



Development and Validation of Pedagogical Beliefs About Teaching Practices Questionnaire: A Cross-Continental Study

Lidon Moliner¹, Aida Sanahuja², Francisco Alegre³

¹ Jaume I University, Department of Pedagogy, Av. Sos Baynat no number 12071, Castellon, Spain. mmoliner@uji.es

² Jaume I University, Department of Pedagogy, Av. Sos Baynat no number 12071, Castellon, Spain. asanahuj@uji.es

³ Jaume I University, Department of Pedagogy, Av. Sos Baynat no number 12071, Castellon, Spain. falegre@uji.es

Annotation. The aims of this study were to create and validate a questionnaire designed to assess schoolteachers' pedagogical beliefs according to 641 schoolteachers and 26 experts and analyse the results obtained therefrom. A seven-factor structure was defined for the questionnaire, and Cronbach's alpha was .91. Compared to their older, more experienced and male counterparts, younger, less experienced and female teachers, respectively, demonstrated more positive beliefs about factors such as classroom climate, the teacher's role and the student's role.

Keywords: *schoolteachers, pedagogical beliefs, questionnaire.*

Introduction

Teachers' pedagogical beliefs have been studied for several decades, but the definition of those beliefs still generates some controversy (Ertmer, 2005). Pioneer studies by Prawat (1992) and Samuelowicz and Bain (2001) led the way for dozens of research articles in the field, with analyses encompassing nearly all academic subjects, including mathematics (Barkatsas & Malone, 2005; Gill et al., 2004; Raymond, 1997), science (Bryan, 2012; Hancock & Gallard, 2004; Tsai, 2002), English (Debreli, 2012; Farrell & Lim, 2005; Phipps & Borg, 2009), music (Battersby & Cave, 2014; Emmanuel, 2005; Thompson, 2007), history (Virta, 2002; Voet & De Wever, 2016), reading (Richardson et al., 1991) and physical education (Chróinín & O'Sullivan, 2016; Tsangaridou, 2017).

At the same time, several authors have focused on a more general assessment in this field of research (Fives et al., 2015; Schraw & Olafson, 2015; Thomas, 2013). Scholarly interest in identifying and quantifying these beliefs from a pedagogical and psychological perspective is high, as factors such as teachers' acceptance of technology (Teo & Zhou, 2017), teacher burnout (Burić et al., 2019; Fives et al., 2007), student perceptions (Lee & Branch, 2018), student academic performance (Glackin, 2016), teacher efficacy (Specht et al., 2016) and teacher well-being (Huang et al., 2019) may be greatly influenced by these beliefs.

Literature Review

What do we mean by pedagogical beliefs? To understand what the term 'pedagogical belief' refers to, the difference between a belief and knowledge must first be understood. Calderhead (1996) considered beliefs to generally refer to assumptions, commitments and ideologies and to imply a conviction about or assessment of the matter at hand (Koballa & Crawley, 1985). Beliefs have a greater emotional component than knowledge and are based on evaluations and judgments. Conversely, knowledge is based on objective facts (Pajares, 1992). Beliefs play a much greater role in decision-making than acquired knowledge (Solis, 2015). To illustrate, two teachers with the same (or similar) knowledge about cooperative learning may have different beliefs about its effectiveness in the classroom. Moreover, the teacher who holds negative beliefs about the benefits of cooperative learning will not be likely to propose cooperative methodologies in the classroom. As this example illustrates, teachers' beliefs are decisive in their organisation of activities to be carried out in the classroom and are strongly tied to the teaching strategies implemented in each session (Mansilla & Beltrán, 2013; Solis, 2015). Indeed, teachers' beliefs about teaching, learning and their students affect their teaching practices (McCombs & Whisler, 1997) and are also closely related to and impact student learning (Trigwell & Prosser, 1991); that is, students' academic performance is influenced by the beliefs of their teacher (Solis, 2015). In addition, a teacher's perspective on such beliefs is also a determining factor in the choice of teaching practices. For example, traditional pedagogical beliefs are teacher-centred, while constructivist pedagogical beliefs focus on the student as the protagonist of the teaching and learning process (Deng et al., 2014).

