

Preparing novice principals in Australia and Turkey: How similar are their needs?

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Abstract Part of a 13-nation, cross-cultural study of the extent to which principals perceive their pre-appointment experiences had prepared them for the job, the International Study of Principal Preparation (ISPP), this paper compares the responses of novice principals in Turkey and Western Australia. Using a survey based on data from case studies of principals in their first 3 years, the views of 50 Western Australian and 60 Turkish principals were examined in terms of the difficulty of the problems they faced and the extent to which they felt prepared for these problems. Responses were analysed by sex, qualification, age at appointment, school size, and school location. Respondents from both countries found that managing the budget and achieving work/life balance presented challenges for them while working with parents and acquiring adequate resources were not challenging. For Turkish respondents, building positive relationships with staff was more challenging than it was for the Australian respondents. Surprisingly respondents felt well prepared for the tasks they faced, with Australians, females, principals of small schools in rural and remote locations reporting significantly more positive views about their preparation than their counterparts.

Keywords School principal preparation · International comparison · Rasch measurement

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1 Introduction

It has become increasingly clear that principal leadership is a key factor in school improvement. It is also clear that principals are expected to manage schools effectively in the face of multiple and varied competing pressures. As we have indicated previously (Wildy et al. 2007), the need to focus on the preparation of principals professionally and psychologically for the role can be demonstrated in four clear ways. First is the potential impact of principal leadership in schools and its connection with student achievement (Walker and Qian 2006). In this connection, one especially robust finding of the research into school effectiveness is the importance of leadership in facilitating school improvement (Rutter et al. 1979).

Secondly, the importance of preparing principals effectively for the role is amplified by the increasing complexity of exercising school leadership. The new work of educational leaders and especially school principals has been well-documented in the literature (Cranston 2007; Grace 1995; Gronn 2003) highlighting that the shift towards school-based management places new demands of autonomy, efficiency and accountability on the principal. The challenges integral to principals' work are often seen as a deterrent to those who might have been aspiring to the role, which presents a third important reason for examining the efficacy of principals' preparation more closely. In many Western countries there is evidence of employers experiencing difficulty in attracting leaders to the principalship because potential aspirants perceive the role as daunting (d'Arbon et al. 2002; Draper and McMichael 2000). This succession problem, however, does not appear to be such a significant issue in Turkey where a more formalized approach to selecting school principals is used, based on an examination and augmented by qualifications and experience (Cerit 2009).

A fourth reason for devoting attention to the preparation of principals is suggested by the burgeoning literature on beginning the principalship. It is becoming clear that for many there is considerable adjustment required in becoming a principal, a process that involves relinquishing the comfort and confidence of a familiar teaching role and embracing the discomfort and uncertainty of the new role of principal (Browne-Ferrigno 2003; Crowe 2007). It is also clear that new principals tend to perceive their role as more complex than initially anticipated especially in its tendency to involve dealing with tensions and dilemmas in their decision-making (Clarke and Wildy 2004; Clarke, et al. 2007; Day et al. 2001; O'Brien et al. 2003). These observations are reiterated in other studies reporting that novice principals found unexpected challenges in defining their role, managing their time, being isolated from peers, and encountering negative interaction with parents and community members (Begley 2000). It seems, therefore, that an initial process of learning and reflection is not only required for facilitating socialisation into the new role, but also needs to be balanced with developing principals' capacity to contend with the role's complexity.

How principals are prepared in different contexts and how well their preparation fulfills their needs in their first 3 years is the focus of the International Study of Principal Preparation (ISPP <http://www.ucalgary.ca/~cwebber/ISPP/index.htm>). The ISPP is based on the premise that 'principal preparation is a crucial aspect of school development and progression, and that programs of preparation should have positive

outcomes for those who undertake them’ (Cowie and Crawford 2007 p. 129). This cross-continent study involves researchers and newly appointed principals from Australia, Canada, China, England, Germany, Jamaica, Mexico, New Zealand, Scotland, South Africa, Tanzania, Turkey, and the United States. As Cowie and Crawford (2007) report, the ISPP aims to examine ‘the utility of principal preparation programs for novice principals in our different contexts, the differences and the similarities, and see what lessons we can learn from each other’ (p. 129–130). So far, the ISPP reinforces findings from other studies about the large variation in principal preparation among countries (Karstanje and Webber 2008; Onguko et al. 2008; Thody et al. 2007; Wildy and Clarke 2008; Wildy et al. 2007; Yan and Ehrich 2009).

The study reported in this paper compares and contrasts the challenges faced by novice principals in two of the ISPP sites—Australia and Turkey—in their first 3 years of appointment and the extent to which these novice principals believe they were adequately prepared to meet these challenges. The study also examines the psychometric properties of a survey instrument designed to measure the perceptions of principals about the problems they face and the adequacy of their preparation. Our research methods are based on the belief that rich understanding of the challenges faced by principals can best be garnered by engaging directly with the principals at their place of work. Our approach involves synthesising the views and perceptions of principals about their own professional experiences in the field.

An earlier publication (Wildy et al. 2007) shows that principal preparation in Western Australia resembles the processes adopted in Mexico more closely than it resembles the preparation of principals in either Scotland or England. Specifically, the preparation consists of a one or 2 day induction conference. The current study will show not only whether the issues faced by Australian novice primary principals are similar to those experienced by their peers in Turkey but also the extent to which they felt they were prepared to deal with them. Such evidence might provide compelling argument for strengthening the programs offered to those who take up the position of leadership especially in times of social, environmental and economic difficulty.

