

Pre-service teachers' concerns about diversity

Concerns about
diversity

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Abstract

Purpose – The purpose of this study was to investigate pre-service teachers' concerns about including diverse learners in their classrooms. The study identified which concerns they ranked highest and lowest and which types of diversity they were most concerned about. The study also compared results in relation to demographic variables of gender, year and major.

Design/methodology/approach – Data collection relied on the Concerns about Inclusive Education Scale administered online with 343 pre-service teachers enrolled in higher education in Thailand. Analysis aimed to identify what were the highest categories of concerns as well as any significant relationships between concerns and demographic variables of gender, year and major. Analysis also identified the types of diversity about which pre-service teachers were most concerned along with any significant relationships between types of diversity and gender, year and major.

Findings – Results revealed that pre-service teachers ranked lack of resources as their highest concern about teaching diverse learners. Analysis revealed a significant difference for gender with females ($p = 0.014$) having a significantly higher level of concern about lack of resources than males. Mental health disabilities along with physical and learning disabilities were ranked highest in terms of types of diversity about which they were most concerned. There were no statistically significant differences for demographics regarding type of diversity about which teachers were most concerned.

Originality/value – There is a lack of research related to higher education's role in preparing teachers to teach in contexts of diversity. This study goes beyond traditional definitions to include 12 types of diversity.

Keywords Pre-service teachers, Concerns, Diversity, Race, Disability, Sustainable Development Goals, Higher education, Mental health

Paper type Research paper

Introduction

The construct of diversity has garnered attention in the past decade, in particular, due to increases in global migration. This migration has led to the emergence of societies characterised by cultural, ethnic and religious diversity. The construct has also garnered attention through its association with social sustainability. This is because, in order for societies to be socially sustainable, there must be participation by and inclusion of various (diverse) individuals and groups (Murphy, 2012). Promotion of social sustainability requires conditions for human welfare, especially for vulnerable persons or groups (Hollander *et al.*, 2016). Diversity can be conceptualised as one of five principles that contribute to the liveability and health of communities. These are diversity, equity, interconnectedness, quality of life and democracy and governance (Barron and Gauntlett, 2002). For example, cultural diversity can help societies move towards “sustainable futures” because this diversity represents a “rich source of innovation, human experience and knowledge exchange” (Tilbury and Mulà, 2009, p. 2). Diversity refers to both observable and non-observable personal characteristics (Aleander, 2011). These characteristics can be related to



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abilities, skills, knowledge, personality and to socio-economic (UNESCO, 2004, p. 56), cultural (Lo Bianco, 2016) and linguistic (Liu and Nelson, 2017) background, sexual orientation (Gale and Ward, 2018), race (Haring-Smith, 2012), religion (Aleander, 2011), ethnic origin (Maruyama *et al.*, 2000) or age (Bartolo and Smyth, 2009). Gender (e.g. Peixoto *et al.*, 2018) is another characteristic that is frequently cited in relation to diversity and social sustainability. Sustainable Development Goal (SDG) 5 focusses on gender equality.

In educational contexts, diversity may be conceptualised in terms of a disability, for example, related to mental health (Konur, 2006), learning (Aragon and Hoskins, 2017) or physical characteristics (Lau *et al.*, 2018). Increasing globalization and mobility have drawn attention to the importance of diversity in educational contexts (Burner *et al.*, 2018) in particular in relation to linguistic and cultural diversity becoming increasingly common in schools (Tran *et al.*, 2018). In fact, teachers have a responsibility to contribute to social sustainability, future social change and improvements in the social quality of life (Mandolini, 2007). In general, education has an important role to play in developing societies that are sustainable and tolerant (UNESCO, 2006). SDG 4 specifically calls on education to promote inclusion, quality and equity (UNESCO, 2017). Social exclusion, as opposed to inclusion in education, undermines social sustainability and it is the teacher's frame of mind that can determine if individuals are excluded or not (Gedžūne, 2015). Inclusion refers to providing opportunities for full and effective contributions (Roberson, 2004) from diverse individuals and groups.