Teaching practices based on constructivism approaches stress the need to create learning environments that stimulate self-regulated and active learning, acknowledge differences between students and connect to authentic and real-life contexts (de Kock et al., 2004; Shuell, 1996). This conceptualisation of teaching practices from a constructivist viewpoint is in line with practices based on inclusive education. From this perspective, the lessons are responsive to student diversity. Students are encouraged to be actively involved in all aspects of their education, which draws on their knowledge and experience gained outside of school (Booth & Ainscow, 2000).

Another important point related to this topic is the relation between teachers' practices and self-efficacy, which has been analysed in the last decade (Caprara et al., 2006; Dellinger et al., 2008; Tschannen-Moran & Hoy, 2007). In pedagogical terms, self-efficacy may be defined as teachers' individual beliefs in their own capacities to execute actions and behaviours necessary to foster specific learning by their students (Tschannen-Moran & Johnson, 2011). Self-efficacy is usually linked to the teacher's own motivation, behaviour, and social environment, among other factors (Granziera & Perera, 2019; Oppermann et al., 2019).

In the literature, oftentimes, the instruments used to assess teachers' beliefs were not validated with sufficient rigor or were not validated at all (Brackett et al., 2012). To this purpose, a questionnaire appropriate for an international audience was developed for this research, and the information obtained through its application may be used by researchers in the field across the world from both pedagogical and psychological perspectives. The technical validity of the instrument was ensured by means of validity and reliability as well as exploratory and confirmatory factor analyses.

The objectives of this study were twofold: 1) to create and validate a questionnaire that could examine schoolteachers' pedagogical beliefs and 2) to analyse the results obtained after administering the questionnaire. To achieve these objectives, we proposed the following research questions:

- What are schoolteachers' pedagogical beliefs on teaching practices?
- Do statistically significant differences exist in schoolteachers' pedagogical beliefs on teaching practices based on years of experience, gender, employment status and background?

Materials and Methods

Questionnaire Design

The questionnaire was developed following procedures provided by educational psychology researchers (Duchesne & McMaugh, 2018; Duckworth & Yeager, 2015; Kline, 2015). According to these scholars, the first step is to review the literature on validated questionnaires in the field. Hence, several questionnaires related to teachers' beliefs about teaching and learning were examined (Beswick et al., 2019; Crosswaite & Asbury, 2019; Kurup et al., 2019; Lotter et al., 2018; O'Neal et al., 2017). Following this review, an initial version of the questionnaire appropriate for an international audience was designed (Marshall & Cox, 2008). Considering findings from previous studies in the field, a 7-factor structure was developed, and 6 items were included for each factor, for a total of 42 items. The seven defined factors by which teachers' beliefs would be assessed were as follows: (1) motivation, (2) evaluation, (3) socioemotional aspects, (4) classroom

climate, (5) teacher's role, (6) methodology and (7) student's role. Teacher responses for each item followed a 5-point Likert-type scale (1 = strongly disagree, 2 = disagree, 3 = indifferent, 4 = agree, 5 = strongly agree). In this sense, the higher the score, the higher the level of beliefs for each factor.

Questionnaire Validation

The initial version of the questionnaire was submitted for expert review (Oluwatayo, 2012) by educational authorities from European, North American, and South American universities who were selected based on their published works in high impact journals in the field of teachers' beliefs using the Delphi Method (Haynes & Shelton, 2018). The 26 experts who participated were contacted by email, and anonymity of their responses was guaranteed. They were instructed to complete a Google Forms questionnaire following the Lawshe method (Baghestani et al., 2019) to validate each item of the initial version of the teachers' questionnaire. Using a 3-point scale, the experts evaluated each item as not necessary (1), useful but not essential (2) or essential (3). Based on these expert ratings, each item was awarded a content validity ratio (CVR) using a mathematical expression defined in Baghestani et al. (2019). A CVR cut-off value of .51 for a .01 level of significance for a two-tailed test, provided by Wilson et al. (2012), was applied to exclude items from the final version of the questionnaire. The CVR values and total scores awarded for each item by the 26 experts are shown in Table 1. Items excluded due to a CVR value lower than .51 are marked with an asterisk.

