

Exploring Quality Teacher Education Programs in Lebanon, Qatar, and China

Abstract

The present quantitative study explored pre-service teachers' perspectives regarding the quality of their Teacher Education Program (TEP) in Lebanon, Qatar, and China. The sample consisted of 326 pre-service school teachers who completed a survey designed to examine their perception of the following indicators of TEP quality: (1) a shared vision of good teaching, (2) coherence, or alignment among TEP courses, and (3) opportunities for pre-service teachers to enact their own teaching practice. An exploratory factor analysis indicated the underlying factors were instead theory and vicarious experiences, reflections on authentic experiences, and program coherence. Overall, pre-service teachers in all countries rated their TEP highest on program coherence, while reflections on authentic experiences received the lowest ratings. Pre-service teachers in Lebanon and Qatar rated their TEPs significantly higher than did participants in China ($p < .01$), which could be attributed to differences in TEP structure. Practical implications and recommendations were discussed.

Keywords: teacher education, comparative, pre-service teachers, program coherence

Introduction

In recent years, there has been international emphasis on the need to improve teacher effectiveness, particularly in light of studies such as the Programme for International Student Assessment (PISA, Meng and Muñoz 2016, Zhang and Campbell 2015). Despite Eastern countries often outperforming their Western counterparts in international assessments (Meng and Muñoz 2016), researchers continue to note the need for more effective teachers in countries like Lebanon, where over half of the teachers in public schools are considered ill-equipped when measured against national teaching requirements (Mattar 2012). Similar calls to improve teacher effectiveness have been made in Qatar, which recently received recommendations from an outside consulting agency to improve the quality of their teachers in order to promote greater student achievement (Nasser 2017). Finally, the need to increase teacher effectiveness has been noted even further east, in China, where, despite strong student achievement in international assessments, discrepancies still exist in the effectiveness of teachers in different regions (Li et al. 2019).

While some of these countries, such as China, have been noted for their resulting emphasis on in-service professional development for teachers, such school-based efforts also come with questionable benefit (Ke et al. 2019). As a result, the focus of concern regarding teacher effectiveness has shifted to how well Teacher Education Programmes (TEPs) are preparing teachers for the profession (Nguyen 2018). With more than 200,000 students completing a TEP each year in the U.S. alone (National Research Council 2010), there is a growing need to develop TEPs capable of preparing high-quality teachers with a basic teaching competence that would equip them for entry into the profession (Brouwer and Korthagen 2005).

As the study of quality TEPs gains momentum, there is a gap in the literature examining this construct in non-Western countries. Furthermore, of particular importance is the extent to which pre-service teachers perceive their TEP is based on a clear vision of quality teaching, is coherent by linking theory with practice, and provides opportunities to enact teaching (Cabaroğlu 2014, Canrinus et al. 2017a, Goh and Yusuf 2017, Klette and Hammerness 2016). Few comparative studies have focused upon these features of programme design which can provide insight into pre-service teachers' learning and future practices. Indeed, through such an investigation, it becomes possible to share experiences, learn from multiple contexts, and contribute to the endeavour to create stronger TEPs that can better prepare future teachers.

In understanding the quality of TEPs, it is important to clarify that the student experience of a programme should also be considered (Canrinus et al. 2017a). Student perspectives should be studied, as they may differ from the programme's intent (Canrinus et al. 2017b). Additionally, because pre-service teachers know their programme, they can provide valuable input about it (Goh and Yusuf 2017). For instance, as Smeby and Heggen (2014) observed, there was a correlation between pre-service teachers' perceptions of teaching quality and programme coherence in their TEP. Currently, there is limited research on the quality of TEPs using pre-service teachers' perspectives (Canrinus et al. 2017b).