Not surprisingly, there have been calls for teachers to be better prepared to contribute to societies that are more diverse (see European Commission, 2017). However, teachers may resist having to learn or change to new practices related to diversity (Gay, 2013). Furthermore, their attitudes can negatively affect how they respond to diversity (Chiner *et al.*, 2015) and these attitudes can affect their behaviours (McLeskey *et al.*, 2001). Related to attitudes are teachers' concerns (Sokal and Sharma, 2014). Forlin *et al.* (2011) explained the need to identify those concerns about which teachers are most anxious and to subsequently take action to lessen the anxiety. Sharma *et al.* (2007) observed that "There is hardly any research that has looked at pre-service teachers' concerns about inclusive education" (p. 98), i.e. education with diverse students. This is in spite of the fact that early identification of pre-service teachers' concerns can subsequently be targeted in teacher training and education (Sharma *et al.*, 2007). Sharma *et al.* were referencing inclusion of individuals with disabilities. In general, there is a lack of such research on diversity in education and what exists "lacks a strong empirical base for its claims, findings, and recommendations" (Grant and Gibson, 2011). In Europe, a similar lack of evidence was observed regarding effective approaches to teacher preparation for diversity (European Commission, 2017). In Australia, Tran (2013) observed the need for research on the professional learning needs of teachers to teach international students and respond to cross-cultural demands and expectations.

It is in light of this gap in the literature that the study reported on in this paper was conducted. This study investigated pre-service teachers' concerns about including diverse learners in their classrooms. The study identified which categories or factors of concerns they ranked highest and lowest and which types of diversity they were most concerned about. The study also investigated whether there were differences in relation to demographic factors. The study was conducted in Thailand. Thailand represents a relevant context in which to investigate teachers' concerns about diversity. Lo Bianco and Slaughter (2016) argued that Thailand has not adopted a multicultural perspective in its official discourse or policy. Instead, it presents itself as linguistically, ethnically and culturally homogenous. This homogeneity, Lo Bianco and Slaughter argued, is part of a "powerful and historically sanctioned national narrative of a centralized and standardized 'Thai-ness' – language, culture, religion and politics" (p. 192). Tantiniranat (2015) identified the theme of unity in

diversity from an analysis of Thai higher-education policies. However, a study of inclusive education in Thailand uncovered evidence of a lack of translation of inclusive policies into actual practices due to factors such as limited funding, support services, materials and support personnel (see [Sanrattana, 2010](#)). The study's research questions were as follows: in relation to Thai, pre-service teachers' concerns regarding teaching diverse students in their classrooms:

Concerns about diversity

(1a) About which categories (factors) of diversity are pre-service teachers most concerned?

(1b) Are there any significant relationships between these factors on one hand, and demographic variables of gender, year and major on the other?

(2a) About which types of diversity (e.g. race, sexual orientation) are pre-service teachers most concerned?

(2b) Are there any significant relationships between pre-service teachers' concerns about types of diversity, on one hand, and demographic variables of gender, year and major on the other?

Methodology

Context

This study was conducted in Bangkok, Thailand, within a five-year Bachelor of Science in Industrial Education (Engineering Education) teacher-education programme. The programme aims to prepare teachers to teach in secondary or post-secondary vocational schools and colleges or in the private or public industrial sector, as trainers of technicians (e.g. electrical engineers). Students can choose to major in Telecommunications Engineering, Electronics Engineering or Computer Engineering. Coursework relates to education as well as major subject courses.

Participants

All students ($N = 468$) in the programme year were sent an email invitation. The number of respondents was 343 or 73% of those invited to participate. [Table 1](#) provides a summary of respondents.

Year	Major	Total responded N	Male (%)	Female (%)
1	No major declared	57	53	47
2	Telecommunications	36	44	56
	Electronics	29	41	59
	Computer	10	80	20
	Total	75	48	52
3	Telecommunications	37	38	62
	Electronics	14	71	29
	Computer	15	47	53
	Total	66	47	53
4	Telecommunications	31	42	58
	Electronics	21	57	43
	Computer	23	65	35
	Total	75	53	47
5	Telecommunications	28	54	46
	Electronics	20	40	60
	Computer	22	45	55
	Total	70	47	53
	Totals	343	50	50