Table 1
CVR and Expert Scores for Each Initial Questionnaire Item

Item	Expert Scores			Item CVR	Item	Expert Scores			Item CVR	Item	Expert Scores			Item CVR
	1	2	3			1	2	3			1	2	3	
1	0	4	22	.69	15*	8	9	9	-.31	29*	2	6	18	.38
2	0	3	23	.77	16	0	0	26	1	30	0	1	25	.92
3	1	4	21	.62	17	1	3	22	.69	31*	3	9	14	.08
4*	6	7	13	0	18	0	2	24	.85	32*	3	8	15	.15
5	1	3	22	.69	19*	4	5	15	.15	33	0	3	23	.77
6*	5	9	12	-.08	20*	4	9	13	0	34*	6	7	13	0
7	1	1	24	.85	21*	7	5	14	.08	35	1	3	22	.69
8	0	1	25	.92	22	1	3	21	.62	36	0	2	24	.85
9*	8	7	11	-.15	23*	9	8	9	-.31	37	1	1	24	.85
10*	5	7	14	.08	24	0	4	22	.69	38	0	0	26	1
11	0	2	24	.85	25	0	3	23	.77	39	1	5	21	.62
12	0	1	25	.92	26*	6	5	15	.15	40	2	4	22	.69
13*	6	9	10	-.23	27*	4	7	15	.15	41	0	2	24	.85
14	0	3	23	.77	28	0	0	26	1	42	0	5	21	.62

As a result of the validation process, 16 items were excluded, leaving 26 of the original 42 items remaining. The final version of the questionnaire used for the study is included in the appendices.

Data Collection and Participants

Data collection was carried out using the Google Forms tool. The participants for this phase of the research were enrolled in a massive online open course (MOOC) on ‘the inclusive classroom today’ (2nd edition). This course took place from October to November 2018; the link to the final version of the questionnaire was provided during the course on the participants’ online platform. Those interested were invited to answer voluntarily; the confidentiality of their responses was guaranteed. In addition to responding to the questionnaire’s items, respondents were asked to indicate, by category, their age (less than 23 years, between 23 and 26 years, between 27 and 30 years or more than 31 years) and years of experience in the field (less than 1 year, between 1 and 3 years, between 4 and 7 years or more than 8 years), as well as their employment status (employed or unemployed), their gender (male or female) and their region (North America, South America, or Europe). Thus, access to the study sample was non-probabilistic, and sampling can be considered intentional or convenience (Aven et al., 2013; Etikan et al., 2016). Descriptive data on the 641 schoolteachers who participated in the study are reported in Tables 2 and 3.

Table 2

Participants by Employment Status, Age and Gender

Gender		Employment status		Age			
Male	Female	Employed	Unemployed	< 23	23–26	27–30	> 31
267	374	208	433	19	133	119	370

Table 3

Participants by Years of Experience and Region

Years of experience				Region		
< 1	1–3	4–7	> 8	North America	South America	Europe
122	101	120	298	129	205	307

Reliability Analysis of the Questionnaire

Several analyses were conducted using SPSS software version 25 to determine the reliability of the questionnaire. Cronbach’s alpha for the whole questionnaire, Cronbach’s alpha if item was deleted and Spearman-Brown and Guttman Split-Half Coefficient were

calculated (Drost, 2011; McCrae et al., 2011). These tests showed consistent results with a Cronbach's alpha coefficient of .91. In addition, if any of the 26 items were deleted from the questionnaire, the global Cronbach's alpha did not improve, and a Spearman-Brown and Guttman Split-Half Coefficient of .81 was found. For each of the factors, the Cronbach's alpha was as follows: F1-motivation: 0.93; F2-evaluation: 0.89; F3-socioemotional aspects: 0.94; F4-classroom climate: 0.79; F5-teacher's role: 0.88; F6-methodology: 0.90; F7-student's role: 0.92.

