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Pre-service Teachers' Perceptions of Professional Standards and their Integration into Pre-service Training: A Comparative Study of Australia and Pakistan

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Abstract: This paper critically analyses 52 Australian and 68 Pakistani pre-service teachers' (PST) perceptions of professional standards for teachers enabling the comparison of teacher preparation in the two countries. A multivariate analysis of variance tested the hypothesis that an integrated standards-based teacher preparation program was more effective for professional skills and competencies development than a non-integrated one. While the Australian PSTs undertaking a standards-integrated curriculum reported significantly higher levels of professional preparation in ten areas of professional Standards, their Pakistani counterparts - who were not exposed to such curriculum - reported inadequate preparation. The findings have implications for teacher educators and policy makers involved in the development of pre-service teacher programs.

Key words: Teacher education, teacher professional standards, pre-service teachers, pre-service teacher curriculum

Introduction

The construct of “professional standards” for teachers has been debated in different scholarly interfaces among educators and education policy developers around the globe since the late 1990s (see for example, Darling-Hammond & Baratz–Snowden, 2005; Hudson, 2009; Ingvarson et al., 2013; Kriewaldt, 2015; Sachs, 2003; Tuinamuana, 2011). A lot of these studies problematise the formation of initial competencies and skills of pre-service teachers (PSTs) as they progress through teacher education programs. For example, Mayer et al. (2005) stressed the need for PSTs to be equipped with a solid initial understanding and basic knowledge of professional teacher standards during their teacher education training for greater purposiveness. Such standards are intended to provide clear and appropriate professional development competencies and parameters to develop PST’s initial professional knowledge, professional practices, professional engagement and collaboration skills (Choy et al., 2013; Feiman-Nemser, 2001). Pre-service teachers with a sound understanding and initial knowledge of professional standards have greater potential to becoming effective and competent teachers, especially in response to the particular needs of their schools. Most importantly, this initial “baptism” into an understanding and appreciation of the standards can

also be the precursor to the consolidation their use as the basis for future and lifelong professional learning (Call et al., 2021).

Australia has a standards-integrated teacher curriculum that aims to facilitate ongoing professional development of pre-service teachers, and to improve the quality of teaching and learning processes. In comparison, while Pakistan is on its way to establishing and formalising standards, there is still a lack of integration of these standards into teacher education content (for a detailed study on this, see Shaukat & 2020). This study examines and compares pre-service teachers' perceptions of professional standards for teachers in a standards-integrated and non-standards-integrated curriculum in teacher education programs in Australia and Pakistan respectively. Such a comparative study allows educators to perceive phenomena that might not otherwise be evident when research is restricted to individual contexts (Romberg, 1999).

With a literacy rate of 99% Australia is a developed country in comparison to Pakistan which has a literacy rate of 58%. Although the rationales are similar, the strategic plans of teacher education through the integration of professional standards for teachers are significantly different. Despite this, the standards for teachers of these two countries match closely. It is the aforementioned lack of *integration* of these standards into teacher education programs that marks the most significant difference and is the focus of the current study.

Specifically, this international comparison investigated the perceptions of Australian and Pakistani PSTs regarding professional standards as they moved from their first year to second year while undertaking a standards-integrated curriculum and a non-standards-integrated curriculum in their teacher education programs. While there is plenty of research on the impact of teaching standards on teacher education programs and learning outcomes, few research studies - such as Chung & Kim (2010) - addressed the impact of teaching standards on PSTs' learning to teach, and none comparing these two countries.

This research was undertaken to explore two specific research objectives: a) to identify differences in pre-service teachers' perceptions between those who undertake a standards-integrated curriculum (Australia) and those who experience a non-standards-integrated curriculum (Pakistan); and b) to determine differences in these PST's perceptions regarding professional standards as they move from first year through to their second year.

Professional Standards for Teachers

A recent study by Willis et al. (2021) involving 54 first- and second-year PSTs in a graduate-entry program in Australia investigated the use of teacher professional standards in an initial teacher education program. This study concluded that the PSTs seemed to benefit from a standards-integrated approach, although they seemed to lack confidence in some areas of the standards, such as engaging professionally with colleagues, dealing with students from diverse sociolinguistic backgrounds, and executing lesson arrangements that involve students. Endorsing the results of this study, a study by Call et al. (2021) showed similar findings - that Australian PSTs were not sufficiently trained to make the connection between the Australian Professional Standards for Teachers (APST) and their professional learning. Their study recommends the need for an alignment of teacher education programs with the APST and an integration of evidence-based activities.

Regardless of the nature of training, PSTs enter their teaching careers with a set of beliefs about teaching standards that shapes their foundation for teaching, and this foundation has an inevitable impact on their professional practices. Therefore, research on PST's perceptions regarding professional standards for teachers as initial indicators of their professional learning *before* joining the teaching profession becomes important. By

contrasting the educational contexts and learning environments where professional standards are integrated in one context, that is, Australia, but not in the other, that is, Pakistan, it is hoped that the perceptions of pre-service teachers in these two contexts will cast light on how to review teacher training programs to facilitate an optimisation for preparing PSTs according to school needs. This certainly does not mean that Pakistan needs to follow Australia. Indeed, in this paper we keep in mind that the contextual and logistic complexities in these two countries are different and to expect one country to follow the other in this regard would be reductive and insensitive.