Drawing upon data gathered from Lebanon, Qatar, and China, the aim of the current study was to examine the three programmes in order to understand the degree to which pre-service teachers perceive their programme to be designed around tenets of

high quality TEPs. By assessing commonalities and differences in the TEPs offered in these countries, we can better understand the quality of teacher preparation across multiple contexts, thus providing a means for capturing important characteristics of the rigor, depth, and strength of each programme, as well as potential challenges. Cross-cultural discourse also becomes possible through the implementation of such studies (Klette and Hammerness 2016), particularly when the participating countries are undergoing nation-wide educational reforms (Du et al. 2020). Toward this end, the study was guided by the following research questions:

- (1) To what extent do pre-service teachers in Lebanon, Qatar, and China perceive their TEP to be designed around components indicative of high quality?
- (2) How do TEPs in Lebanon, Qatar, and China compare on components indicative of high quality?

Different researchers have identified the components of quality TEPs in slightly varied ways, but the overlap is evident across all perspectives. The three primary components typically referenced are the identification of a shared vision of quality teaching; programme coherence in alignment among courses, and connections between coursework and field experiences; and opportunities to enact practice (Canrinus et al. 2017b, Grossman et al. 2008, Klette and Hammerness 2016).

Vision

For TEPs working toward improving the quality of teacher preparation, the first step is often identifying a common vision of good teaching (Hammerness 2006). Such a vision may then be used to guide programme design and curriculum (Du et al. 2020,

Klette and Hammerness 2016). The indicators of vision, as outlined by Hammerness and Klette (2015), are an explicit vision of quality teaching, a statement that is elaborated and specific, faculty and student understanding of the programme vision, and an articulation of teaching approaches that support the vision. Beginning with an explicit TEP vision is particularly important in helping pre-service teachers in the process of knowledge acquisition (Stürmer, Könings, and Seidel 2015), and in developing a vision of teaching that will lead to effective practice (Kennedy 2006).

Coherence

A second indicator of quality TEPs is programme coherence, or “a process, in which all courses within a programme, be it theoretical or practical, are aligned based on a clear vision of good teaching” (Canrinus et al. 2017a, 315). A consistent approach to teaching must be present within a course, across all courses, and between fieldwork and coursework (Allen, Ambrosetti, and Turner 2013). If these conditions are met, the resulting learning opportunities will be well-structured and purpose-driven (Klette and Hammerness 2016) and will therefore better prepare pre-service teachers for the classroom (Goh and Yusuf 2017).

Although programme coherence in quality TEPs should consist of opportunities for pre-service teachers to make connections between different ideas (Canrinus et al. 2017a), establishing coherence across courses has historically proven to be an area of difficulty (Canrinus et al. 2017b, Korthagen 2010). Supporting this belief, in an international study of teacher candidates, the lowest survey responses were related to the extent to which the faculty knew what was happening in other courses or in field experiences (Canrinus et al. 2017b). One possible solution is increased collaboration

among teacher educators to promote programme coherence (Canrinus et al. 2017a). For instance, working deliberately toward curriculum alignment in university courses can improve the quality of teaching, particularly if coupled with a shift from one's own course to the types of opportunities students need in general (Gagné et al. 2013). The recommendation to improve what faculty know about other areas of the TEP in which they work is echoed by the National Research Council (2010) in their call for more research into the integration of subject-matter coursework in TEPs.

Because teachers must know about the context in which they are working (Zeichner 2014), quality TEPs must also maintain connections between coursework and fieldwork, between theory and practice (Grossman et al. 2008, Klette and Hammerness 2016). Specifically, this alignment refers to pre-service teachers observing in their field experience what they learn about in their coursework and discussing in their coursework what they observe in their field experience (Canrinus et al. 2017b, Grossman et al. 2008). In a three-part scale measuring perceived coherence between courses, opportunities to connect various parts of the programme, and perceived coherence between field experiences and courses, students perceived the least alignment between field placement and coursework (Canrinus et al. 2017a).

Opportunities to Enact Practice

A final and important measure of TEP quality is the degree to which pre-service teachers have opportunities to enact practice (Grossman et al. 2008, Jensen et al. 2018). In TEPs, pre-service teachers need to have opportunities to enact their vision of good teaching, whether in university classrooms or in their field experience (Ulvik and Smith 2011). Regardless of where the opportunities occur, the provision of such experiences

can help pre-service teachers grow in their acquisition of pedagogical knowledge, their capacity to lead the class, and their ability to respond effectively to students (Kazemi and Wæge 2015, König 2013).