Exploratory and Confirmatory Factor Analyses

Exploratory and confirmatory factor analyses were conducted to test the appropriateness of the seven-factor structure. SPSS software version 25 was used for the exploratory factor analysis, and EQS 6.3 software was used for the confirmatory factor analysis. First, the suitability of performing an exploratory factor analysis was assessed using the Kaiser-Meyer-Olkin Measure of Sampling Adequacy and Bartlett's Test of Sphericity (Osborne et al., 2008). Both tests showed adequate results, as an .88 value for the Kaiser-Meyer-Olkin Measure of Sampling Adequacy and a Bartlett's test of sphericity value of 3756.51 were reached.

The exploratory factor analysis was performed by means of a varimax rotation of principal axes factors (Gerbing & Hamilton, 1996). The Kaiser method was used so that only eigenvalues greater than one were considered (Osborne, 2015). The analysis showed a seven-factor structure in which 71.23% of the cumulative variance was explained by these factors. Hence, the confirmatory factor analysis was performed, maintaining the seven-factor structure as indicated and associating each factor with its corresponding items.

Table 4
Exploratory Factor Analysis

Component	Total	% of Variance	Cumulative %
1	5,35	24,95	24,95
2	1,68	9,67	34,62
3	1,29	8,05	42,67
4	1,22	7,74	50,41
5	1,12	7,32	57,74
6	1,09	6,83	64,57
7	1,06	6,66	71,23

For the confirmatory factor analysis, the Bentler Comparative Fit Index (CFI) and Joreskog-Sorbom Fit Index (GFI) were used as goodness-of-fit indices, while chi-square divided by degrees of freedom (χ^2/df) and root-mean-square residual (RMR) were used

as badness-of-fit indices. To confirm a suitable structure, according to Yuan et al. (2016), CFI and GFI values should be .9 or greater (the greater, the better), RMR should be 0.06 or lower and χ^2/df should be lower than 4 (the lower, the better). All these requirements were met for the four parameters, confirming the consistency of the factor structure.

Table 5
Confirmatory Factor Analysis

Model	RMR	χ^2/df	CFI	GFI
Seven-factor structure	.04	2.05	.92	.93

Descriptive and Inferential Statistical Analysis

Descriptive and inferential analyses of the data were carried out using SPSS version 25. First, a descriptive analysis was performed at a global level (average scores by factors, by age groups, by years of experience, by gender, by employment status, and by region). Subsequently, analyses of variance (ANOVAS) were carried out for those variables for which more than two options existed – that is, factors, years of experience, age, and region (Yigit & Mendes, 2018). ANOVAs only indicate if statistically significant differences exist among the groups, but not which groups present such differences. Hence, ANOVAs were complemented with Scheffe’s tests where significant statistical differences were reported to identify the specific groups between which said differences existed. Likewise, with the same goal of detecting differences in the variables for which only two groups existed (gender and employment status), student *t*-tests were conducted (Lakens, 2017). In addition, correlations between factors were examined using Pearson’s correlation coefficient (Kelley et al., 2019).

Based on the size of the study sample and its psychoeducational nature, only those differences of means with $p < .01$ levels of significance were considered statistically significant (Connolly, 2007; Reich, 2005). In addition, only those correlations between factors greater than .5 were considered significant (Bishara & Hittner, 2015; Osborne, 2003).

Results

Strong correlations were found among the motivation, classroom climate, and student’s role factors: a Pearson’s correlation coefficient of .58 was reported between the motivation and classroom climate factors; $r = .53$ between the motivation and student’s role factors; and $r = .51$ between the classroom climate and student’s role factors. No other statistically significant correlations between factors were reported. Statistically significant differences were reported for scores among factors ($F = 89.73$). In this context, Scheffe’s test showed that scores for motivation, socioemotional aspects, and methodology factors

were significantly greater than those for the evaluation, classroom climate, teacher's role, and student's role factors.