The reasons for the move towards professional standards for teachers in both countries are similar – they are based on the premise that teacher quality can be enhanced through the incorporation of professional standards into teacher education programs (Kennedy, 2014; Sevimli-Celik & Johnson, 2016). Several Australian researchers, notably Sachs (2003, p. 177), have argued that standards prescribe the basis for the benchmarking of minimum criteria of achievement in various aspects of teaching, defining “what teachers should be able to do and what they should know”. Further, Tuinamuana (2011) argued that professional standards contribute to the development of professional identity of teachers. Thus, during their pre-service programs, PST standards have the potential to guide the nature and level of professional engagement, classroom performance and pedagogical practices, and their willingness to bring about changes in students’ learning and learning outcomes. From this perspective, teacher education programs provide students a “structure” of professional practice experiences to induct students into the knowledge, skills and understandings necessary for successful entry into schools and professional communities. Professional standards therefore can provide a focussed means of establishing the readiness of prospective teachers (Hudson et al., 2016; Swabey et al., 2010).

Standards typically cover a range of competencies, values and attitudes and can be used in ways that inform teachers’ practices, purposes and efforts in lieu of outcomes alone (Mayer et al., 2005). Hence, it is essential for PSTs to develop an understanding of the rationale behind professional standards so that they can formulate the professional goals they wish to achieve in their teaching. Arguably, having an informed yet critical initial knowledge and understanding of these standards can improve the readiness of professional practice as they prepare to transit into teaching (The State of Queensland Department of Education, 2002).

Professional Standards for Teaching in Australia

The national governing body for teacher professional standards in Australia, the Australian Institute for Teaching and School Leadership (AITSL), established in 2010, is accountable for providing national leadership for the Commonwealth, state and territory governments, and to promote excellence in the profession of teaching and school leadership (AITSL, 2018). AITSL formulated *The National Standards for Initial Teacher Education* in 2011, the development of which signifies an explicit policy response aimed at improving the quality of teaching and the teaching profession. In addition, it is intended that these Standards be used to regulate and enhance the status of the profession (Mayer et al., 2005). Although the Australian Standards framework provides a benchmark for professionalism in education, it is suggested that their value to educators resides in a *commitment* to those standards as a platform for building ongoing professional development (Tuinamuana, 2011).

Seven professional standards are categorised under three areas of teaching: professional knowledge, professional practice and professional engagement, with each standard listing a number of explicit areas of focus with the delineation of significant

components for each (Santoro & Kennedy, 2016). Current Australian initial teacher education courses are designed to provide students with the knowledge, understandings and skills essential for entry into a school and professional community in line with these Standards.

Professional Standards for Teaching in Pakistan

In comparison to Australia, Pakistan, where the formulation of standards is relatively recent, the application of professional standards to the provision of a framework for teachers' professional learning and practice is largely absent because these have not, as yet, been integrated into the teacher education curricula (Shaukat & Chowdhury, 2020). At best they represent, at this point, an ideal that requires actualising at the practical level.

The quality of teacher education in Pakistan has been criticised frequently in recent years in scholarly literature (see, for example, Akram & Zepeda, 2015; Butt, 2008; Dilshad, 2010; Shaukat & Chowdhury, 2020).). However, in attempting to meet the increasing demands on teachers at different levels, the teacher education system has gone through substantial reforms and has developed a set of competencies required to meet the challenges of teaching in the modern world (Dilshad, 2010). In order to meet these challenges, the Policy and Planning department of the Ministry of Education (MOE) executed the 'Strengthening Teacher Education in Pakistan' (STEP) project in 2008 in collaboration with the United Nations Educational Scientific and Cultural Organization (UNESCO) (Lister et al., 2010). The complexities surrounding the implementation of this project are reported in a recent study by (Shaukat & Chowdhury, 2020).

The STEP project mainly focused on developing the professional standards for teachers in Pakistan in consultation with concerned stakeholders in teacher education programs. Nationally approved professional standards were developed in 2009 to encapsulate the knowledge, skills and dispositions considered to be indispensable for PSTs, accomplished master teachers, teacher educators and trainers, and other educational specialists (Ministry of Education, 2009a, 2009b). These standards also prescribe the comprehensive development of pre- and in-service programs of teacher education and create procedures and systems for accrediting teacher education programs (Butt, 2008). Each of the 10 professional standards - 'subject matter knowledge', 'human growth and development', 'knowledge of Islamic values', 'instructional planning' and strategies', assessment', 'learning environment', 'effective communication, collaboration and partnerships', 'professional development and code of conduct' and 'ICT knowledge and cognition' - is comprised of three components: knowledge (what the teacher knows), disposition (behaviours, attitudes and values), and performance (what the teacher can do and should be able to do). As these standards are relatively new, and yet to be integrated into teacher content, there is a crucial need to research into how the status and implementation of these standards might be promoted.

In terms of areas of professional standards, the Australian framework of National Standards and Pakistan's STEP-initiated National Standards are very similar (see Table 1). Rather than looking at a comparison of the two frameworks, this paper looks into differences in the teacher education programs in alignment to these standards. Such an orientation also allows a better understanding of PST needs in both countries and has implications for countries such as Pakistan where the benefits of teacher professional standards are touted but in practice implemented inconsistently (Government of Pakistan, 2017).

Perceptions of Pre-Service Teachers regarding Professional Standards

Ideally at least, it is essential for pre-service teachers (PSTs) to know about professional standards before commencing a teaching career and for policy level agreement on what PSTs are expected to know, value and are able to do upon completion of their pre-service course. To prepare for a teaching career, it is generally expected that PSTs will gain theoretical understandings about teaching and learning through their coursework and demonstrate application of this content knowledge in their practicum and later in their in-service training. Professional standards provide specific skills, knowledge and understandings for PSTs to prepare for their future teaching according to school needs. However, standards are often theoretical and abstract and need to be translated into specific school contexts which can vary widely. Findings of this study certainly indicated this in both groups.