Importance of Quality TEPs

Previous research has indicated that the effects of TEPs on teacher practices are minimal, while earlier researchers have also critiqued the fragmented nature of TEPs (Brouwer and Korthagen 2005). Many reform efforts in recent years have therefore been a response to the lack of quality or programme coherence in TEPs (Hammerness 2006).

The importance of the quality of TEPs is observable primarily in the benefits reaped by the future teacher. Learner outcomes are affected by the quality of TEPs, particularly in helping pre-service teachers get a better understanding of teaching (Canrinus et al. 2017a, Canrinus et al. 2017b). Pre-service teachers need to receive consistent messages to help make sense of teaching experiences and observations (Hammerness 2006).

Theory-Practice Gap

Increased quality in TEPs may help resolve the theory-practice gap found in TEPs, yielding one of the primary benefits of undertaking such an endeavour (Brouwer and Korthagen 2005, Smeby and Heggen 2014). As described earlier, connecting theory with practice is a challenge faced by many TEPs (Cabaroglu 2014). In essence, there is a search for balance between practical knowledge, which comes from participating in teaching and reflecting, and formal knowledge, or knowledge promoted by research

(Korthagen 2010). The limited effects of TEPs may be attributable to too much formal knowledge and not enough practical knowledge (Korthagen 2010). Focusing TEPs more on practice, however, can produce more effective first-year teachers (Boyd et al 2009). Pre-service teachers themselves have voiced their desire for more practice with real situations to help them make sense of the discrepancies between what they learn in coursework and what they see in schools (Cabaroglu 2014).

Preparedness for Profession

In addition to reducing the theory-practice gap, quality TEPs offer future teachers other benefits. For instance, when pre-service teachers are involved in the actual practise of teaching, their own students tend to gain on test scores in their first year of teaching (Boyd et al. 2009). Additionally, stronger perceptions of programme coherence have been correlated with higher levels of confidence in engaging students, lesson planning, using teaching strategies, and classroom management (Goh and Yusuf 2017). Such preparedness among pre-service teachers for their profession can then trickle down to student success: coherent programmes are linked to better student outcomes at all levels of education (Canrinus et al. 2017a).

In a study by Smeby and Heggen (2014), programme coherence in TEPs and in field placements was significantly related to the development of theoretical knowledge and practical skills during the TEP. The quality of TEPs, therefore, is important to both the instruction in the TEP and to the field placement (Smeby and Heggen 2014). Placement coherence could even be more important than placement quality in predicting outcomes at the end of the TEP (Smeby and Heggen 2014).

Identity as Teacher

A final benefit to pre-service teachers of quality TEPs is that they hear similar views about teaching across all courses and in all programmes (Carrinus et al. 2017a). Such consistency ideally lends itself to a stronger self-identity as a teacher. Teacher identity, or the conceptualisation teachers have of themselves and the narrative they believe defines their core as a teacher, is a topic of growing interest in TEPs because of its importance in guiding teachers' values and actions (Izadinia 2016, Sutherland Howard, and Markauskaite 2010). In his study of eighteen pre-service teachers in England, Rogers (2011) found pre-service teachers struggled to form their own identity as teachers in their TEPs. Specifically, they struggled to align their practice with their values as educators, pointing to the challenges caused by the theory-practice gap in incoherent TEPs. Effective TEPs, therefore, should not only provide practical skills for future teachers, but should also impart a vision of teaching that will help inform identity development as a teacher (Rogers 2011).

Cautions

Despite the benefits of quality TEPs, researchers have pointed to one word of caution regarding programme coherence in particular. Specifically, Buchmann and Floden (1991) raised the question of whether making all connections for future teachers is the best way to teach them, a concern echoed years later by Hammerness (2006), who questioned whether a more coherent programme would reduce the number of opportunities for students to come to terms with different perspectives on teaching and learning. Others have expressed similar concern, noting that TEPs should be an agency of change, encouraging experimentation and the exploration of students' own ideas (Boyd et al. 2008, Rogers 2011). Kennedy (2006) also noted the need to distinguish

between helping students develop an effective vision of teaching and attempting to convert students to a single approach to teaching. However, even in a coherent programme, there should still be some autonomy for teacher educators (Canrinus et al. 2017b), providing reassurance for earlier decades of concern regarding the consequences of programme coherence.