2 Context: The Australian case

Australia is a diverse society. Its approximately 22 million people are mainly of European background and recent immigration has increased its ethnic and cultural diversity, especially from Asia. About 3% of Australians are of Indigenous descent and one-third of these people live in isolated communities. The Australian continent covers 7.7 million square kilometres, roughly the size of China or the United States or Europe. Much of this area is extremely arid and most people live in the southeast of the country. Australian society is highly urbanized: two-thirds of the population lives in cities of more than 100 000 people. Western Australia,—which constitutes one-third the landmass of the country,—has a population of only 2 million, three-quarters of whom live in the capital city, Perth. One quarter of its schools are very small (under 100 students) and are located in rural and remote areas. Such isolation creates challenges in attracting leaders and teachers and providing adequate support

to isolated schools. Principals of small schools are mostly in their first appointment; they have teaching responsibilities as well as leadership and administrative roles; they are usually professionally and physically isolated; and face the challenges of conservatism and sometimes poverty and disadvantage (Clarke and Wildy 2004) and even crisis (Kilpatrick et al. 2002) that occurs in small and isolated communities particularly in indigenous communities (Boston 1999).

Under the Australian Constitution, education is a constitutional power of each of its six States and two Territories within which education is provided by three sectors: the state/territory government; a Catholic Education authority; and an independent sector. Overall, state government schools enroll 68% of students. Of the 9 579 schools in Australia in 2007, 6 851 were government and 2 728 were non-government (MCEETYA 2007). Primary schools comprised 68% of schools and 16% were secondary schools. A further 12% were combined primary and secondary schools and 4% were special schools. There were nearly 3.5 million full-time students attending schools across the board.

For more than 20 years, each Australian State and Territory has pursued policies to restructure its once highly centralized bureaucratic government educational authorities. The shift towards greater autonomy, efficiency and accountability that has characterised such school-based management has placed demands on the principal (Wildy and Loudon 2000), not only for finance and staffing but also school development (Christie and Lingard 2001). Principals are no longer only required to implement decisions made by central office (McKenzie et al. 2007) but their work is becoming increasingly complex and contradictory (Dempster et al. 2001). While it is expected that principals focus on leading teaching and learning, managerial demands continually distract them from this role (Watson 2007).

Australia has for some years dabbled with a national approach for soliciting, improving and assuring the quality of school leaders (APPA et al. 2003). Historically Australia has been characterized by a distinct absence of not only national collaboration in preparing, developing and supporting school leaders but also any coherence within a single educational authority (Caldwell et al. 2003). However, even by 2009, no State or Territory has implemented or even proposed a preparation program for principals prior to appointment. Indeed, preparation for the principalship across Australia is left largely to chance and even in-post development is a matter of picking up, serendipitously, the tricks of the trade from colleagues (Wildy et al. 2007).

3 Context: The Turkish case

In contrast to Australia, Turkey ranks seventh in the world in terms of population density with its 70.5 million people comprising 1.2% of the world's population (2007 census). Young people between the ages of 6 and 21, the years of formal education, constitute 29% of this population (TurkStat 2008). Compulsory education is delivered in primary school for the children aged from 6 to 14. Secondary education is provided in general, vocational and technical education institutions offering at least 4 years of education for those who have completed primary education. General secondary education is provided in general high schools,

Anatolian high schools, science high schools, Anatolian teacher high schools, Anatolian fine art high schools, social science high schools, sports high schools and multi-programmed high schools. In 2008, there were 315 887 schools for Turkey's approximately 11 million primary aged students and 8 280 schools for over 3 million secondary students. Most of these are found in Turkey's developed regions or cities (Eurydice 2008; TurkStat 2008).

Education in Turkey is centralized. The Turkish Ministry of National Education (MoNE) moulds the educational landscape in schools (Aslan et al. 2008). Since legislative arrangements at different levels are centrally realized, the MoNE makes all policy decisions and controls implementation. The organizational structure of the MoNE encloses organizational units established in 81 provinces and 850 districts. Each province has one provincial national education directorate and each district has one district national education directorate. These directorates are responsible for executing all educational services at provincial/local levels. The district national education directorates are responsible to provincial national education directorates with respect to functions and services. In line with the public administration structure and functioning in Turkey, all private and public schools and institutions at pre-primary, primary and secondary education levels are hierarchically affiliated to the province and district national education directorates which implement the resolutions adopted by the MoNE at local levels. Restructuring Turkey's education system has been debated for some years. The Eighth Five Year Development Plan and the 15th National Education Council highlighted issues such as undertaking new structuring in the provision of services; commissioning of the central organization of the Ministry with strategic planning at the macro level; determination of curricula; and transferring the authority and responsibility for other issues to the provincial units of the Ministry and local administrations.

School management in Turkey is also centralized. Principals are responsible to local education directorates for general functions and services of MoNE and centrally realized legislative arrangements at different levels. Principals are representatives of the central authority at the school level. Not only is restructuring on the agenda, but also the current state of educational administration in Turkey is being debated. As Isik (2003) states, "there has been a separation between the study of educational administration at universities and its practice in the schools:..." "There were no links between academic programs designed to prepare school administrators and the employment policies for the principalship" (p. 261). MoNE does not take the graduates of educational administration programs of universities into account while employing principals or promoting teachers to the principalship. The basic requirement for appointment to the principalship has been a minimum of 3 years of teaching experience. Recently, however, prospective state school principals have been required to complete a pre-service administration program of 120 hour education (Isik 2003).