In a study investigating the effectiveness of the teacher education program in the UK, McMahon et al. (2015) reported that PSTs perceived that their professional knowledge and skills improved considerably in areas such as classroom management, lesson planning skills and applying motivation strategies towards engaging students in their studies as a result of their teacher education. This obviously suggests that the design and application of the teacher education program has a significant impact in developing PSTs' understanding of professional learning. In particular, within teacher education programs, the inclusion of professional standards for teachers plays an even greater role in the ongoing professional learning of PSTs. According to Ingvarson (1998), in a standards-guided model, defined standards provide the basis on which the teaching profession can set its agenda and expectations in relation to both professional development and accountability. Feiman-Nemser (2001) suggested that PST education programs lay the foundation of theories and offer professional opportunities for PSTs to apply and practise these during their teaching placements.

In an Australian study, Swabey et al. (2010) investigated the perceptions of pre-service and beginning teachers in relation to their preparedness for teaching through their coursework. They focused on three indicators - 'professional knowledge', 'professional relationships' and 'professional practice' - as indispensable in preparation for teaching. They selected two cohorts of teachers: cohort one comprised of 43 PSTs enrolled in their final year of a Bachelor of Human Movement course at the University of Tasmania, while cohort 2 comprised of 38 beginning teachers who received their degrees through the completion of the Bachelor of Human Movement from the same university. The study gathered data by using a questionnaire which was designed based on the AITSL Professional Standards (see Table 1). From the two cohorts of teacher participants, a sub-group of each cohort was also interviewed to gain a more in-depth look into the issues raised in the questionnaire. Results in this longitudinal study indicated that both cohorts believed that their training had equipped them well in relation to most aspects of the three components of the Professional Standards. This study's results indicated PSTs considered the professional standards to be of significant importance for their professional growth, that is, to become effective teachers in meeting the diverse needs of their students.

Another Australian study was conducted by Hudson (2009) on PSTs' perceptions of professional standards using a pre-test and post-test design on a sample of 106 second year students. Participants responded to a five-point Likert scale involving 26 statements relating to the Professional Standards. The survey was administered as a pre-test at the beginning of their science education coursework and then as a post-test on its conclusion. The researchers looked into the PSTs' perceptions of how well they considered themselves able to implement the standards. A significant mean score difference between pre-test and post-test indicated a closer correlation between standards and success in completing the coursework. Hudson re-

evaluated the aims of a coursework unit to more adequately reflect a specific standards-based response on the positive results recorded in the study. This study revealed the potential use of professional standards to develop PSTs' understanding of professional learning indicators in improving the practice of classroom teaching.

In connection to this earlier study by Hudson in 2009, Hudson et al. (2016) conducted a second study on a sample of 312 final-year PSTs from three universities to determine their self-confidence in using the APST at the graduate level by employing a mixed methods approach involving a survey and interviews. This study identified gaps including PST's lack of understanding about APST both in theory and in practice, for example in supporting disabled students, or those with carer or parent support.

Notably, both of these Australian studies emphasised on the impact of professional standards on PSTs. The current study was carried out between a developed (Australia) country and a developing one (Pakistan) where professional standards are a relatively new movement towards teacher quality and effectiveness.

Drawing on this review of literature as a backdrop, this study now examines PSTs' perceptions of teaching in relation to the integration (or lack thereof) of professional standards. Ideally, university coursework provides PSTs with confidence in the theoretical and pedagogical knowledge for teaching with the expectation that positive experiences in applying such knowledge to the classroom will ensue. In addressing the perceptions of PSTs regarding professional standards, this study sought to identify the differences across Australia and Pakistan in terms of the need for the integration of professional standards in pre-service teacher training. As stated earlier, while Australia has a set of professional standards for teachers in place and teacher course profiles are integrated with these standards, until now, the integration of these standards into teacher curricula in Pakistan remains broadly unattained.

Methodology

Sites and Sample

To explore this dynamic, two cohorts of pre-service teachers enrolled in Masters-level graduate entry programs (first year and second year) from Australia and Pakistan were selected. The participants comprised convenience samples of 52 respondents (35 female, 17 male) from Australia and 68 (51 female, 17 male) from Pakistan. In both groups these PSTs were enrolled in primary teacher education programs in large metropolitan universities on the east coast of Australia and in the east central region of Lahore, Pakistan. This study was conducted following the ethical guidelines approved under the institutional review boards for conducting research with human subjects in both universities.

Within each teacher education program, coordinators were contacted to secure permission to invite all teacher candidates to take part in the study, producing high response rates with a range of 80-100% return rate per class for two classes in each country. Data were collected by the first author of the study during class time. After an initial explanation of the purpose and the format of the questionnaire, the participating PSTs completed the questionnaire independently.

Instrument

A survey questionnaire (see *Appendix*) was used in this research and the questions therein were based on information from the literature - most notably from the Australian Institute for Teaching and School Leadership (AITSL, 2018) and the National Professional

Standards for Teachers in Pakistan (NPSTP, 2009), as well as others (Akram & Zepeda, 2015; Butt, 2008; Ingvarson et al., 2013; Santoro & Kennedy, 2016; Swabey et al., 2010; Tuinamuana, 2011). The questionnaire was designed to gather information to determine the PSTs’ initial knowledge and understanding of professional standards for teachers. Sixteen items were designed and organised in line with the focus areas of professional standards - that is, professional knowledge, professional practice and professional engagement in the Australian and Pakistani contexts using a 6-point Likert scale.

Table 1 below shows information about Australian and Pakistani professional standards for teachers and the similar focus areas that were considered as the basis for the construction of the questionnaire. It is to be noted that while the focus areas were similar, their descriptions were somewhat different, and signifying varied understandings.