Materials and Methods

In the present study, a quantitative research design was adopted. The appropriate ethical approval process was followed for the participating universities and participants' informed consent was secured accordingly. The data was collected by administering a modified version of the Teacher Education Survey, which was developed as part of the Coherence and Assignments Study in Teacher Education (CATE, Hammerness, Klette, and Bergem 2014). The survey consists of 38 Likert-style items categorized into three sections, and examines the extent to which pre-service teachers have the opportunity in their TEP to engage in certain activities which prepare them for the profession, and the extent to which their TEPs are aligned with the theoretical framework of vision, coherence, and opportunities to enact practice (Hammerness and Klette 2015). The first section focuses on participants' Curriculum and Instruction courses and the extent to which they have the opportunity to engage in certain tasks, such as plan for teaching, discuss experiences from their student teaching in their university classes, and watch or analyse videos of classroom teaching. The second section focuses on opportunities to engage in certain tasks in the TEP as a whole, such as learn about the vision of effective teaching that their TEP promotes or connect ideas from one course to another. Finally, the third section includes questions about the extent to which participants agreed or disagreed with certain statements, such as whether or not their program articulates a

vision of teaching and learning or whether fieldwork observations are supported by what they learn during coursework. Cronbach's alpha reliability estimates of internal consistency for the three subscales ranged from .88 to .90 in a previous study of pre-service teachers spanning several countries (Hammerness and Klette 2015). Prior to using the survey, we examined the items closely, removing nine of the items that were either redundant or not applicable to the contexts we were studying. The final 29-item survey was translated into Arabic and Chinese.

We recruited participants from Lebanon, Qatar, and China through convenience sampling. The following descriptions provide additional details regarding the contexts. Descriptive statistics regarding the sample can also be found in Table 1.

Table 1

Descriptive Statistics of Sample

	Lebanon	Qatar	China	Total
<i>N</i>	79	92	155	326
Females	77	92	143	312
Average age (years)	24.91	22.73	21.44	22.64

Lebanon

The sample in Lebanon ($N = 79$) was recruited from the northern region of the country. The survey was sent via Google Forms to education students who were enrolled in a TEP at either the graduate or undergraduate level and had completed their field experience course. Pre-service teachers begin their university education with three years of coursework and then are required to complete one practicum course. As part of their semester-long practicum experience, they generally do not have the opportunity

for extensive opportunities for student teaching. Instead, they observe in-service teachers for approximately two to three hours per week, and then debrief in a weekly seminar with their respective practicum course professor.

Qatar

Participants in Qatar ($N = 92$) were from the only educational institute that trains pre-service teachers in the country, which aims to graduate teachers following the professional standards requested by the Ministry of Education and Higher Education. During the four-year TEP, pre-service teachers receive a range of general education courses and spend ten weeks conducting a practicum in governmental schools at the end of the TEP. Third-year students were chosen in this study as they have experienced most of the TEP. A paper-and-pencil version of the survey was completed by 92 respondents within the given timeline. All participants were female due to gender separation at the college of education.

China

The sample in China ($N = 155$) was recruited from a four-year undergraduate TEP in Central China. The pre-service teachers had completed three years of coursework prior to beginning their practicum, a 10-week field experience. Pre-service teachers received a manual from the university outlining their responsibilities during the practicum, which included observing, teaching, lesson planning, conducting research, and writing about their reflections. Throughout the practicum, they were observed and assessed by their in-service teacher, supervisors, and peers.

Data Analysis

Data were analysed using several tests. We began by conducting an exploratory factor analysis (EFA) to determine whether the three original factors on the survey—vision, coherence, and opportunities to enact practice—would be supported by our data. The EFA was adopted because we wanted to examine the factor structure of the survey in a different context and ensure the survey maintained its original structure in the present study. By doing so, we could more easily identify relationships and patterns in pre-service teachers' perceptions in order to further interpret and understand them (Yong and Pearce 2013). Given that other researchers have found different underlying factor structures when using the survey in a different country (Goh and Yusuf 2017), we believed this to be a critical first step. Using the resulting factors, we then calculated descriptive statistics from survey responses to answer the first research question regarding the extent to which pre-service teachers viewed their TEPs to be high quality. To answer the second research question, we conducted one-way ANOVA tests on each new factor to determine if statistically significant differences existed among different countries.