Figure 1
Scores by Factor

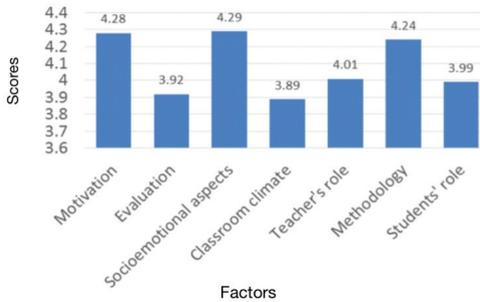
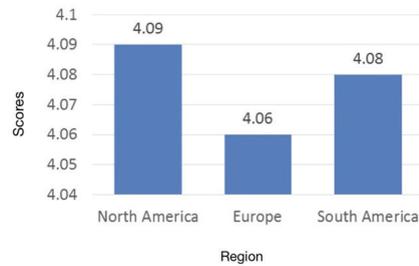


Figure 2
Scores by Region



No statistically significant differences were found overall ($F = 0.01, p = .97$), or by any of the seven factors, between North American, South American, and European teachers' beliefs.

Statistically significant differences were reported when analysing responses according to the ages of the respondents ($F = 3.97$) and their years of experience ($F = 3.99$). For example, Scheffe's test showed that overall scores for teachers 26 years old or younger and for those with three years of experience or less were significantly greater than for their elder and more experienced peers (see Figures 3 and 4). An additional analysis by factors revealed that classroom climate ($F = 4.05; F = 4.11$), teacher's role ($F = 3.92; F = 4.10$) and student's role ($F = 4.11; F = 3.99$) were the factors in which those differences were statistically significant.

Figure 3
Scores by Teacher Age

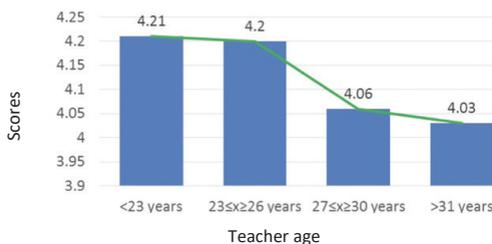
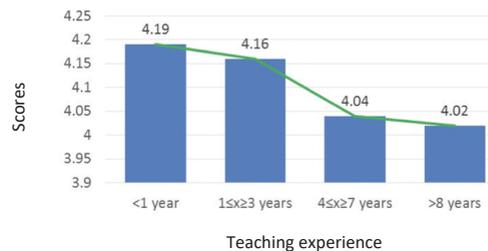


Figure 4
Scores by Teaching Experience



No statistically significant differences were reported regarding employment status ($t = 1.25, p = .26$). Statistically significant differences were reported by gender ($t = 3.28$), as females showed significantly higher scores than males. The additional analysis by factors

with the gender variable revealed that, as with the variables of age and years of experience, classroom climate ($t = 3.10$), teacher's role ($t = 3.25$), and student's role ($t = 3.12$) were the factors in which those differences were statistically significant.

Figure 5
Scores by Employment Status

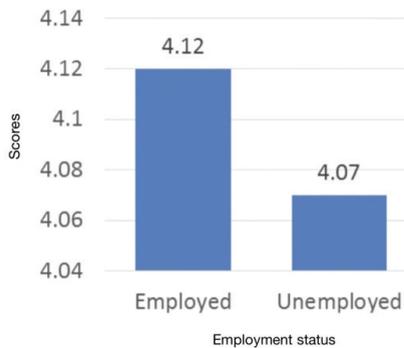
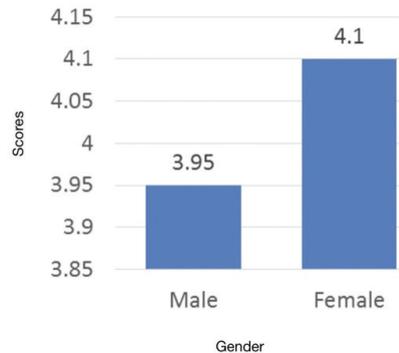