Similar focus areas of professional standards	AITSL 2018 (Australia)	NPSTP 2009 (Pakistan)
Professional knowledge	Know students and how they learn Know the content and how to teach it	Subject matter knowledge Human growth and development Knowledge of Islamic values ICT Knowledge and cognition
Professional Practice	Plan for and implement effective teaching and learning Create and maintain supportive and safe learning environments Assess, provide feedback and report on student learning	Instructional planning and strategies Learning environment Assessment Effective communication Collaboration and partnerships
Professional Engagement	Engage in professional learning Engage professionally with colleagues, parents/carers and the community	Professional development and code of conduct

Table 1: Professional standards for teachers in Australia and Pakistan

Analysis

The pre-service teachers’ responses to the questionnaire, which ranged from *strongly agree* to *strongly disagree*, were converted into a numerical scale ranging from 6 to 1 in line with the analytical framework of Cohen et al. (2007). The frequency distribution of each item was calculated using the SPSS software, as well as the mean scores and standard deviation. Likewise, the 16 items of Professional Standards for Teachers were subjected to principal components analysis (PCA) using SPSS. Prior to performing the PCA, the suitability of the data for factor analysis was assessed. Inspection of the correlation matrix revealed the presence of many coefficients of .3 and above. The Kaiser-Meyer-Olkin value was .84, exceeding the recommended value .6 (Kaiser, 1970), and Bartlett’s Test of Sphericity (Bartlett 1954) reached statistical significance, supporting the factorability of correlation matrix.

A principal components factor analysis followed by an oblique rotation of the factor axes showed four factors with eigenvalues greater than unity, accounting for 36.96% of the total item variance. Oblique rotations are commonly used in factor analyses as psychological factors are often correlated, and, under these circumstances, the orthogonal varimax solution can lack discrimination (Norusis, 1990, p. 334; Youngman, 1979, p. 102). The strongest factor, which took 45.23% of variance, comprised the 13 items of Table 1. Three statements

(2, 15, 16) reported weak loading and therefore were excluded from the final scale construction.

A 13-item scale constructed from these items has a Cronbach alpha reliability of 0.90. For PSTs, the professional standards are encapsulated under the items: ‘engage students in collaborative learning’ (item 13), ‘understanding students how they learn’ (9), and ‘support students’ personal development and participation in society’ (12).

A two-way multivariate analysis of variance (MANOVA) followed by the Bonferroni method were subsequently conducted on items scores to determine the mean score differences between Australian and Pakistani PST’s perceptions regarding professional standards for teachers in the context of teacher education.

Item#	Statements	Factor loading	Corrected item total correlation	Mean	Standard Deviation
1	Understand the professional standards for the teachers	0.53	0.47	4.15	1.40
3	Design effective instructional strategies according to students’ different needs	0.41	0.54	3.95	1.51
4	Integrate ICT (Information Communication Technologies) into classroom teaching	0.42	0.58	4.11	1.49
5	Alignment and implementation of well-structured lesson sequences that engage students and promote learning	0.74	0.59	4.14	1.32
6	Provide feedback and report on students’ learning	0.60	0.50	4.02	1.36
7	Engage myself in professional learning	0.42	0.52	4.15	1.45
8	Create and maintain a safe and supportive learning environment	0.73	0.71	4.38	1.55
9	Understanding students how they learn	0.76	0.78	4.88	1.15
10	Develop my professional identity through the professional experience (practicum)	0.50	0.59	4.61	1.27
11	Develop students’ higher order thinking skills	0.64	0.65	4.36	1.42
12	Support students’ personal development and participation in society	0.75	0.59	4.34	1.34
13	Organise content into an effective learning and teaching sequence	0.73	0.61	4.83	1.27
14	Engage students in collaborative learning	.788	0.69	4.73	1.327

Table 2: Factor loading, mean and standard deviation of perceptions of professional standards for Teachers (n=120)

Results

Comparing PSTS’ Perceptions of Professional Standards for Teachers Across Australian and Pakistani Samples

A two-way MANOVA yielded a statistically significant multivariate effect on the variable of country $F(13, 104) = 11.84, p < .000$; wilks’ Lambda = .40; partial eta squared .60, year at university $F(13, 104) = 2.27, p < .011$; wilks’ Lambda = .80; partial eta squared .22, and interaction between year at university and country $F(13, 104) = 2.38, p < .008$; Wilks’ Lambda = .77; partial eta squared .23.

The multivariate resulted in significant interaction. There was a significant difference in PST’s perceptions regarding professional standards for teachers enrolled in first and second year across both Australia and Pakistan. To follow this up, the effects, as established for each country and year at university, were examined at the item level with univariate analyses.

As shown in Table 3 below, ten significant interactions were found in the focus areas of professional standards: “Understand the professional standards for the teachers” $F(1, 116) = 16.78, p < .000, \eta^2 = .13$; “Integrate ICT (Information Communication Technologies) into classroom teaching” $F(1, 116) = 5.49, p < .021, \eta^2 = .04$; “Alignment and implementation of well-structured lesson sequences that engage students and promote learning” $F(1, 116) = 7.17, p < .008, \eta^2 = .06$; “Engage myself in professional learning” $F(1, 116) = 5.39, p < .022, \eta^2 = .04$; “Create and maintain a safe and supportive learning environment” $F(1, 116) = 10.86, p < .001, \eta^2 = .09$; “Understanding how students learn”, $F(1, 116) = 6.09, p < .015, \eta^2 = .05$; “Develop my professional identity through the professional experience (practicum)” $F(1, 116) = 4.42, p < .038, \eta^2 = .04$; “Support students’ personal development and participation in society” $F(1, 116) = 8.97, p < .003, \eta^2 = .07$; “Organise content into an effective learning and teaching sequence” $F(1, 116) = 6.28, p < .014, \eta^2 = .05$; and, “Engage students in collaborative learning” $F(1, 116) = 6.54, p < .012, \eta^2 = .05$.

No significant interactions were found on other focus areas of standards such as “design effective instructional strategies”, “provide feedback and report on students’ learning”, and “develop students’ higher order thinking skills” (Table 2).