Table 1.
Summary of survey respondents

Instruments and procedures

The pre-service teachers were contacted using their university email addresses and were invited to complete an online survey in SurveyMonkey (www.surveymonkey.com). The survey was composed of three sections. The first section was designed to gather information regarding demographics and ethics. Part 2 relied on the Concerns about Inclusive Education Scale (CIES) (Sharm *et al.*, 2007) which is based on the original CIES (Sharma and Desai, 2002). The CIES uses a four-point, multichotomous, close ended, Likert-type scale as follows: extremely concerned (4), very concerned (3), a little concerned (2), not at all concerned (1). The scale has 21 items (see Figure 1) and is divided into four factors (categories or clusters of concerns) with a reliability coefficient of 0.91 (Sharma *et al.*, 2007). These factors were revised by Sharma *et al.* (2007) from those derived by Sharma and Desai (2002). The factors are as follows: Factor 1, Lack of resources; Factor 2, Acceptance; Factor 3, Academic standards; Factor 4, Workload. The wording for this study's instrument was adapted slightly from the original to focus on diversity as opposed to merely inclusion of individuals with special needs or disabilities. The Cronbach's alpha of the 21 items was 0.917 and of the 12 items was 0.827. The survey was administered in the Thai language. It was translated using translation-back translation to ensure accuracy.

Part 3 of the survey featured a two-columned table (see Table 2) that provided an overview of diversity types as well as examples. The table was preceded by the statement: "Diverse in this survey means ANY of the following." The survey invited participants to indicate their level of concern regarding 12 types of diversity.

Data analysis

Descriptive statistics (mean, standard deviation (SD) and percentages) were calculated using Excel. For further analysis, the researchers created factor scores. The higher the mean factor score, the greater the concern. A mean of < 2 suggests a low degree of concern whereas a mean of 2.25 would represent a moderate degree of concern (Sharma *et al.*, 2009). Scores from 2.5 to 3 would be high whereas those from 3 to 4 indicate very high to extreme levels of concern, respectively. ANOVA was used to identify differences in the mean level of concerns in relation to research questions 1b and 2b as follows: Are there any significant relationships between pre-service teachers' concerns, on one hand, and demographic variables of gender, year and major on the other? Are there any significant relationships between pre-service teachers' concerns about types of diversity, on one hand, and demographic variables of gender, year and major on the other?

Results

Research question 1a asked which categories (factors) of concerns regarding inclusion of diverse students in their future classrooms do Thai, pre-service industrial education teachers rank the highest and lowest? Figure 1 presents the results of this question. The highest ranked items were related to lack of resources. For example, the pre-service teachers expressed the highest concern about the adequacy of instructional materials and teaching aids that they would have with their diverse students. The lowest ranked items related to academic standards. Table 3 shows the averages of the items and factors. The lowest level of concern was with academic standards. The highest ranked was year 4, factor 1 (lack of resources), with a mean of 2.43 (i.e. between somewhat concerned and very concerned.) Figure 1 shows the scale's items along with the percentages corresponding to respondents' concerns.

Research question 1b sought to identify any significant relationships between pre-service teachers' concerns on one hand, and demographic variables of gender, year and major on the