Figure 6
Scores by Gender



Discussion and Conclusions

The high global scores detected in this study regarding teachers' beliefs are in line with the findings from other research related to this field recently documented in the literature (Aragona-Young & Swayer, 2018; Gralewski, 2019; Sak et al., 2018). These scores can be understood by the purely vocational character that is always linked to teaching, so finding a person with negative beliefs that are formed or professionally dedicated to issues related to teaching is difficult (Warwas & Helm, 2018). In addition, the important differences found between the factors have also been reported in other recent studies. For example, authors such as Rubie-Davies (2015) and Oder and Eisenschmidt (2018) showed important differences between beliefs about classroom climate, motivation, methodology and teacher's role. Similarly, Barnes et al. (2015) referred to the differences that arise between teachers' beliefs regarding evaluation and their beliefs regarding methodology. According to these authors, these differences in scores between factors are justified for two main reasons: the environment in which teachers work and the level of independence they are given. For instance, working with problematic students may seriously affect beliefs about some factors, such as classroom climate, the teacher's role or the student's role, from the psychological perspective of the teacher (Tam, 2015). Also, as Santos and Miguel (2019) asserted, teachers often are not restricted in their choice of teaching methodology, but the same is not true for evaluation, as assessment methods are often established by the school educational department or other educational institutions. Hence, differences in

teachers' beliefs regarding methodology and evaluation, as well as between other factors, are common and logical. A similar discussion may ensue when analysing the strong correlations found among teachers' beliefs regarding motivation, the student's role, and classroom climate. Previous research by Rubie-Davies and Peterson (2010), Köğçe (2017), and Alansari and Rubie-Davies (2019) had already determined the existing relationships among teachers' beliefs on these factors. In agreement with what has been mentioned previously, these authors determined that the teaching environment is vital with respect to teachers' beliefs regarding these factors. Students with a good attitude towards learning may be easily motivated, so the classroom climate will probably be better (or easier to improve) in this context, significantly affecting teachers' beliefs.

The progressive decline in scores according to age and years of teaching experience indicated in the results has also been previously documented in other studies, such as Collie et al. (2015), Lev et al. (2018), and Bereczki and Karpati (2018). According to these authors, factors such as stress or job satisfaction may have a significant influence on teachers' psychological level over time. The fact that the results of this work regarding teachers' beliefs for the factors classroom climate, teacher's role, and student's role were particularly low for the elder and more experienced teachers supports this statement (Dubbeld et al., 2019; Shahzad et al., 2017; Walker & Graham, 2019). In line with previous studies, many of the surveyed teachers who had more than 4 years of experience or were at least 31 years old may have already at some point encountered complicated educational situations regarding students' attitudes or behaviours, which would have significantly influenced their beliefs over time (Blazar & Kraft, 2017; Peterson et al., 2016).

The differences found between males and females have also been previously documented in other studies (Berger & Lê Van, 2019; Sak et al., 2015). As indicated by Specht et al. (2016), these differences may be explained by the more inclusive nature of females compared to males. In this sense, female schoolteachers are more sensitive to students' integration and well-being in class (Bernard, 2016; Tella, 2017). The higher scores for females regarding their beliefs on factors such as classroom climate or student's role support these results.

The non-influence of the employment situation on teachers' beliefs agrees with results obtained in other studies, such as those of Skaalvik and Skaalvik (2017) and Reichert and Torney-Purta (2019). The fact that a schoolteacher is currently unemployed does not necessarily indicate that teacher has not worked before or is not up to date with regional educational issues, which explains the similarities in the scores.

The similarity in scores for North American, South American, and European schoolteachers aligns with the findings of previous international or intercontinental studies in the field (Bauman & Del Río, 2005; Little et al., 2019; Roose et al., 2019; Sharma & Sokal, 2015; Sharma et al., 2018; Yan, 2018). Some of the authors of these studies have proposed that the similarities may be explained by the fact that, despite the important cultural differences between continents and the significant variations in educational settings among countries, in the end, the educational challenges and issues that schoolteachers face in the

Americas and in Europe do not differ greatly. Hence, teachers' beliefs may be able to be generalised internationally, as the teachers encounter similar situations in their schools.