At this present stage the teacher education program has given me sufficient knowledge to:	Australia (<i>n</i> =52)		Pakistan (<i>n</i> =68)		<i>F</i>	<i>p</i>	partial <i>eta</i>
	Year 1 (<i>n</i> =32) <i>M</i> (<i>SD</i>)	Year 2 (<i>n</i> =20) <i>M</i> (<i>SD</i>)	Year 1 (<i>n</i> =39) <i>M</i> (<i>SD</i>)	Year 2 (<i>n</i> =29) <i>M</i> (<i>SD</i>)			
understand the professional standards for the teachers	4.31 (0.10)	5.30 (0.73)	4.13 (1.67)	3.21 (1.05)	16.777	<.000	.126
design effective instructional strategies according to students’ different needs	4.22 (0.79)	4.80 (0.70)	3.38 (1.74)	3.83 (1.85)	0.065	>.799	.001
integrate ICT (Information Communication Technologies) into classroom teaching	3.56 (1.48)	4.80 (0.77)	4.18 (1.58)	4.14 (1.56)	5.495	<.021	.045
alignment and implementation of well-structured lesson sequences that engage students and promote learning	4.28 (1.14)	5.10 (0.85)	3.97 (1.51)	3.55 (1.12)	7.167	<.008	.058
provide feedback and report on students’ learning	4.25 (1.08)	4.85 (0.75)	3.74 (1.71)	3.55 (1.15)	2.636	>.107	.022
engage myself in professional learning	4.25 (0.98)	5.30 (0.57)	3.82 (1.75)	3.69 (1.47)	5.393	<.022	.044
create and maintain a safe and supportive learning environment	5.00 (1.05)	5.60 (0.68)	4.15 (1.73)	3.14 (1.22)	10.858	<.001	.086
understand students how they learn	4.94 (0.80)	5.40 (0.68)	4.95 (1.28)	4.38 (1.37)	6.093	<.015	.050
develop my professional identity through the professional experience (practicum)	4.81 (0.97)	5.40 (0.68)	4.44 (1.41)	4.07 (1.41)	4.419	<.038	.037
develop students higher order thinking skills	4.44 (0.95)	5.45 (0.69)	3.87 (1.66)	4.17 (1.51)	2.025	>.157	.017
support students’ personal development and participation in society	4.81 (0.74)	5.25 (0.64)	4.23 (1.60)	3.34 (1.17)	8.977	<.003	.072
organise content into an effective learning and teaching sequence	5.00 (0.88)	5.65 (0.50)	4.72 (1.54)	4.24 (1.30)	6.282	<.014	.051
engage students in collaborative learning	5.00 (0.80)	5.55 (0.51)	4.64 (1.56)	4.00 (1.46)	6.542	<.012	.053

$P < .001^{**}, p < .000^{***}$

**Table 3: Descriptive statistics and significant univariate effects between Australian and Pakistani PSTs’ perceptions of professional standards for teachers (*n*=120)
Comparing PST’s perceptions of Professional Standards across first and second year in Australian and Pakistani samples**

The simple effects of year level were then carried out separately by country as a variable. It was found that improvement for second year PSTs on the 10 focus areas of professional standards held true only for the Australian sample. Australian PSTs enrolled in second year held significantly better understandings of the 10 focus areas of professional standards than their first-year peers. This was accounted for by significant sample differences in their perceptions of understanding of the professional standards, that is, second year students understood more completely the significance of the requirement to integrate ICT into classrooms, the alignment and implementation of well-structured lesson sequences, the need to engage the self in professional learning, create and maintain a safe and supportive environment, understand how students learn, connect between developing a professional identity through professional experience, the need to support students’ personal development and participation in society, and the need to organise content into an effective teaching sequence and engage students in collaborative learning.

In relation to each criterion, the Australian students demonstrated higher mean scores in their second year. In fact, in comparison with Australian students, Pakistani PSTs’ perceptions regarding three focus areas, that is, “understanding the professional standards”, “create and maintain a safe and supportive environment”, and “support students’ personal development and participation in society” declined as they moved from first year to second year (see Figures 1, 2 and Table 2).

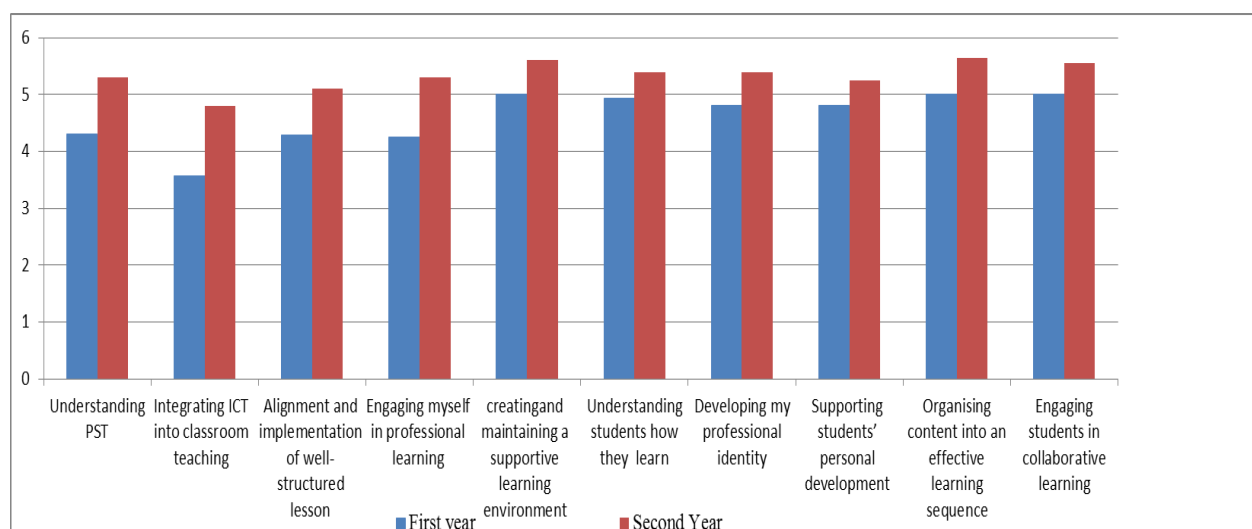


Figure 1. Comparison of mean ratings for Australian PSTs’ perceptions of Professional Standards