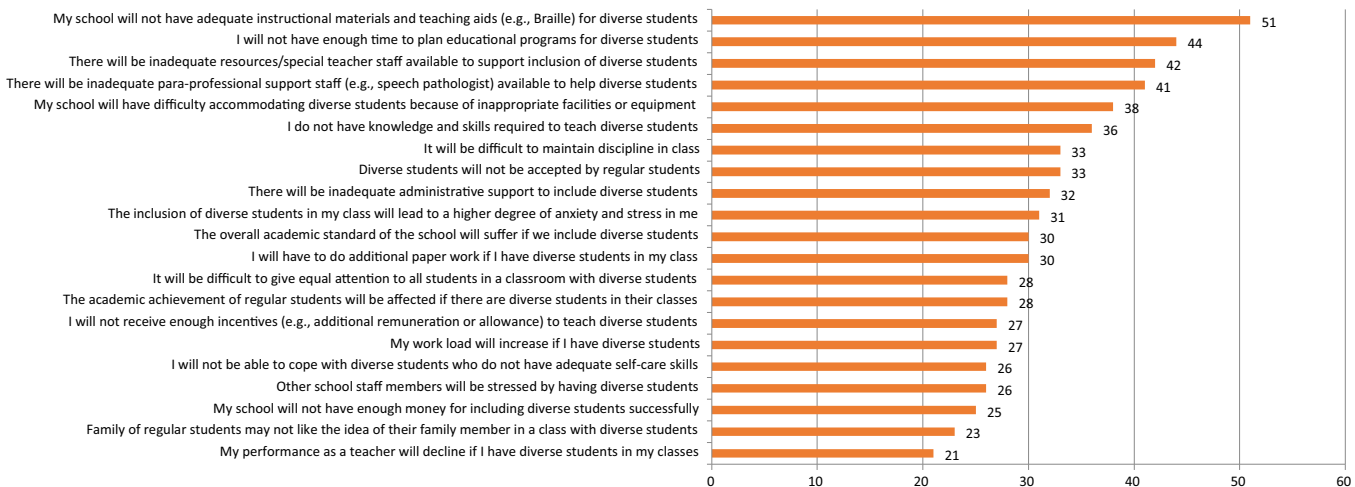


Figure 1.
Concerns ranked high
to low (N = 343)

other. Analysis revealed a significant difference for gender with females ($p = 0.014$) having a significantly higher level of concern regarding lack of resources. No other statistically significant differences were identified.

Research question 2a investigated which types of diversity (e.g. race, sexual orientation) pre-service teachers were most concerned about. The highest ranked item (58%) was a mental health disability. Physical and learning disabilities also ranked highly as did language with 41% expressing concern for the latter. Religion, ethnicity, sexual orientation, age, race and gender were the areas about which the pre-service teachers expressed the least concern, 13% (a little or not at all). [Figure 2](#) shows the range from 6% to 58% concerned.

Research question 2b focussed on identification of any significant relationships between pre-service teachers' concerns about types of diversity, on one hand, and demographic variables of gender, year and major on the other. Analysis revealed no significant differences.

Discussion

The aim of this first part of the investigation was to identify which factors ranked highest in terms of concerns – i.e. around which categories did the concerns cluster? Lack of resources ranked highest amongst pre-service teachers' concerns about including diverse students in their classroom. This factor was also the highest in the study by [Sharma et al. \(2007\)](#) of pre-service teachers' concerns about inclusion of students with disabilities into regular schools. Sharma *et al.* found that lack of resources “emerged as the most highly ranked concern factor for participants from all four countries” (Australia, Hong Kong, Singapore and Canada) represented in their study. The study by [Sharma et al. \(2009\)](#) with pre-service teachers in India also revealed a concern about lack of resources. However, their study was limited to inclusion based on disability only. Academic standards (Factor 3) were the lowest ranked. Similarly, [Sharma et al.'s \(2007\)](#) comparison of results from pre-service teachers from the same four countries revealed that standards represented only a minor concern for pre-service teachers in all respondents from these countries except Singapore.

Research question 1b sought to identify significant relationships between pre-service teachers' concerns, on one hand, and demographic variables of gender, year and major on the other. The only statistically significant difference identified was for gender. Females reported a higher level of concern than males regarding lack of resources needed to meet the needs of diverse learners in their classrooms. A study using the CIES scale with primary teachers in India also identified a statistically higher level of concern for females regarding inclusion (see [Shah et al., 2013](#)). [Kamp et al. \(2017\)](#) found in their Australian study that females supported cultural diversity more than males did. In a Canadian study of pre-service teachers'

Table 2.
Part 3 of survey:
Examples of types of
diversity

	Type of diversity	Examples
1	Gender	Female/transgender
2	Cultural origin	European, Middle Eastern
3	Religion	Catholic, Muslim, Buddhist
4	Physical disability	Needing a prothesis
5	Mental health disability	Depression/anxiety
6	Socio-economic class	Low or high income
7	Ethnic origin	Hmong, Rohingya
8	Race	Caucasian, Black
9	Age	Seniors, younger than usual
10	Learning disability	Reading difficulties/dyslexia
11	Language	Thai is not first language
12	Sexual orientation	Prefers same sex

