086	2.977	0.904	2.974	2.980	2.951	0.697	2.944	2.958	2.750	0.829	2.724	2.776	0.307	0.820	0.002	
P16	3.275	0.992	3.266	3.283	3.583	0.958	3.580	3.586	3.293	1.486	3.278	3.307	3.250	1.479	3.204	3.296	2.150	0.093	0.014	
P17	3.137	0.908	3.129	3.145	3.266	0.898	3.263	3.269	3.073	1.332	3.060	3.086	3.000	1.225	2.962	3.038	0.769	0.512	0.005	
P18	3.118	1.078	3.108	3.127	3.091	0.990	3.088	3.095	2.878	1.193	2.867	2.890	2.500	1.118	2.465	2.535	0.976	0.404	0.007	
P19	3.196	1.010	3.187	3.205	3.169	0.877	3.166	3.171	2.780	1.094	2.770	2.791	2.750	0.433	2.737	2.763	2.514	0.058	0.017	
P20	3.373	1.137	3.363	3.382	3.469	0.955	3.465	3.472	2.951	1.324	2.938	2.964	2.000	0.707	1.978	2.022	5.707	0.001	0.037	U = O < L U < N < L U < N < L U < L = N
P21	3.255	1.007	3.246	3.264	3.123	0.878	3.120	3.126	3.195	1.214	3.183	3.207	2.250	1.299	2.210	2.290	1.541	0.203	0.010	
P22	3.667	1.023	3.658	3.676	3.806	0.984	3.802	3.809	2.878	1.253	2.866	2.890	3.000	1.581	2.951	3.049	10.619	0.000	0.067	
S1–S22	3.340	0.616	3.334	3.345	3.352	0.506	3.350	3.353	2.997	0.806	2.989	3.004	2.784	0.794	2.760	2.809	6.169	0.000	0.040	
S1–S43	3.345	0.574	3.340	3.350	3.335	0.496	3.333	3.337	2.898	0.808	2.891	2.906	2.709	0.901	2.681	2.737	9.432	0.000	0.060	

Source: own elaboration.

The post-hoc tests show that the mean of the group U = Yes. During my university studies are below groups L = Yes. During my work experience and N = No who have not received PSLL training in all dimensions and in the overall mean of the questionnaire S1–S43; therefore, it could be inferred that teachers who have received PSLL training during their university studies have a more negative perception of the overall development of this competence by their students, compared to teachers who have not received training or those who have received training during their work experience.

Statistically significant differences appear in the overall mean of the questionnaire S1–S43, in all dimensions and in the questionnaire items P1, P2, P9, P10, P11, P12, P20 and P22, although as the effect size measured in the ANOVA test by eta squared is less than 0.06 has to be considered as weak in the dimensions D1 = S1–S22 = Teacher's perception of students' overall development of PSLL and in items P9, P10, P11 and P20, except in the overall average of the questionnaire S1–S43 and in items P1, P2, P12 and P22 which, as eta squared is greater than 0.06, can be considered as having a medium effect.

5. Discussion

The analysis of the first dimension of the INNOVAPRENDE questionnaire, which focuses on teachers' perceptions of the development of PSLL competences by university students, provides us with valuable insight into how teachers perceive the process of training their students in these essential competences, aligned with active methodologies and lifelong learning [6,13]. Personal and social competences, such as self-reflection, effective communication and problem solving, are essential for success in today's and tomorrow's society. His ideas support the notion that the development of these competences is a crucial component of Lifelong Learning [24,25]. On the other hand, the theory of Lifelong Learning emphasizes the importance of adaptability and the capacity for continuous learning throughout life [26]. This theory aligns with the idea that PSLL competences are fundamental in a constantly changing world where the need to learn and relearn is constant.

Regarding the relationship between active methodologies and Lifelong Learning, some authors have extensively researched the impact of active teaching and learning strategies [27]. Their work suggests that active methodologies promote students' active participation, improve knowledge retention, and foster critical thinking and problem-solving skills, all of which are essential skills in the context of Lifelong Learning.

Through the teaching innovation and improvement project that supports this study, we have found that the educational methodology used in the classroom is a basic and important element for acquiring transversal and specific competences. Active methodologies, aligned with lifelong learning, play a crucial role in the training of students who are competent and prepared to face the challenges of today's knowledge society. These adapt to the changing needs of learners throughout their lives, which is in line with the concept of lifelong learning. This means that students can continue to develop skills and acquire new knowledge as they advance in their careers and face new challenges [28,29].