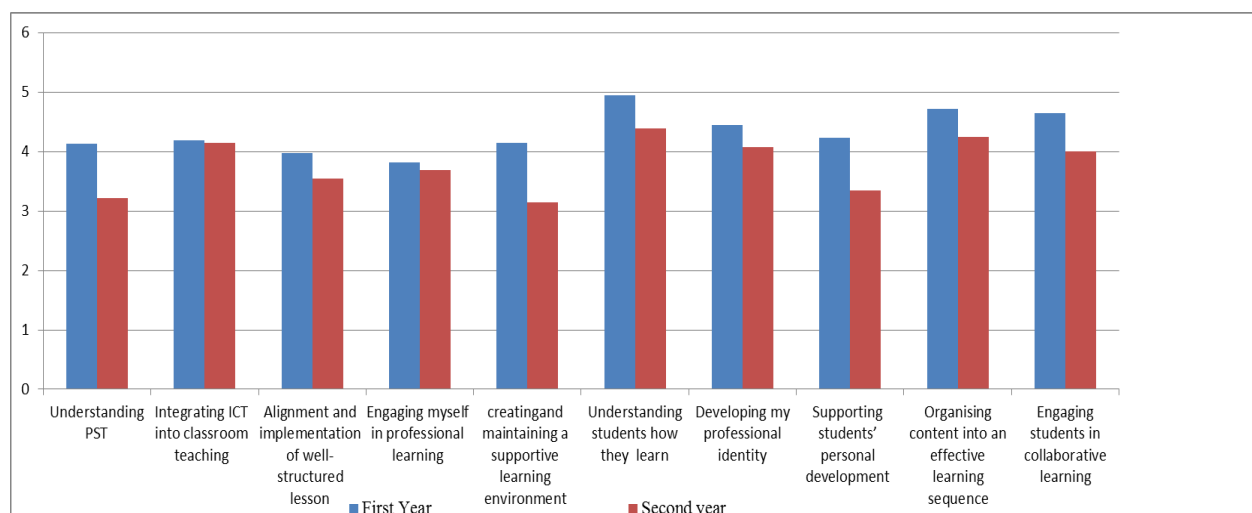


Figure 2. Comparison of mean ratings for Pakistani PSTs’ perceptions of Professional Standards

Discussion

This study aimed to determine pre-service teachers' perceptions of professional standards for teachers within the context of pre-service training, involving two cohorts of students - one from Australia who undertook a standards-integrated curriculum, and the other from Pakistan, who experienced a non-standards-integrated curriculum.

The study found that the Australian participants showed statistically significant improvement in their understanding of the professional standards for teachers as they progressed through the teacher education program. These PSTs revealed higher perceptions of the 10 focus areas of professional standards as they moved from first to second year. These findings are in accord with previous research conducted by McMahon et al. (2015) in the UK, which reported that PSTs improved their professional knowledge and skills as a result of their coursework, underpinning professional development activities specifically connected to concrete classroom applications and experiences. These Australian PSTs significantly improved their understanding of professional standards by their second year indicating their successful professional learning and application and the reinforcement of professional knowledge through the coursework program. In addition, they gained experience in demonstrating the concepts of professional knowledge and practice, opportunities which contribute to the on-going professional learning of teachers (Sachs, 2003).

Another reason for the improved understanding of professional standards by the Australian PSTs may relate to the teaching practice and practicum component of their course where they received more "real-life" engagement in professional practice. As Choy et al. (2013) reported in their study, the reciprocal relationship between professional practice and experience tend to increase teaching competencies.

On the other hand, the reason behind the weak perceptions of PSTs in three focus areas - "design effective instructional strategies", "provide effective feedback" and "develop students higher order thinking skills of professional standards" - could be explained by the comparatively underdeveloped integration of these standards into the teacher education content which is apparent from the results of this study. As Goepel (2012) observed, some standards, as they play out currently, are not experienced and are rather responded to with nothing more than a perfunctory and tokenistic "tick-box" response to ensure all bases are covered.

However, even when PSTs participate in sound teacher education programs, it is nevertheless true that only with their induction and experience in classroom teaching are they likely to be able to design effective strategies to align with the diverse needs of the students and provide students finely-honed feedback allowing them to develop higher order thinking skills, including metacognitive awareness of how successful learning occurs. It is certainly important to note that adherence to professional teaching standards alone will not automatically realise an increase in understanding and knowledge, which PSTs perceived as being fundamental to becoming competent practitioners (Sachs, 2003).

This study revealed that Pakistani PST's perceptions and understandings of the professional standards did not improve with the progression of coursework and, indeed, declined as they moved from first year to second year, as per the MANOVA results reported above. Part of the reason for these results may be that professional standards for teachers in the Pakistani context are relatively new, having been established recently and yet to be enlisted (Shaukat & Chowdhury, 2020), or integrated into the teacher education curriculum. Professional standards provide benchmarks for professional learning, and while PSTs may have some knowledge of the professional indicators through their courses, these neither appear to be deeply rooted nor sensitively integrated into practice. At best, this can be described as anecdotal integration. Indeed, because the professional standards are not clearly

integrated and delineated in the Pakistani teacher education program, it is perhaps unsurprising that PSTs' understanding of them is poorly developed.