Factors	Variable		<i>N</i>	Mean (SD)	<i>F</i>	<i>p</i>	Concerns about diversity
1	Gender	Male	170	2.24 (0.63)	6.141	0.014*	
		Female	173	2.40 (0.56)			
	Major	Tele	132	2.29 (0.62)	0.185	0.906	
		Electronics	84	2.35 (0.60)			
		Computers	70	2.34 (0.62)			
	Year	1	57	2.33 (0.58)	1.299	0.270	
		2	75	2.22 (0.53)			
		3	66	2.28 (0.60)			
		4	75	2.43 (0.62)			
		5	70	2.35 (0.65)			
	Average			2.32			
2	Gender	Male	170	2.19 (0.54)	0.852	0.357	
		Female	173	2.25 (0.52)			
	Major	Tele	132	2.22 (0.55)	1.242	0.294	
		Electronics	84	2.22 (0.49)			
		Computers	70	2.14 (0.59)			
	Year	1	57	2.32 (0.44)	1.803	0.128	
		2	75	2.17 (0.49)			
		3	66	2.10 (0.53)			
		4	75	2.27 (0.53)			
		5	70	2.26 (0.61)			
	Average			2.21			
3	Gender	Male	170	2.08 (0.59)	0.058	0.810	
		Female	173	2.06 (0.54)			
	Major	Tele	132	2.09 (0.52)	1.370	0.252	
		Electronics	84	2.01 (0.58)			
		Computers	70	2.00 (0.67)			
	Year	*1	57	2.18 (0.51)	1.577	0.180	
		2	75	2.07 (0.52)			
		3	66	1.93 (0.58)			
		4	75	2.08 (0.57)			
		5	70	2.10 (0.63)			
	Average			2.06			
4	Gender	Male	170	2.13 (0.61)	1.017	0.314	
		Female	173	2.07 (0.59)			
	Major	Tele	132	2.10 (0.63)	0.189	0.904	
		Electronics	84	2.10 (0.56)			
		Computers	70	2.06 (0.65)			
	Year	1	57	2.14 (0.53)	0.452	0.771	
		2	75	2.08 (0.54)			
		3	66	2.05 (0.68)			
		4	75	2.16 (0.59)			
		5	70	2.07 (0.66)			
	Average			2.09			

Table 3.
Demographic variables
in relation to each
factor

Note(s): **p* < 0.05, year 1 = no major declared, Tele. = Telecommunications

Note(s): * $p < 0.05$, year 1 = no major declared, Tele. = Telecommunications

Table 3.
Demographic variables
in relation to each
factor

perceptions of management of behaviours in inclusive classrooms, [Brackenreed and Barnett \(2006\)](#) found that females relied on coping strategies to increase direct support whereas males initiated strategies that decreased direct support. These studies were focussed solely on students with disabilities as opposed to diversity more generally.

In relation to research question 2a about which types of diversity (e.g. race, sexual orientation) pre-service teachers were most concerned, mental health disabilities ranked highest at 58%. In fact, only 10% of respondents indicated that they were not at all concerned about inclusion of students with mental health disabilities in their classrooms.

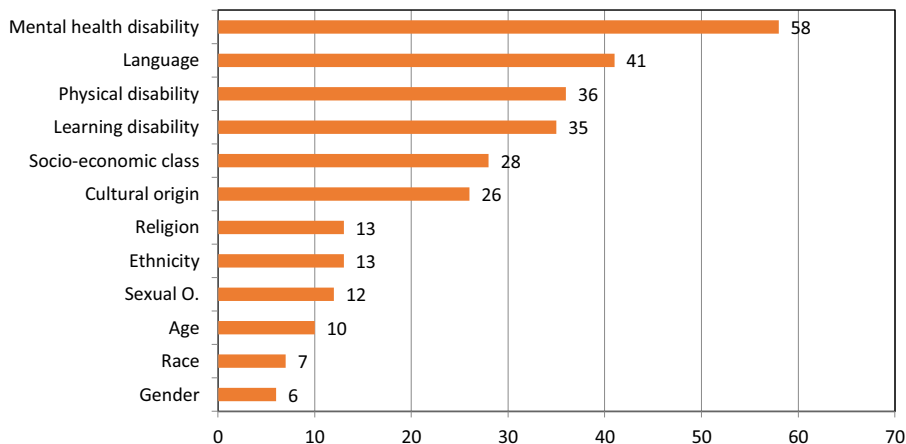


Figure 2.
Concerns ranked by
type of diversity
(N = 343)

Physical and learning disabilities represented types of diversity about which pre-service teachers were either extremely or very concerned (36 and 35%, respectively). These results may be explained by [Klibthong's \(2013\)](#) observation regarding Thai culture that negative attitudes regarding disabilities result from traditional religious beliefs in karma, i.e. punishments for behaviours in past lives. Language (linguistic diversity) also ranked high (41%) as a concern. Much of the literature on linguistic diversity and teachers' concerns tends to be framed within a context of English as a foreign language or in a broader context of internationalisation and cultural diversity (see [Hattingh et al., 2017](#)). The high level of concern regarding language points to the need for research on how pre-service teachers can be prepared to teach in classrooms where the students not only speak a different language than the teacher and other students but also a language other than English, e.g. Khmer, Burmese or Vietnamese.