We chose the two countries—Australia and Turkey—because of the similarities in the preparation of their school principals. Unlike other countries participating in the ISPP, for example, England and Scotland, principals in Australia and Turkey take up their first appointments in the principalship without any formal preparation program. This is particularly the case for novice principals in Western Australia where this study was conducted.

4 Methods

The study reported in this paper is part of a larger International Study of Principal Preparation (ISPP) that is now in its fifth year. The first part of the ISPP was a mapping of existing preparation programs in each of the partner countries. The second part of the ISPP was a series of case studies of newly appointed primary principals aimed at identifying and describing the challenges and dilemmas faced by novice principals in their first 3 years. The study reported here is the third part of the international project. Based on the findings of the international case studies a survey was developed. Issues associated with the validation of this instrument are reported in Wildy and Clarke (2009). The English version of the survey was administered to 50 novice principals in Western Australia, during late 2008–early 2009. The response rate for the Western Australian sample was 90%. The survey was translated into Turkish and administered to 60 novice primary principals in three cities of Turkey early in 2009. The response rate for the Turkish sample was 98%.

The survey was designed as a common instrument to investigate those aspects of principals' work perceived to be most challenging in the early years in the position and the extent to which principals believe they were prepared for these challenges. The survey contains three main sections. The first section comprises 10 items that seek biographical details about the respondents and information about their schools. The second section includes 20 items that refer to those aspects of principals' work identified in case studies to be especially challenging. These items have been clustered according to four key categories of challenges facing the novice principals: dealing with place; dealing with people; dealing with system; and dealing with self (Wildy and Clarke 2008). The design of the survey requires two responses for each of the 20 items according to a four point Likert scale (strongly agree; agree; disagree; strongly disagree): first, an evaluation of the extent to which the aspect of principals' work represented by the item was problematic in the first 3 years of the respondents' appointment; and second, the extent to which the respondent felt adequately prepared before appointment for this aspect of principals' work. (Although a "don't know" option was included, such responses were treated as missing data as research has shown it does not form part of the response continuum (Linacre 2002). There were few instances of missing responses in this data set.) The third section of the survey seeks to identify, on 10 bipolar continua, characteristics of the learning experiences of respondents prior to taking up their current principal position. The survey concludes with three open questions inviting responses about the nature of the preparation received prior to appointment as a principal and the usefulness of that preparation. For this report, two sets of data were considered as separate scales:

1. Responses to statements about possible problems faced by principals; and
2. Responses to statements about the extent to which the principals consider they were prepared to deal with these possible problems.

The data were examined using the Rasch measurement model for dichotomous data (Andrich 1988; Rasch 1960/1980; Wright 1999). The Rasch model is used to establish the internal consistency and reliability of scales in a wide range of disciplines in the social science and medical fields. The first step in the analysis is to

address the question of whether each scale may be accepted as constituting a single variable, that is, the construct validity of the items. The second step is to establish whether the items show invariance of relative difficulty across locations for both countries. According to the Rasch model, if such invariance is demonstrated, then the scales measure the same construct in each country. This invariance was checked using the Differential Item Functioning (DIF) facility available in the computer software used for the analysis, namely, RUMM2020 (Andrich et al. 2005). A major advantage of the software is the interactive nature of its presentation that is consistent with the need to consider multiple indicators of fit to the model. No single statistic is necessary or sufficient to establish the quality of the variable being scrutinised. The software provides a range of indices at different levels of diagnosis of the psychometric properties of the scales and the persons assessed. Using these, it is possible to examine the characteristics of sets of items as well as individual items, and groups of people as well as individuals (Andrich et al. 2005).

The psychometric properties of each of these scales are now reported in turn. These sections are followed by an analysis of substantive questions relating to the scales. Note that the sample size is a little small for some of the analyses, so results should be treated with caution.

5 Data analyses

5.1 The problem scale

A high score on the Problem scale is associated with a high level of perceived problems. All items except one discriminated well on this scale for this group of respondents. The log residual and item-trait interaction tests of fit after significant DIF in one item was removed from the scale are shown in the [Appendix](#). The only item showing poor fit according to the item-trait interaction test of fit was item P14 (*coping with public visibility*), ($\chi^2=8.011$, $p<0.018$). This item tended not to discriminate amongst middle and high-scoring persons. The item Characteristic Curve (ICC) for this item is shown in Fig. 1. However, it was retained in further analyses as it constitutes only about 5% of all items: its performance will be monitored in future data sets.

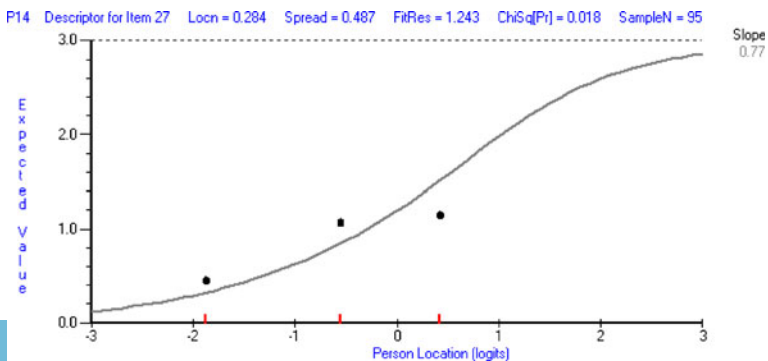


Fig. 1 ICC of least well-fitting item: *coping with public visibility* (P14)

We then checked the ways the items performed for respondents with various demographic profiles. There was no differential item functioning (DIF) by any person factor (that is, by Sex, Qualification, School Size, Age and School Location) except for one item *building positive relationships with staff* (P07). This item showed DIF by Country, that is, it was qualitatively different for persons from each Country. Figure 2 shows that Turkish respondents, regardless of their overall scores on all items found that *building positive relationships with staff* was more challenging than Australian respondents with the same total scores. This item was then split into two items—one for Australian (P07A) and for Turkish (P07T) respondents, and both items retained in analyses (Tennant et al. 2004).