Another reason could be associated with the existing gap between theory and practice in the Pakistani teacher education system (Ali, 2011; Levine, 2006). If students are not made specifically aware of the standards, nor have opportunities to actualise them through pre-service and in-service classroom experiences, it is perhaps understandable that the application of the standards *as an issue* disappears off the radar for them.

Implications

The analysis revealed significant differences in PSTs' perceptions of the professional standards of pre-service teachers in Australia and Pakistan. This study also provides encouraging findings and potential implications for policymakers and teacher educators in Pakistan. Seen through the lens of the Australian experience, the integration of standards with the course curriculum in pre-service teacher programs may play a significant role in ensuring that the application of the standards develops better understanding of professional knowledge, and practice, and increases the professional engagement of PSTs. In saying so, however, we are aware that we are not positioning Australia as the aspirational target by downplaying Pakistan, because, as indicated above, every context has issues unique to them, making transferability impractical and undesirable.

The survey results reinforce the need to place greater emphasis on and integrate professional standards into teacher content to prepare PSTs in response to school needs. In Pakistan, there is a need to merge a standards-oriented curriculum with content courses, and to align the standards with evidence-based teaching strategies that will positively affect PSTs' knowledge and understanding of professional standards and their application to practice. In Australia, better integration is needed for a more nuanced understanding of the practical implications of the contextual needs of schools.

Finally, the survey results have implications for the research design of future studies. One limitation of this study is that the respondents do not necessarily represent a sample of "typical" pre-service teachers. Indeed, a larger study, built on a longitudinal research design that focuses on a broader sample of pre-service teachers who are tracked from their first year of training through to the end of their first year of classroom practice could provide a research vehicle that allows for a more detailed understanding of the relationship between professional standards and their application across time.

Conclusion

No doubt, in both Australia and Pakistan there is a determination to improve the standards of teacher education. While reform is occurring in very different cultural contexts, many lessons can be learnt through comparative studies that highlight for those stakeholders entrusted with making fundamental changes to teacher education the strengths and pitfalls of integrating professional standards into the fabric of the curricula and their delivery.

The juxtaposing of cohorts from Australia and Pakistan provides a snapshot of the potential for standards to make a difference to the quality of teacher education. While it would be simplistic and naïve to assume that the fusion of the standards with content is sufficient to ensure the preparation of teachers who were fully prepared to embrace the challenges of classroom teaching, it seems that providing students with clear, tangible, and

professional goals is one element in the complex mix of improving the quality of classroom practice and the status of the teaching profession more generally.

References

- Akram, M., & Zepeda, J. S. (2015). Development and validation of a teacher self-assessment instrument. *Journal of Research and Reflections in Education*, 9(2), 134-148.
- Ali, T. (2011). Understanding how practices of teacher education in Pakistan compare with the popular theories and narrative of reforms of teacher education in international context. *International Journal of Humanities and Social Science*, 1(8), 208-222.
- Australian Institute for Teaching and School Leadership. (2018). *Australian professional standards for teachers*. <https://www.aitsl.edu.au/docs/default-source/national-policy-framework/australian-professional-standards-for-teachers.pdf>
- Bartlett, M. S. (1954). A note on the multiplying factors for various chi square approximations. *Journal of Royal Statistical Society*, 16(Series B), 296-298. <https://doi.org/10.1111/j.2517-6161.1954.tb00174.x>
- Butt, H. M. (2008). *Draft proposed national professional standards for teachers in Pakistan*. http://miyaichi.up.seesaa.net/image/Pakistan20Quality20Standards20_April20182008_20draft.pdf
- Call, K., Christie, M., & Simon, S. E. (2021). Do preservice teachers believe they use the Australian Professional Standards for teachers to inform their professional learning? *Australian Journal of Teacher Education*, 46(6). <http://dx.doi.org/10.14221/ajte.2021v46n6.6>
- Choy, D., Wong, A., Lim, K., & Chong, S. (2013). Beginning teachers' perceptions of their pedagogical knowledge and skills in teaching: A three year study. *Australian Journal of Teacher Education*, 38(5), 68-79. <http://dx.doi.org/10.14221/ajte.2013v38n5.6>
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education* (6th ed.). Routledge. <https://doi.org/10.4324/9780203029053>
- Chung, H., & Kim, H. (2010). Implementing professional standards in teacher preparation programs in the United States: Preservice teachers' understanding of teaching standards. *Korean Journal of Educational Policy*, 7(2), 355-377.
- Darling-Hammond, L., & Baratz-Snowden, J. (2005). *A good teacher in every classroom: Preparing the highly qualified teachers our children deserve*. John Wiley & Sons.
- Dilshad, M. R. (2010). Assessing quality of teacher education: A student perspective. *Pakistan Journal of Social Sciences*, 30(1), 85-97.
- Feiman-Nemser, S. (2001). From preparation to practice: Designing a continuum to strengthen and sustain teaching. *Teachers College Record*, 103(6), 1013-1055. <https://doi.org/10.1111/0161-4681.00141>
- Goepel, J. (2012). Upholding public trust: An examination of teacher professionalism and the use of Teachers' Standards in England. *Teacher Development*, 16(4), 489-505. <https://doi.org/10.1080/13664530.2012.729784>
- Hudson, P. (2009). How can preservice teachers be measured against advocated professional teaching standards? *Australian Journal of Teacher Education*, 34(5), 65-73. <https://doi.org/10.14221/ajte.2009v34n5.6>
- Hudson, S. M., Hudson, P., Weatherby-Fell, N. L., & Shipway, B. (2016). Graduate standards for teachers: Final-year preservice teachers potentially identify the gaps. *Australian Journal of Teacher Education*, 41(9). <http://dx.doi.org/10.14221/ajte.2016v41n9.8>