Socio-economic class and cultural origin were ranked as a concern by more than one-quarter of participants. Similarly, in a study of 141 pre-service teachers in Turkey "three out of every four" revealed that their education did not prepare them to teach in a culturally diverse classroom (see [Uyar, 2016](#)). Concerns about race, religion, gender, age, ethnicity and sexual orientation were the lowest ranked, i.e. students were primarily either a little concerned or not concerned at all. Regarding mental health disabilities, as [Mazzer and Rickwood \(2015\)](#) observed, "little is known about the views of teachers regarding their role in supporting student mental health and how well-equipped they feel to fulfil it" (p. 29). Mazzer and Rickwood explained that teachers are actually well positioned to identify and support mental health issues but, in their study, they found that Australian teachers reported both a lack of knowledge and of skills in supporting students' mental health. Similarly, [Kratt \(2018\)](#) found that, in spite of the prevalence of mental health disorders, teachers lacked training in this area.

Research question 2b aimed to identify any significant relationships between pre-service teachers' concerns about types of diversity, on one hand, and demographic variables of gender, year and major. No statistically significant differences were identified. The absence of difference suggests that pre-service teachers' concerns about inclusion of diverse students relate more to type of diversity than they do to personal or other demographic variables. This hypothesis could be tested in further studies with other demographic variables. It could also be tested in other geographic contexts to determine if concerns about mental health disabilities rank highest amongst concerns regardless of the country context. With regards to

mental health only, Whitley and Gooderham (2016) in Canada found that the 186 pre-service teachers expressed the most concerns combined with the least knowledge regarding students with depression. The authors argued that teachers need tools and knowledge to act and intervene when there is a mental health issue particularly because these issues can interfere with learning.

Concerns about
diversity

Conclusions and implications

In terms of limitations, the use of self-report measures particularly regarding types of diversity should be considered with some caution because individuals may have given responses that reflect a desire for social acceptability rather than their actual feelings (see Podsakoff *et al.*, 2003). The study relied solely on quantitative approaches to data collection. Future studies might include qualitative data gathered through interviews or observations. The fact that this study was conducted in only one country may limit its external validity. The onus is on the readers to generalise to their contexts. Issues pertaining to cultural, linguistic, religious and ethnic diversity may vary depending on the country in which data are being gathered.

In relation to implications, examples of approaches to preparing teachers for diversity include providing opportunities to appreciate how their own lives have been influenced by aspects of diversity including culture, race, language and socio-economic class (see Haddix, 2008). Study-abroad programmes also represent an opportunity for students to experience linguistic and cultural diversity (Gordon, 2015). Thomas *et al.* (2010) recommended that education designed to promote diversity should not be centred on “diversity as difference” which may “reinforce a view of minority groups as the ‘other’ rather than appreciating these groups as part of a larger us” (p. 296). Thomas *et al.* added that a focus on differences may lead to a backlash whereby the majority is perceived or portrayed as normal and the minority as the “other”. Minority group members participating with others in diversity sessions or training are likely to feel further marginalised in situations that draw attention to their uniqueness (Thomas *et al.*). Likewise, training and education about diversity need to avoid a focus on specific cultural groups thereby denying the diversity that may actually exist in those groups. Thomas *et al.* recommended that training and education be structured, not around “isms” such as racism, sexism, etc. but around themes or topics such as “stereotyping” or “privilege” that are relevant to both minority and majority groups. Awareness of cultural diversity can be promoted through activities such as giving pre-service teachers opportunities to study their own cultural identity (Brown, 2004). Regarding socio-economic differences, Sharma *et al.* (2006) described how pre-service teacher education programmes in Hong Kong were mandated to provide diversity training including for socio-economic differences but that many teachers expressed concerns regarding their ability to teach in inclusive contexts. Mergler *et al.* (2017) argued that teaching students from different cultures and socio-economic backgrounds requires an approach to teaching underpinned by a philosophy of acceptance and by respect.

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