Through the evaluation of the aforementioned actions, by means of the analysis of the results of the first dimension, and a review of the literature, we have been able to verify that "the process of acquisition and/or consolidation of the so-called personal, social and learning to learn competence is transversal not only in terms of the educational stages, but also in terms of the areas of the curriculum" [7] (p. 237). Obviously, transversal competences and lifelong learning are intrinsically linked to the cycle of continuous improvement, through application in specific contexts, initial learning, continuous development and application in multiple contexts. This cycle enhances the adaptability, problem-solving skills and effectiveness of individuals in different contexts [30,31].

The results of the study are also in line with the theoretical foundations outlined above, as it has been shown that pedagogical approaches can vary according to the needs and values of teachers and students of different nationalities. Chilean vs. Spanish nationals consider, for example, that it is difficult for their pupils to enjoy understanding something

they did not previously understand. Moreover, teachers with more teaching experience have been more aware of the importance of fostering the development of these competences lifelong life-wide [15–18].

PSLL should start at the earliest educational stages and last throughout students' lives so that those who have not acquired it effectively will be able to do so efficiently soon. In this way, students will become aware of their own thoughts, ideas and emotions, use strategies to manage tense and conflict situations, identify relevant health risks, respect their own and others' experiences, as well as identify the value of effort and personal dedication [11]. It should be noted that teachers' perceptions play an important role in this process. Their understanding and support of the teaching-learning processes are fundamental in guiding students on their journey towards Lifelong Learning. Teachers, by promoting a learning environment that encourages self-reflection, self-assessment and self-regulation, enable students to project short- and long-term goals in a self-regulated manner [32]. Lifelong Learning as PSLL not only prepares students to meet the changing challenges of society, but also empowers them to actively participate in a culture of continuous improvement.

6. Conclusions

It should be stressed that training in basic skills for lifelong learning is fundamental in the personal, educational and professional lives of citizens, as it offers numerous possibilities: adapting to change, acquiring skills that favor critical thinking and creativity, tackling complex problems, growing personally and broadening horizons, keeping the mind active, exploring new ideas, making informed decisions, etc. [33–35].

The study has allowed us to know the teachers' perceptions of the development of the principles of lifelong learning as PSLL by university students. It should be noted that PSLL begins in the early stages of education and extends throughout students' lives. Teacher insight and support are central to this process, as they create an environment conducive to self-reflection and self-regulation, enabling students to set short- and long-term goals independently. This prepares students to meet the changing challenges of society and fosters a culture of continuous improvement.

In conclusion, we highlight:

- In relation to the factor "Nationality", statistically significant differences appear only in item P22 = They enjoy understanding something they did not previously understand. Citizens from Chile, compared to citizens from Spain in general, have a more negative perception of the fact that their pupils enjoy understanding something they did not previously understand. The educational culture and the emphasis on assessment rather than understanding influence this perception.
- In relation to the factor "Sex", statistically significant differences appear in the overall average of the questionnaire S1–S43; and in items P1, P2, P4, P7, P8, P9, P11, P20, P21 and P22. Therefore, males, in general, have a more negative perception of the overall development of PSLL by their students compared to females.
- In relation to the factor "Teaching experience", statistically significant differences appear in the overall average of the S1–S43 questionnaire. It is reflected that teachers with experience between 0 and 5 years have a more negative perception of the overall development of PSLL by their students compared to teachers with experience between 16 and 25 years. More experienced teachers tend to perceive that their pupils are better prepared in terms of PSLL than less experienced teachers. These differences could be due to a variety of reasons, such as the teaching strategies used or the adaptation to pupils' needs over time.
- In relation to the factor "PSLL training", statistically significant differences appear in the overall average of questionnaire S1–S43, in all dimensions and in questionnaire items P1, P2, P9, P10, P11, P12, P20 and P22. Teachers who have received PSLL training during their university studies have a more negative perception of their students' overall development of PSLL compared to teachers who have not received training or those who have received training during their work experience.

Finally, we highlight that one of the weaknesses of the study is that the distribution of the participants does not fit the normal distribution and therefore we employed statistical techniques of null models by means of resampling techniques, using the Bootstrap procedure. In future research, stratified probability sampling could be applied to homogenize the different variables and increase the external validity of the research. In addition, new studies could be proposed to address the teachers' perception of the development of PSLL by pupils in Pre-school, Primary and/or Secondary Education.

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