Results

Prior to conducting the exploratory factor analysis, we tested the relevant assumptions for the analysis. Results from the Kaiser-Meyer-Olkin measure of sampling adequacy ($KMO = .92$) and Bartlett's test of sphericity ($p < .05$) both indicated that the assumptions were upheld and it was acceptable to continue with the EFA. After imputing the missing data points, numerous factor analyses were conducted in order to explore the underlying factor structure. Retaining only factors with eigenvalues greater than one, we then applied a promax rotation with maximum likelihood to allow for possible correlations among the factors. We found a three-factor structure was most

appropriate for our data. One item was dropped for failing to meet the recommended minimum loading of .32 on any factor (Costello and Osborne 2005).

Following the EFA, the three factors that emerged from our data differed from the factors of vision, coherence, and opportunity to enact practice, as presented by Hammerness and Klette (2015). Instead, we defined the newly extracted factors to be (1) Theory and Vicarious Experiences, (2) Reflections on Authentic Experiences, and (3) Programme Coherence. Internal consistency for each of the three new factors was estimated with Cronbach's alpha; the estimates were revealed to be .91, .83, and .82, respectively.

To answer the first research question using the new factors, we calculated descriptive statistics for each country on each factor. Results can be found in Table 2.

Table 2

Means and Standard Deviations on the Measures of Quality in TEPs

	Theory and Vicarious Experiences		Reflections on Authentic Experiences		Program Coherence		Overall	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Lebanon	2.79	.56	2.53	.68	3.11	.36	2.81	.46
Qatar	2.95	.56	2.41	.72	3.17	.51	2.89	.49
China	2.22	.45	2.04	.59	2.84	.42	2.33	.39

Note. *M* = Mean. *SD* = Standard Deviation.

We found that in each country, pre-service teachers perceived programme coherence to be the strongest contributing factor to the overall quality of their TEP. This

was followed by their exposure to theory in the field of education and vicarious experiences. Finally, of the three factors, pre-service teachers were least likely to feel they received sufficient opportunity to reflect on authentic experiences in their TEP. Additionally, while the means for Lebanon and Qatar tended to be similar on all three factors, they were significantly higher than the means in China. For example, with regards to programme coherence, the mean in Lebanon (3.11) and Qatar (3.17) was notably higher than the mean in China (2.84). The same pattern can be observed with the other two factors.

In order to answer the second research question, we conducted a one-way ANOVA on each factor to determine if the differences in means among countries were significant. As can be seen in Tables 3, 4, 5, and 6, there was a statistically significant difference in the means among the three countries on each factor and overall ($p < .01$).

Table 3

One-Way Analysis of Variance (ANOVA) by Country of Theory and Vicarious Experiences in TEPs

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between groups	2	36.42	18.21	70.11	.00**
Within groups	323	83.88	.26		
Total	325	120.30	.37		

** $p < .01$

Table 4

One-Way Analysis of Variance (ANOVA) by Country of Reflections on Authentic Experiences in TEPs

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between groups	2	15.06	7.53	17.88	.00**
Within groups	323	136.02	.42		

Total	325	151.08	.46
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 $p < .01$

Table 5

One-Way Analysis of Variance (ANOVA) by Country of Program Coherence in TEPs

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between groups	2	7.60	3.80	19.91	.00**
Within groups	320	61.07	.19		
Total	322	68.67	.21		

**
 $p < .01$

Table 6

One-Way Analysis of Variance (ANOVA) by Country of Overall Quality of TEPs

Source	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>p</i>
Between groups	2	22.54	11.27	57.87	.00**
Within groups	323	62.90	.19		
Total	325	85.43	.26		

**
 $p < .01$

Upon closer analysis using Bonferroni's multiple comparison test, we found that, a statistically significant difference existed between Lebanon and China and between Qatar and China on all three factors and for perceived overall TEP quality ($p < .01$). There were no statistically significant differences on any of the factors or overall between Lebanon and Qatar.