- Ingvarson, L., Schulle, J., Tatto, M., Rowley, G., Peck, R., & Senk, S. (2013). *An analysis of teacher education context, structure, and quality-assurance arrangements in TEDS-M countries. Findings from the IEA teacher education and development study in mathematics*. <http://files.eric.ed.gov/fulltext/ED545244.pdf>
- Ingvarson, L. (1998). Professional development as the pursuit of professional standards: The standards-based professional development system. *Teaching and Teacher Education*, 14(1), 127-140. [https://doi.org/10.1016/S0742-051X\(97\)00065-6](https://doi.org/10.1016/S0742-051X(97)00065-6)
- Kaiser, H. (1970). A second generation little jiffy. *Psychometrika*, 35(4), 401-415. <https://doi.org/10.1007/BF02291817>
- Kennedy, A. (2014). What do professional learning policies say about purposes of teacher education? *Asia-Pacific Journal of Teacher Education*, 43(3), 183-194. <https://doi.org/10.1080/1359866X.2014.940279>
- Kriewaldt, A. J. (2015). Strengthening learners' perspectives in professional standards to restore relationality as central to teaching. *Australian Journal of Teacher Education*, 40(8), 83-98. <https://doi.org/10.14221/ajte.2015v40n8.5>
- Levine, A. (2006). *Educating school teachers*. The Education Schools Project. http://edschools.org/pdf/Educating_Teachers_Report.pdf
- Lister, S., Bano, M., Carr-Hill, R., & MacAuslan, I. (2010). *Mid-term evaluation of the EFA fast track initiative: Country case study: Pakistan* (draft: 28 February 2010). Mokoro. Retrieved from https://mokoro.co.uk/wp-content/uploads/FTI_FullCCSPakistan-Feb2010n.pdf. Accessed March 16, 2020.
- McMahon, M., Forde, C., & Dickson, B. (2015). Reshaping teacher education through the professional continuum. *Educational Review*, 67(2), 158-178. <https://doi.org/10.1080/00131911.2013.846298>
- Mayer, D., Mitchell, J., Macdonald, D., & Bell, R. (2005). Professional standards for teachers: A case study of professional learning. *Asia-Pacific Journal of Teacher Education*, 33(2), 159-179. <https://doi.org/10.1080/13598660500121977>
- Ministry of Education (2017). *National education policy 2017–2025*. <https://planipolis.iiep.unesco.org/en/2017/national-education-policy-2017-2025-6414>
- Ministry of Education (2009a). *National education policy*. http://itacec.org/document/2015/7/National_Education_Policy_2009.pdf
- Ministry of Education (2009b). *National professional standards for teachers in Pakistan*.
- Norusis, M.J. (1990). *SPSS base system user's guide*. SPSS Inc.
- Romberg, T.A. (1999). School mathematics: The impact of international comparisons on national policy. In G. Kaiser, E. Luna, & L. Huntley (Eds.), *International comparison in mathematics education* (pp. 189-199). Falmer Press.
- Sachs, J. (2003). Teacher professional standards: Controlling or developing teaching. *Teachers and Teaching: Theory and Practice*, 9(2), 175-186. <https://doi.org/10.1080/13540600309373>
- Santoro, N., & Kennedy, A. (2016). How is cultural diversity positioned in teacher professional standards? An international analysis. *Asia-Pacific Journal of Teacher Education*, 44(3), 208-223. <https://doi.org/10.1080/1359866X.2015.1081674>
- Sevimli-Celik, S., & Johnson, J. E. (2016). Teacher preparation for movement education: Increasing pre-service teachers' competence for working with young children. *Asia-Pacific Journal of Teacher Education*, 44(3), 274-288. <https://doi.org/10.1080/1359866X.2015.1079303>
- Shaukat, S., & Chowdhury, R. (2020). Teacher educators' perceptions of professional standards: implementation challenges in Pakistan. *Issues in Educational Research*, 30(3), 1084-1104. <http://www.iier.org.au/iier.html>.

- Swabey, K., Castleton, G., & Penney, D, (2010). Meeting the standards? Exploring preparedness for teaching. *Australian Journal of Teacher Education*, 35(8), 29-46. <http://dx.doi.org/10.14221/ajte.2010v35n8.3>
- The State of Queensland Department of Education (2002). *Professional standards for teachers: Guidelines for professional practice*.
- Tuinamuana, K. (2011). Teacher professional standards, accountability, and ideology: Alternative discourses. *Australian Journal of Teacher Education*, 36(12), 72-81. <https://doi.org/10.14221/ajte.2011v36n12.8>
- Willis, L-D., Shaukat, S., & Low-Choy, S. (2021). Preservice teacher perceptions of preparedness for teaching: Insights from survey research exploring the links between teacher professional standards and agency. *British Educational Research Journal*. Advanced online publication. <https://doi.org/10.1002/berj.3761>
- Youngman, M. B. (1979). *Analysing social and educational research data*. McGraw Hill.

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Appendix (Survey questionnaire)

<i>At this present stage my teacher education program has given me sufficient knowledge to/of:</i>	
1	Understand the professional standards for teachers
3	Design effective instructional strategies according to students' different needs
4	Integrate Information & Communication Technologies (ICTs) into classroom teaching
5	Aligning and implementing well-structured lesson sequences that engage students and promote learning
6	Provide feedback and report on students' learning
7	Engage my in professional learning
8	Create and maintain a safe and supportive learning environment
9	Understanding how students learn
10	Develop my professional identity through the professional experience (practicum)
11	Develop students' higher order thinking skills
12	Support students' personal development and participation in society
13	Organise content into an effective learning and teaching sequence
14	Engage students in collaborative learning