We noticed that a number of items showed item dependency, that is, one of each pair is redundant. For example, *understanding the culture of the community* and *developing relationships within the community* have a residual correlation of 0.33. The two items *dealing with poorly performing staff* and *building positive relationships with staff* are even more closely related (correlation 0.61). We decided to retain data from all items even though the reliability is thereby rendered artificially high, because evidence from more data in the future would provide a sounder basis for omitting or retaining items. The Person Separation Index (reliability) was 0.899. Analysis of subscales formed on the theoretical basis of four subscales—dealing with place, dealing with people, dealing with self, and dealing with system, supported the presence of these subscales to some extent (the Person Separation Index decreased from 0.899 to 0.702). However, because the fit of all items together indicated a meaningful single variable at this level of scale, we recommend that all items be used to obtain measures of general levels of problems. A profile of scores on four subscales may be used if more specific information on particular types of problems is required.

The distributions of item and person locations are shown in Fig. 3. Relative to the location of the items, some person locations are low. In other words, it is relatively difficult for these respondents to agree that many aspects are a problem. Groups of persons with the lowest locations (low levels of perceived problems) are not being measured as reliably as the majority of participants, because few items are targeted at them. The survey does not include sufficient items referring to matters that these principals may think were problems for them. We conclude that for these

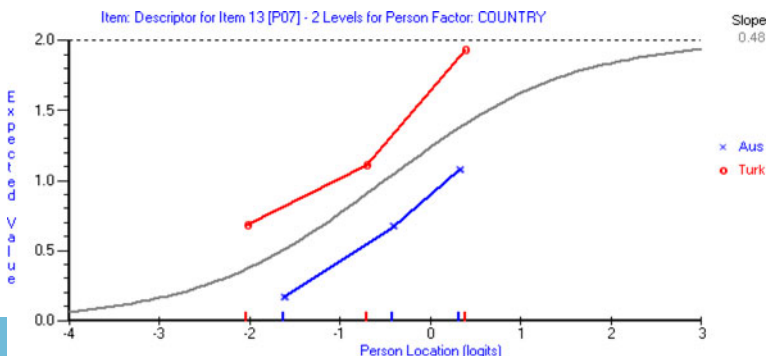


Fig. 2 DIF by Country on item *building positive relationships with staff*

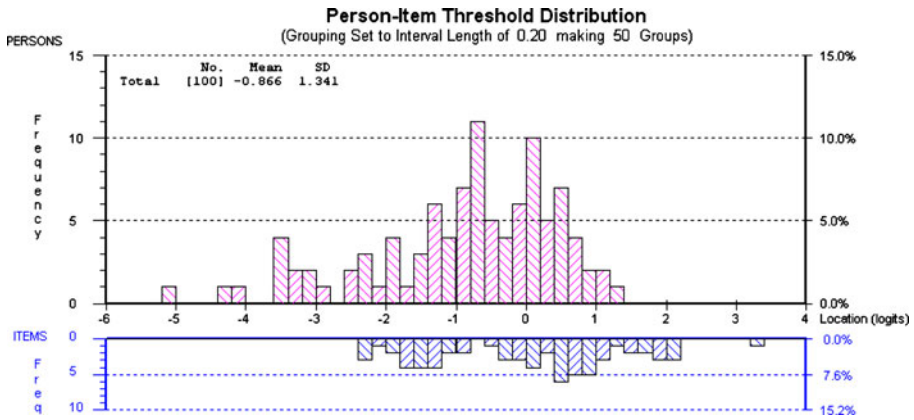


Fig. 3 Distribution of item thresholds and person locations on the Problems Scale

Table 1 Relative item locations for problems scale from most to least problematic

Item	Location (logits)	Std Error	Item content
P7T	-1.294	0.237	Building positive relationships with staff
P21	-0.945	0.181	Managing the school budget
P15	-0.612	0.144	Achieving a work/life balance
P06	-0.371	0.135	Dealing with poorly performing staff
P22	-0.295	0.151	Securing appropriate staff
P09	-0.171	0.155	Handling conflict
P03	-0.080	0.148	Feeling credible in the community within which my school is based
P12	-0.030	0.139	Adjusting to the isolation of the position
P08	-0.027	0.155	Enhancing capacity of staff
P13	-0.021	0.151	Feeling confident as the school's leader
P11	0.004	0.155	Organizing my time
P17	0.006	0.148	Managing paper work
P19	0.124	0.159	Balancing system imperatives with local needs
P05	0.143	0.151	Sustaining school improvement initiatives
P16	0.161	0.18	Applying system policies
P18	0.238	0.18	Getting access to system personnel
P04	0.248	0.149	Initiating school improvement
P14	0.284	0.148	Coping with public visibility in my day-to-day work
P7A	0.333	0.26	Building positive relationships with staff
P02	0.429	0.168	Developing relationships within the community in which my school is based
P01	0.438	0.167	Understanding the community in which my school is based
P10	0.546	0.164	Working with parents
P20	0.892	0.196	Acquiring appropriate resources

respondents the items are not well targeted at all levels, but the targeting for the majority of respondents is good.