Discussion

The purpose of the present study was to identify the extent to which pre-service teachers in Lebanon, Qatar, and China perceived their TEP to be designed around

components indicative of high quality and how such perceptions compared across the countries. An EFA revealed that pre-service teachers' responses to the modified Teacher Education Survey (Hammerness et al. 2014) could be extracted into three new factors: Theory and Vicarious Experiences, Reflections on Authentic Experiences, and Programme Coherence. In all three countries, pre-service teachers rated their TEP highest on Programme Coherence, demonstrating a response to previous calls by researchers and organisations for increased programme coherence in TEPs (Canrinus et al. 2017b, National Research Council 2010). Reflections on Authentic Experiences received the lowest ratings in all three countries, despite their importance in expanding pre-service teachers' pedagogical knowledge and teacher leadership skills (Kazemi and Wæge 2015, König 2013). Further analysis indicated that pre-service teachers in Lebanon and Qatar perceived their TEPs to be designed more around components of high quality than did their counterparts in China, and these differences were statistically significant ($p < .01$).

To answer the first research question, we used the new theoretical framework to further explore responses in each country on the highest-rated factor, Programme Coherence. Following an item-level analysis, we found the highest-rated item in Lebanon was related to clarity of vision in the TEP ($M = 3.25$), while in Qatar, the highest rating item referred to cross-course coherence ($M = 3.37$). In China, the highest-rated item referred to opportunities to apply theories and strategies in their TEP ($M = 3.00$), which is not surprising given that Chinese TEPs tend to offer more active learning opportunities than do TEPs in Lebanon and Qatar (Du et al. 2020). This finding is also indicative of room for improvement in Lebanon and Qatar, particularly given the benefits to pre-service teachers when they witness their teacher educators modelling the

strategies they teach (Canrinus et al. 2017a). For instance, older in-service teachers in Lebanon have been observed to struggle in adopting more modern approaches to instruction (Mattar 2012), such as active or student-centred learning. Therefore, it is important that pre-service teachers are adequately trained in such approaches in their TEPs—through instruction and through modelling—so that when they enter the workforce, they are able to guide their older colleagues in the transition to more student-centred instructional approaches, as well.

Across all countries, participants' lowest-rated item in Programme Coherence related to faculty awareness of what was going on in other courses. Programme coherence is often defined as alignment across courses and a shared understanding among all teacher educators of a common vision (Grossman et al. 2008). Therefore, the seeming lack of awareness among TEP faculty of other courses is concerning as it would be difficult to align courses to one another without faculty awareness as a first step. It is, therefore, important to promote faculty collaboration in TEPs to ensure better cross-course connections as pre-service teachers progress through their coursework. Such initiatives in a previous study have yielded positive results with regards to TEP coherence (Canrinus et al. 2017a).

We also analysed the lowest-rated factor in each country within the Reflections on Authentic Experiences construct. Among those items, pre-service teachers in all three countries indicated they had the most opportunity to do the work that their own pupils would complete. However, they felt they had the least opportunity to examine such work as a teacher. Role-playing as a student is important in allowing pre-service teachers to view situations from multiple perspectives and construct knowledge

accordingly (Kilgour et al. 2015). Nonetheless, the relative lack of opportunity to examine student work from a teacher's perspective is concerning, as such experiences can provide much insight into interpreting the process of children's understanding (Jacobs, Lamb, and Philipp 2010). Therefore, in structuring TEPs with greater quality, it is important that teacher educators incorporate various opportunities for pre-service teachers to familiarise themselves with the act of examining student work: by learning how students' understanding can be extracted by analysing their work, pre-service teachers become better prepared to assess for learning in their own classrooms.