Among the main limitations of the study are, first, the form of access to the sample and size of the sample. Access to the sample was carried out in a non-random manner, when ideally the sample should have been accessed in a completely random manner without compromising the validity of the study (Copas & Li, 1997). Also, although the size of the sample was not negligible, it did not represent 1% of the population under study, which, therefore, necessitates caution when considering the results (VanVoorhis & Morgan, 2007). Moreover, although the results can be considered representative for the teaching population of Europe and North and South America, considering the absence of statistically significant differences by regions, the results, and conclusions of this study cannot be extrapolated to a worldwide population (Olejnik, 1984). Additionally, although the results in terms of reliability and goodness- and badness-of-fit indices were correct for several authors, the most demanding researchers in the field may consider them improvable (Rose et al., 2017).

Schoolteachers' beliefs regarding the seven factors of motivation, evaluation, socio-emotional aspects, classroom climate, the teacher's role, methodology, and the student's role were mostly positive. These positive beliefs can be explained by the purely vocational character to which teaching is linked. However, significant differences existed in teachers' beliefs about the importance of the seven factors noted. For example, findings indicated that teachers' beliefs about factors such as evaluation, classroom climate, the teacher's role, and the student's role were less positive than for factors such as motivation, methodology and socioemotional aspects. The teaching environment and the level of freedom are the main reasons for these differences in teachers' beliefs. Considering this, the conclusion can be drawn that the teaching environment may significantly affect teachers' beliefs regarding factors such as the teacher's role, the student's role and classroom climate. In addition, greater autonomy for teachers regarding evaluation may have a positive impact on their beliefs towards evaluation. Along these lines, the strong correlations found among the teachers' beliefs on the factors of motivation, student's role, and classroom climate must be considered.

A progressive decline in teachers' beliefs as they advanced in age and years of experience is evident in the findings. This decline is explained by the fact that older and more experienced professionals are more likely to have encountered stressful situations while teaching that have affected their job satisfaction, altering their beliefs. The most affected factors in this sense were the beliefs regarding the classroom climate and the teacher's role.

The conclusion that women have more positive global beliefs than men, mainly due to their more inclusive nature, is valid. Also valid is the conclusion that employment status does not have a significant influence on teachers' beliefs, as they may have taught for years or they may be aware of the current educational issues in their region, regardless of their employment status.

Finally, despite important differences in cultures, educational settings, and laws among countries, schoolteachers' beliefs in North America, South America, and Europe are very similar. This can be attributed to the similar educational situations and challenges that they face, resulting in beliefs that are also similar from an educational perspective.

The information provided in this article may help researchers worldwide improve our understanding about the teaching and learning beliefs of North and South American, and European schoolteachers. In the policymaking arena, the questionnaire can serve as a tool for articulating national and international development policies that may help all agents included in the education system. A better understanding of teachers' beliefs will facilitate educational institutions' design and development of programmes that may improve these beliefs. Teachers' positive beliefs are expected to have a positive influence on students' academic performance, perceptions, and well-being. In addition, teachers' psychological well-being is crucial in the educative system. Hence, quantifying factors such as motivation, perceived roles, and other socioemotional aspects may help improve teachers' quality of life and teaching efficacy.

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Pedagoginių įsitikinimų apie mokymo praktiką plėtros ir patvirtinimo klausimynas: tarpžemyninis tyrimas

Lidon Moliner¹, Aida Sanahuja², Francisco Alegre³

¹ Jaume I universitetas, Pedagogikos katedra, Sos Baynat alėja s/n 12071, Kasteljonas, Ispanija, mmoliner@uji.es

² Jaume I universitetas, Pedagogikos katedra, Sos Baynat alėja, s/n 12071, Kasteljonas, Ispanija, asanahuj@uji.es

³ Jaume I universitetas, Pedagogikos katedra, Sos Baynat alėja s/n 12071, Kasteljonas, Ispanija, falegre@uji.es