Table 1 shows the relative item locations for the items in increasing order of intensity. The items that are perceived as being the most problematic for principals (many can agree these are problems) are those at the low (negative) end of the scale such as *managing the school budget* and *achieving a life/work balance*. Respondents find it relatively easy to agree they are problems. Items at the high end of the scale, such as *working with parents* and *acquiring resources*, are relatively less problematic for most principals. For Turkish respondents, *building positive relationships with staff* is seen as more of a problem than it is seen by Australian respondents.

ANOVA analyses (with Bonferroni adjustments where necessary) were conducted to compare mean locations of different groups of people. There were no significant differences for the various age of principals, the qualifications of principals, or the location of their schools. However, there were found to be statistically significant differences amongst means for Country, Sex and School Size. On average, Australian principals regarded issues as more problematic than did the Turkish principals. Females reported aspects to be more problematic, on average, than males did. Principals of smaller schools reported aspects to be more problematic than principals of larger schools.

5.2 The preparation scale

A high score on the preparation scale is associated with a high perceived level of preparation, that is, high scorers felt they had more adequate preparation to deal with the problems they faced. All items except one (AP17) were considered to have acceptable fit and were retained in further analyses. Relative to all other items, Item AP17 (*managing paperwork*) tended not to discriminate across the total score range ($\chi^2=20.183, p<0.001$), but again is retained until further evidence is available from a larger sample. Item AP18 showed slight misfit (item-trait interaction) but much less than AP17. The log residual and item-trait interaction tests of fit (after significant DIF was removed) are shown in the [Appendix](#). We then checked the ways the items performed for respondents with various demographic profiles. There was no differential item functioning (DIF) by any person factor (that is, by Sex, Qualification, School Size, Age and School Location) except that two items showed DIF by Country. When, firstly, item *managing the school budget* (AP21) was split into two items (one for each Country) and then *dealing with poorly performing staff* (AP6) was also split, there was no further DIF by Country.

The Item Characteristic Curves (ICCs) for the two Country groups on Item AP21 are shown in Fig. 4. Turkish principals tend to endorse this item more than Australian principals do, even though they have the same total scores on the set of items as a whole. This means that Turkish principals consider themselves less prepared to manage their school budgets than Australians do, even when they have the same overall levels of feeling prepared.

Again, a number of items showed item dependency, that is, one of each pair is redundant. Once again, *understanding the culture of the community* and *developing relationships within the community* are dependent, with a residual correlation of 0.46. The two items *dealing with poorly performing staff* and *building positive*

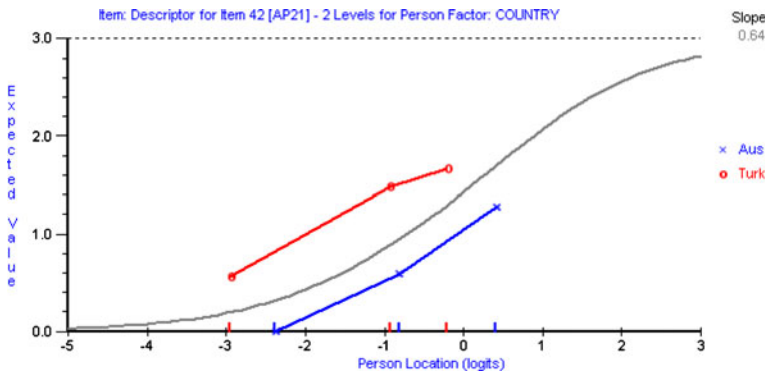


Fig. 4 DIF by Country: item *managing the school budget* (AP21)

relationships with staff have a residual correlation 0.31. At this stage, no action was taken in regard to this problem, though it does mean that the reliability is artificially high as a result of these dependencies. The Person Separation Index (the reliability) was 0.929. A subtest analysis using the same theoretical groupings as for the problems scale resulted in a decrease in the person Separation Index from 0.929 to 0.822. This decrease supports the presence of subscales to some extent. However, again, this relative small decrease and the good fit of the items altogether leads us to conclude the items as a whole represent a single meaningful variable. We recommend the use of all items to obtain a measure of persons’ perceived levels of preparation in general, with the use of scores on subsets of the items if information on specific aspects of preparation is required.

The distributions of item thresholds and person locations are shown in Fig. 5. As may be seen, this scale is not targeted to people at the lowest locations (those who feel least well prepared) as well as it might be. A group of about 15 persons with the lowest locations are not being measured as reliably as the majority of participants, because few items are targeted at them. The people in this group do not feel well-prepared for their role as principals. A high location means a person felt better prepared to deal with problems. A majority of this group of principals report feeling well-prepared to deal with problems.