Regarding the second research question, in comparing across countries, the relatively lower scores given by Chinese participants on the survey when compared with their Lebanese and Qatari counterparts warranted further consideration. Specifically, given our familiarity with each of the contexts, Chinese participants may have scored their TEPs more conservatively than did their Lebanese and Qatari counterparts. This hypothesis is supported by previous research. On Likert-style questions, Chinese participants were more likely to give middle responses (e.g., 3 out of 5) than extreme responses (e.g., 5 out of 5), while their peers in countries that are geographically and culturally closer to the Middle East, such as Turkey, have been shown to be equally if not more likely to give extreme responses on such surveys (Harzing 2006). While middle response styles may be attributable to a national tendency toward collectivism (Harzing 2006), others have demonstrated that response styles may instead be predicted more by personal dispositions than by cultural context (He and Van de Vijver 2016; Heine et al. 2002). Therefore, it is difficult to ascertain whether or not cultural response style was a mediating factor in the present study without further investigation.

In addition to response styles, the lower scores of perceived TEP quality in China could also be attributed to the TEP's structure. Specifically, the TEP offered students exposure to educational theory for three years, followed by an opportunity to enact practice in a 10-week practicum experience at the start of their fourth year. The length of the practicum was shorter than the Ministry-recommended semester-long experience (Yan and He 2015). This shortcoming has been noted more broadly in previous research: limited practicum schools and insufficient theory-practice connections have been challenges facing Chinese TEPs, despite attempts at reform by the Chinese Ministry of Education (Yan and He 2015). The lower scores of perceived TEP quality in China corroborated significant issues of Chinese TEP design revealed by previous research: rigid curriculum that follows a model of specialisation, excessive focus on subject training, minimal exposure in field experiences, and insufficient emphasis on teaching skills (Guo 2005, Guo and Pungur 2008, Campell and Hu 2010). In comparison, while TEPs in Lebanon and Qatar face challenges of their own, they both offer courses requiring classroom observations prior to pre-service teachers' fourth-year practicum. With growing concern about the theory-practice gap across the world and TEP's perceived lack of coherence between coursework and fieldwork, as evidenced in the present study, the responsibility for closing this gap falls to TEPs (Grudnoff 2011).

Despite the limitations typical to survey study, including the extent to which pre-service teachers' responses accurately reflected their perceptions, our study suggests several directions for future research. For instance, a mixed-methods study to learn more about pre-service teachers' perceptions regarding their TEP would be useful,

particularly if structured to learn more about specific features they feel their TEP is lacking. Additionally, a longitudinal study in which those same participants are interviewed during their first year of teaching could yield valuable insights. It might also be useful to consider teacher educators' perceptions of the quality of their TEP. Toward that end, further research could be conducted to explore teacher educators' views on the effective implementation of their TEP and challenges they may face

Conclusions and Recommendations

In summary, while pre-service teachers' responses generally indicated cross-cutting similarities in terms of the relative provisions of opportunities in TEPs, each country in the present study also offered varying perceived strengths. By comparing them, we propose the following recommendations in the development of future TEPs or the reforms of current ones. First, increased faculty collaboration around a shared TEP vision could help improve programme coherence by improving a critical component of coherence: cross-course connections (Hammerness and Klette 2015). Additionally, echoing a previous study (Du et al. 2020), countries like Lebanon and Qatar can reconsider the incorporation of more active learning opportunities to allow students to enact the strategies they are learning in their courses. All TEPs should also ensure they are providing opportunities to both experience assignments as a student, and also as a teacher, as the latter provides great insight into students' approach to understanding content (Jacobs et al. 2015). Finally, to reinforce what researchers have been noting for the past decade (Boyd et al. 2009, Cabaroglu 2014), TEP structures as a whole must be reconsidered to provide sufficient opportunity to bridge the theory-practice gap. Much of this comes down to the provision of more practicum hours and more opportunity to

engage in quality reflections (El-Abd and Chaaban 2020, Grossman et al. 2008), thereby contributing to the development of pre-service teachers as more reflective practitioners, a skill that can be improved through observation and experience (Kayapinar 2016). By so doing, TEPs better equip pre-service teachers for the transition from coursework to the profession, the literal crossing of the theory-practice gap.

Declaration of Interest

The authors indicate no conflict of interest in the presented research.

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