Santrauka

Šio tyrimo tikslas – sukurti ir patvirtinti klausimyną, skirtą įvertinti mokytojų pedagoginius įsitikinimus. Tyrime dalyvavo 641 mokytojas ir 26 ekspertai. Klausimyne pateikta septynių faktorių struktūra, pagal kuriuos vertinami mokytojų įsitikinimai. Septyni faktoriai buvo šie: (1) motyvacija, (2) įvertinimas, (3) socialiniai ir emociniai aspektai, (4) klimatas klasėje, (5) mokytojo vaidmuo, (6) metodologija ir (7) mokytojo vaidmuo. Mokytojų atsakymams į kiekvieną teiginį buvo taikoma 5 balų Likerto skalė. Matavimo skalės Cronbacho alfa – .91. Šio tyrimo tikslai buvo dvejopi: 1) sukurti ir patvirtinti klausimyną, kuriame būtų galima išnagrinėti mokytojų pedagoginius įsitikinimus; 2) išanalizuoti rezultatus, gautus pritaikius klausimyną. Siekiant šių tikslų, pasiūlyti šie tyrimo klausimai: Kokie yra mokytojų pedagoginiai įsitikinimai apie mokymo praktiką? Ar yra statistiškai reikšmingų skirtumų tarp mokytojų pedagoginių įsitikinimų, susijusių su mokymo praktika, remiantis ilgamete patirtimi, lytimi, užimtumo padėtimi ir kvalifikacija? Palyginti su vyresniais, labiau patyrusiais tyrimo dalyviais, taip pat vyrais, atitinkamai jaunesnės, mažiau patyrusios tyrimo dalyvės, taip pat moterys, pademonstravo daugiau teigiamų įsitikinimų apie tokius faktorius kaip klimatas klasėje, mokytojo vaidmuo ir mokinio vaidmuo.

Esminiai žodžiai: *mokytojai, pedagoginiai įsitikinimai, klausimynas.*

Appendices

Schoolteachers' pedagogical beliefs on teaching practices questionnaire

Scale: 1 = strongly disagree, 2 = disagree, 3 = indifferent, 4 = agree, 5 = strongly agree

Factors: 1 = motivation, 2 = evaluation, 3 = socioemotional aspects, 4 = classroom climate, 5 = teacher's role, 6 = methodology, 7 = student's role

Item	Sentence	Factor
1	Activities should be developed considering the interests and motivations of the students.	1
2	Teachers must have enough strategies to motivate all students, even those who do not have interest.	1
3	Some students are unmotivated because the centres have not answered their interests or expectations.	1
4	Teachers must create a classroom climate that students enjoy.	1
5	The evaluation of the students must be diversified and adapted to the personal characteristics of each student.	2
6	The final evaluation supposes a stressor for the students; therefore, it should be eliminated.	2
7	The time given for the evaluation should adapt to the rhythms of the students.	2
8	Teachers should look for different ways to evaluate students.	2
9	The adequate socioemotional development of students must be prioritised over their cognitive-intellectual development.	3
10	Teaching staff should promote and develop students' personal knowledge as well as healthy relationships among them.	3
11	Tutoring is as important as classroom work.	3
12	Self-concept is vital and necessary for student learning.	3
13	Faculty must focus on creating a friendly classroom climate.	4
14	Relationships between teachers and students should be horizontal and democratic.	4
15	The teacher's role is a determining factor in student learning.	5
16	Making a connection between the previous knowledge of the student and the new content to be learned should be a task carried out by the teacher, even if this implies delaying the introduction of the new content.	5
17	The teacher is responsible for the degree of learning of all students.	5
18	Cooperative learning allows students to learn more and better.	6
19	Learning objectives should be broken down into more basic components to meet the diversity of classroom learning.	6

Item	Sentence	Factor
20	The teacher must have sufficient reinforcements to ensure that all students learn.	6
21	Students must be the protagonists of teaching–learning processes.	7
22	Teachers’ empathy with students is closely linked to the students’ academic performance.	7
23	Students’ satisfaction is closely related to the teaching–learning processes that take place in the classroom.	7
24	Learning objectives should be developed in a democratic way between teachers and students.	7
25	Students’ opinions should be considered when making decisions.	7
26	Lack of flexibility in the educational system is an obstacle in the learning process of the student.	7

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