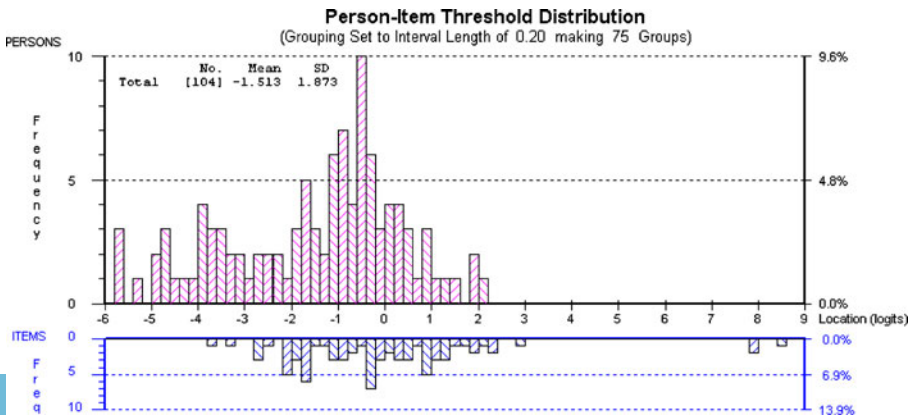


Fig. 5 Distribution of items and person locations on the Preparation Scale

Table 2 shows the item locations for this scale in increasing order of intensity, that is, the lowest locations denote items on which people felt most well-prepared and those with high locations indicate items on which people felt least well-prepared. Principals, on the whole, seem to consider themselves well-prepared, for example, to *understand the local community, build relationships in the community and feel credible in that community*. They feel less well prepared to *apply system policies, balance these with local imperatives, acquire resources and achieve a work-life balance*. Relative to Australian principals, Turkish principals consider they are better prepared to *manage the school budget*. Australian principals feel less well-prepared to do so. The same is true of *dealing with poorly performing staff*—Australians feel less well-prepared to do so than Turkish principals.

5.2.1 Comparisons of groups

We then compared mean locations for various groups of people. Age and Qualification were not significant factors. However, each of Country, Sex, School

Table 2 Item locations for the preparation scale in increasing order of intensity

Item	Location (logits)	Std Error	Item content
AP6T	-1.348	0.218	Dealing with poorly performing staff
AP21T	-1.247	0.240	Managing the school budget
AP01	-0.782	0.168	Understanding the community in which my school is based
AP07	-0.675	0.155	Building positive relationships with staff
AP03	-0.582	0.161	Feeling credible in the community within which my school is based
AP22	-0.578	0.176	Securing appropriate staff
AP02	-0.540	0.175	Developing relationships within the community in which my school is based
AP14	-0.494	0.155	Coping with public visibility in my day-to-day work
AP08	-0.457	0.164	Enhancing capacity of staff
AP10	-0.431	0.16	Working with parents
AP09	-0.359	0.165	Handling conflict
AP12	-0.287	0.156	Adjusting to the isolation of the position
AP05	-0.234	0.168	Sustaining school improvement initiatives
AP13	-0.116	0.164	Feeling confident as the school's leader
AP18	-0.065	0.175	Getting access to system personnel
AP17	-0.055	0.172	Managing paper work
AP04	-0.013	0.167	Initiating school improvement
AP11	0.175	0.161	Organizing my time
AP15	0.285	0.183	Achieving a work/life balance
AP19	0.352	0.201	Balancing system imperatives with local needs
AP21A	0.850	0.200	Managing the school budget
AP20	1.872	0.196	Acquiring appropriate resources
AP16	2.317	0.188	Applying system policies
AP6A	2.412	0.277	Dealing with poorly performing staff

Size and School location showed statistically significant differences amongst means on the Preparation scale. Australian principals reported feeling better prepared overall than Turkish principals did. Females felt better prepared than males felt. People in smaller schools felt more prepared than those in larger schools. Rural and Remote people felt more prepared than City people.

5.2.2 Comparison of order of items for two scales

Table 3 shows the order of items for each of the two scales, Problems and Preparation. Items ranked first in the table for the Problems scale were most challenging for these novice principals; those items ranked towards the end of the table were least challenging for these novice principals. The Turkish principals found

Table 3 Ranking of problem items and preparation items from most to least

Problems in order of most to least problematic	Preparation in order of most to least well prepared
Building positive relationships with staff T	Dealing with poorly performing staff T
Managing the school budget	Managing the school budget T
Achieving a work/life balance	Understanding the community in which my school is based
Dealing with poorly performing staff	Building positive relationships with staff
Securing appropriate staff	Feeling credible in the community within which my school is based
Handling conflict	Securing appropriate staff
Feeling credible in the community within which my school is based	Developing relationships within the community in which my school is based
Adjusting to the isolation of the position	Coping with public visibility in my day-to-day work
Enhancing capacity of staff	Enhancing capacity of staff
Feeling confident as the school's leader	Working with parents
Organizing my time	Handling conflict
Managing paper work	Adjusting to the isolation of the position
Balancing system imperatives with local needs	Sustaining school improvement initiatives
Sustaining school improvement initiatives	Feeling confident as the school's leader
Applying system policies	Getting access to system personnel
Getting access to system personnel	Managing paper work
Initiating school improvement	Initiating school improvement
Coping with public visibility in my day-to-day work	Organizing my time
Building positive relationships with staff A	Achieving a work/life balance
Developing relationships within the community in which my school is based	Balancing system imperatives with local needs
Understanding the community in which my school is based	Managing the school budget A
Working with parents	Acquiring appropriate resources
Acquiring appropriate resources	Applying system policies
	Dealing with poorly performing staff A

building positive relationships with staff to be the most challenging, and both Australian and Turkish principals in our study found *managing the school budget* and *achieving a work/life balance* to be most challenging. At the other end of this scale, *acquiring appropriate resources* and *working with parents* were found by both groups to be least challenging.

Items ranked first in the table for the Preparation scale are those for which these novice principals felt well prepared; items ranked towards the end of the table are those for which these novice principals did not feel well prepared. Curiously, *dealing with poorly performing staff* was found to be the challenge for which Australian principals felt least well prepared but Turkish principals felt most well prepared. Similarly, *managing the school budget* was among those challenges that Australians felt least well prepared but Turkish principals felt most well prepared. However, both groups considered they were well prepared for *understanding the community in which my school is based*, *feeling credible in the community within which my school is based*, and *building positive relationships with staff*. Similarly, both groups felt they were relatively less adequately prepared for the challenges of *acquiring appropriate resources*, *balancing system imperatives with local needs*, *applying system policies*, and *achieving a work/life balance*.

Items related to dealing with *Place*—*understanding the community in which my school is based*, *developing relationships within the community in which my school is based*, *feeling credible in the community within which my school is based*, *initiating school improvement*, and *sustaining school improvement initiatives*—are not considered to be serious challenges. *Understanding the community in which my school is based* is one of the aspects of the job that neither Australian nor Turkish respondents felt to be a challenge for them. Principals felt they were relatively well prepared for these challenges. *Understanding the community in which my school is based* is one of the aspects of the job that both Australian and Turkish respondents felt best prepared to undertake.

Items related to dealing with *People*—*working with parents*, *building positive relationships with staff*, *handling conflict*, *dealing with poorly performing staff*, and *enhancing the capacity of staff*—are spread across the Problem scale with a cluster of three of them at the ‘most problematic’ end. *Dealing with poorly performing staff* is a serious challenge for all respondents. However, *working with parents* is one of the least problematic aspects of the job for all respondents. These are challenges considered to be variable in their seriousness, but they are middle ranked for degree to which principals felt prepared. The exception is *dealing with poorly performing staff* for which the Australian principals felt least well prepared and the Turkish principals felt most well prepared.

Items related to dealing with *Self*—*organizing my time*, *feeling confident as the school’s leader*, *coping with public visibility in my day-to-day work*, *achieving a work/life balance* and *adjusting to the isolation of the position*—lie in the ‘most problematic’ part of the Problems scale but one, *achieving a work/life balance*, is regarded as a serious problem by all respondents. However, these items appear at the high end on the Preparation scale, that is, these are challenges for which principals felt least well prepared. Most notably, the challenges of *organizing my time* and *achieving a work/life balance* are those for which neither the Australian principals nor the Turkish principals felt adequately prepared.

Items related to dealing with the *System*—*applying system policies, acquiring appropriate resources, balancing system imperatives with local needs, managing paperwork, and getting access to system personnel*—appear in the middle of the Problems scale, except *managing the school budget* which is an aspect of the job that all respondents felt was a serious challenge for them. On the Preparation scale, these are challenges for which principals feel less prepared, particularly the Australian respondents.

In summary, aspects relating to *Place* tend to provide less challenge and principals in this sample feel well prepared to deal with them. Aspects relating to *System* tend to provide the most challenge and principals feel least prepared for them. Those aspects relating to both *People* and *Self* are considered challenging and these principals do not feel sufficiently well prepared to deal with those relating to *Self*. The exception to the general pattern is the *People* item *dealing with poorly performing staff* for which Turkish respondents felt well prepared but Australian respondents identified as the aspect of their work for which they felt least prepared.

5.3 Correlational analyses

When the entire sample of both Australian and Turkish principals are considered, the correlation between the person locations on the Problems Scale and the Preparation Scale was 0.53 ($p < 0.01$). This suggests that those principals who tended to identify aspects as problems also tended to consider they were adequately prepared. Conversely, those who do not think problems were severe also tended to think they were not adequately prepared for them.

A stepwise linear regression analysis with the Preparation Scale as the dependent variable (57% of variance accounted for) showed Country to account overwhelmingly for most of the variance, followed by Age of appointment (negative contribution), Problems Scale, Sex, and Size of School (negative contribution). The regression equation showing the beta weightings for each factor was as follows:

$$\text{Preparation scale} = -0.59 \text{ Country} - 0.28 \text{ AppointmentAge} + 0.20 \text{ Problems Scale} \\ - 0.18 \text{ SchoolSize} + 0.19 \text{ Sex}.$$

In other words, feelings of adequate preparation are predicted best by Country (Australians feeling better prepared), Age at appointment (younger ages feeling better prepared), Severity of problems encountered (those with more severe problems feeling better prepared), School Size (principals of smaller schools feeling better prepared), and Sex (females feeling better prepared).

6 Discussion and conclusion

This study is the first application of the survey instrument derived from case studies in an earlier phase of the International Study of Principal Preparation (ISPP). We set out to discover the extent to which a sample of principals in two countries had

similar preparation needs. Despite experiencing no formal targeted or mandated preparation program, principals come to the job with an array of life experiences, including an academic qualification and teacher preparation, teaching experience, and knowledge of the educational authority by whom they are employed. Therefore, in this study we do not seek to comment on the quality or relevance of the preparation programs that participants undertook prior to their appointment, as other partners in the ISPP may do. We do comment, though, on the extent to which these novice principals believe their accumulation of experiences made them ready to deal with aspects of their work identified in the earlier case studies to be challenging for novice principals in the ISPP contexts.

Our analysis indicated that the aspects for which these novice principals felt least prepared are those aspects which they found most challenging. Aspects of the job relating to the place—the community—present least challenge. Aspects relating to the system and its policies and provisions present the greatest challenges for which they are least prepared. Aspects relating to people and the self were also challenging and for these they feel less than adequately prepared.

When we examined the data in terms of the principals rather than aspects of the job, we found that those who felt better prepared were Australian novice principals (rather than their Turkish counterparts), younger (rather than older) novice principals, those who experienced more severe (rather than less severe) problems, principals of smaller (rather than larger) schools, and the female novice principals (rather than the males). The most interesting point here is that those who perceived the work to present the most serious challenges were those who felt better prepared. We interpret this finding to suggest that feeling well prepared to do the job might be associated with understanding the complexity and hence the challenge of the job. Conversely, those who feel under-prepared may have a weaker understanding of the job's complexity. In other words, we suggest that the better principals are prepared the more likely they may be to problematise their work.

However our argument is tentative because none of the principals in this study has experienced formal, targeted, preparation programs that are designed to tackle and confront the challenges of the job. For example, aspirant principals in neither country have the opportunity to explore, debate or role play the variety of challenging situations that confront novice and experienced principals alike. Such opportunities are available in preparation programs like New York City Leadership Academy's Aspiring Principal Program (New York City Leadership Academy 2009) and the National Professional Qualification for Headship offered by the National College for Leadership of Schools and Children's Services (NCLSCS 2009).

Australia and Turkey share histories of highly centralised education systems as well as an absence of mandated pre-appointment preparation for principals. However, principals who responded to our survey do not feel unprepared for their first years in the job. For some—particularly younger, female, novice principals of small schools in Western Australia—their previous life experience together with their learning on the job may help them recognise the complexity and challenge of the job.

As we have demonstrated throughout the analysis of our data, the survey instrument we have used appears to be robust for the samples for which we have

data. However, we conclude with two cautions. Firstly, this study involves two countries with similar preparation profiles. The results presented here should be interpreted in relation to each other. For example, relative to the Turkish principals, those in Australia felt more adequately prepared. We anticipate that the inclusion of data from other partner countries involved in the ISPP, especially England and Scotland, will generate increased variation in sample and relatively different positioning of the Australian and Turkish data. Secondly, and finally, we stress that there are no formal principal preparation programs offered to aspiring principals in the Australian and Turkish jurisdictions involved in this study. It is likely that neither principals nor their superordinates have a rich appreciation of what preparation programs entail or offer with consequent limiting of the notion of being ‘well prepared’.

Appendix

Log residual and item-trait interaction fit statistics for the Problems Scale

Item	Location	SE	Fit Resid	df	Chi Sq	df	Probability
AP21A	0.85	0.20	-0.24	40.87	0.22	2	0.898
AP09	-0.36	0.17	0.06	75.38	0.36	2	0.837
AP07	-0.68	0.16	0.41	73.57	0.44	2	0.803
Ap6A	2.41	0.28	-0.23	39.96	0.79	2	0.673
AP6T	-1.35	0.22	-0.62	37.24	0.94	2	0.624
AP19	0.35	0.20	-0.22	73.57	0.98	2	0.613
AP13	-0.12	0.16	0.24	73.57	1.08	2	0.583
AP12	-0.29	0.16	0.57	79.93	1.30	2	0.521
AP02	-0.54	0.18	-0.56	72.66	1.31	2	0.520
AP08	-0.46	0.16	-0.82	70.84	1.60	2	0.450
AP16	2.32	0.19	-0.39	73.57	1.83	2	0.402
AP10	-0.43	0.16	-0.14	73.57	2.00	2	0.368
Ap21T	-1.25	0.24	0.67	41.78	2.32	2	0.313
AP11	0.18	0.16	-1.08	74.48	3.12	2	0.210
AP22	-0.58	0.18	1.86	77.2	3.18	2	0.204
AP05	-0.23	0.17	0.82	71.75	3.25	2	0.197
AP15	0.29	0.18	-0.12	70.84	3.29	2	0.193
AP14	-0.49	0.16	-1.67	74.48	3.44	2	0.179
AP03	-0.58	0.16	1.47	73.57	4.44	2	0.109
AP01	-0.78	0.17	0.63	75.38	5.36	2	0.069
AP04	-0.01	0.17	-0.65	72.66	5.51	2	0.064
AP20	1.87	0.20	-1.13	79.02	6.35	2	0.042
AP18	-0.07	0.18	2.02	77.2	7.48	2	0.024
AP17	-0.06	0.17	4.31	79.93	20.18	2	0.000

Log residual and item-trait interaction fit statistics for the Preparation Scale

Item	Location	SE	Fit Resid	df	Chi Sq	df	Probability
P06	-0.37	0.14	2.04	75.64	0.03	2	0.986
P03	-0.08	0.15	0.82	75.64	0.06	2	0.971
P05	0.14	0.15	0.19	77.46	0.22	2	0.896
P18	0.24	0.18	0.52	71.99	0.69	2	0.707
P7Turk	-1.29	0.24	-0.40	43.74	0.71	2	0.700
P01	0.44	0.17	0.90	71.08	0.89	2	0.642
P19	0.12	0.16	-0.71	71.99	0.91	2	0.634
P12	-0.03	0.14	1.07	74.73	1.06	2	0.590
P15	-0.61	0.14	-0.13	77.46	1.10	2	0.577
P17	0.01	0.15	-0.07	74.73	1.61	2	0.447
P09	-0.17	0.16	0.49	73.82	1.74	2	0.419
P10	0.55	0.16	1.28	74.73	1.93	2	0.381
P04	0.25	0.15	-0.46	73.82	2.23	2	0.327
P02	0.43	0.17	0.20	74.73	2.31	2	0.316
P16	0.16	0.18	-0.57	76.55	2.31	2	0.315
P22	-0.30	0.15	1.56	71.08	2.82	2	0.245
P11	0.00	0.16	-0.32	76.55	2.85	2	0.241
P7Aus	0.33	0.26	-0.82	32.81	2.90	2	0.235
P13	-0.02	0.15	0.71	76.55	3.23	2	0.199
P21	-0.95	0.18	-1.20	76.55	4.24	2	0.120
P08	-0.03	0.16	0.14	75.64	5.12	2	0.078
P20	0.89	0.20	-1.04	68.35	5.53	2	0.063
P14	0.28	0.15	1.24	78.37	8.01	2	0.018

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