Author(s): Klassen, Robert M.; Durksen, Tracy L.; Hashmi, Waleed Al; Kim, Lisa E.; Longden, Ken; Metsäpelto, Riitta-Leena; Poikkeus, Anna-Maija; Györi, János G.

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National context and teacher characteristics: Exploring the critical non-cognitive attributes of novice teachers in four countries

Robert M. Klassen [a, *], Tracy L. Durksen [b], Waleed Al Hashmi [a], Lisa E. Kim [a], Ken Longden [c], Riitta-Leena Metsäpelto [d], Anna-Maija Poikkeus [d], János G. Györi [e]

[a] University of York, United Kingdom
[b] University of New South Wales, Australia
[c] GIZ (German Development Agency), Malawi
[d] Jyväskylä University, Finland
[e] Eötvös Loránd University, Hungary

HIGHLIGHTS

- Teachers' non-cognitive attributes include empathy, organization, and resilience.
- Most attributes are similarly endorsed in England, Finland, Malawi, and Oman.
- Cultural context influences some non-cognitive attributes.
- Community-focused attributes are critical in more collectivist settings.

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ABSTRACT

The purpose of this article was to examine what education professionals in four countries (England, Finland, Malawi, and Oman) deemed as the critical (i.e., most important for effective teaching) non-cognitive attributes of novice teachers. Results from an iterative comparative case study showed that participants consistently judged certain attributes of novice teachers as critical, i.e., empathy, organization, and resilience. However, there was also differential importance placed on teachers' relationships with the community, reflecting theorized cultural differences. The findings provide new insight into how national and cultural context are associated with the perceptions of the critical non-cognitive attributes of effective teachers.

1. Introduction

It is clear that effective teachers across the world share many of the same practices: they interact with students, share ideas and knowledge, and guide student learning. However, the influence of national and cultural context on the practices and attributes of teachers perceived as 'effective' is less clear. This lack of clarity may be due to the fact that most of the research on teacher effectiveness has been conducted in single, usually Western, settings (e.g., Bastian, Henry, Pan, & Lys, 2016; Pianta & Kerr, 2015; Rockoff, Jacob, Kane, & Staiger, 2011). Although research shows that some teaching practices vary across countries (e.g., McIntyre, Mainhard, & Klassen, 2017; Hofstede, 1986; Stigler, Gallimore, & Hiebert, 2000), less is known about cross-national variations in critical non-cognitive attributes (i.e., inter- and intra-personal attributes such as motivation, personality, and beliefs) associated with teaching. Examining the universality of non-cognitive attributes has been deemed "an important question needing attention" by researchers in organizational psychology (Steiner, 2012, p. 762), and is also a crucial question in education (Meng & Muñoz, 2016).

The purpose of this article is to examine how experienced teachers and teacher educators in four culturally contrasting countries—England, Finland, Malawi, and Oman—judge the importance of non-cognitive attributes associated with novice teacher effectiveness. By conducting the research in multiple settings that are diverse in a wide range of ways, including cultural

* Corresponding author. Department of Education, University of York, Heslington, York, YO10 5DD, United Kingdom.
E-mail address: robert.klassen@york.ac.uk (R.M. Klassen).

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dimensions, geographical region, educational attainment, economic status, and national age distribution (a marker of relative demands on an education system), we offer readers insight into the universality of non-cognitive attributes associated with effective teaching.

1.1. Teachers' cognitive and non-cognitive attributes

For the purpose of this article, we use the term *cognitive* attributes to refer to the characteristics associated with academic skills, subject-area knowledge, and reasoning ability, typically assessed by measures of educational achievement and capacity (e.g., GPA, secondary school and university transcripts, SAT/GRE scores). Cognitive attributes have long been associated with workplace behaviors and outcomes (e.g., Murphy, 2012), including teachers' classroom practices (Harris & Rutledge, 2010), but they do not act alone in influencing outcomes. In the cognitive activation (COACTIV) model of teacher effectiveness (Kunter, Kleickmann, Klusmann, & Richter, 2013), cognitive attributes interact with environmental factors such as the availability of professional support, and also with *non-cognitive* attributes—'soft' personal characteristics such as beliefs, inter-personal skills, motivation, attitudes, dispositions, and personality—to influence teachers' professional practices and subsequent student outcomes.

Teachers' non-cognitive attributes represent a variety of constructs that have been linked to teacher effectiveness (Bastian, McCord, Marks, & Carpenter, 2016). For example, teachers' self-efficacy and personality show significant associations with external measures of effectiveness (Klassen & Tze, 2014). Teachers' personality shows significant associations with student evaluations of teaching in university (Kim & MacCann, 2017) and in secondary school (Kim, Dar-Nimrod & MacCann, 2017). Teachers' epistemological beliefs influence teaching behaviors in primary and secondary school (Fives & Buehl, 2014; Sosu & Gray, 2012). However, teachers' non-cognitive attributes may not be endorsed in the same way across contexts. The emic-etic framework from cultural psychology describes how non-cognitive attributes might be understood differently across countries and cultures. *Emic* attributes refer to attributes that may be uniquely important in a particular setting, whereas *etic* attributes are those that apply more broadly across settings. National and cultural differences may play a role in the perceptions of effective teaching (Meng & Muñoz, 2016), but little is known about how national context and shared cultural beliefs influence the characteristics that are most valued in novice teachers.

1.2. How does national and cultural context influence teachers' beliefs and practices?

Culture refers to the shared beliefs, goals, and values that serve as trans-situational guiding principles in people's lives and that influence how people interpret relationships, expectations, duties, and activities (Schwartz, 1994). Differences in shared cultural values emerge between geopolitical entities (e.g., countries or regions within countries) as people interact with their environment over time (Guay, 2016; Kim & Park, 2006). 'Nation' (or 'country') is not synonymous with culture: countries and regions are not culturally homogeneous, and much variation exists between people within countries (Schwartz, 2014). However, particular cultural beliefs vary predictably across countries, and are more strongly linked to one's country than to religion, employer, or personality (Inglehart & Baker, 2000; Markus, 2016).

Previous research has shown that national context plays a role in teachers' non-cognitive attributes such as beliefs, personality, commitment, motivation, and emotions about teaching (Klassen, Usher, & Bong, 2010; Cohen, 2007), and influences teachers' interpretations of successful teaching and learning behaviors (Jiang, 2016). Hofstede (1986, 2001) proposed that national context influences a range of teacher and teaching factors, including the social position of teachers, the ways that curriculum is understood and followed, how teachers process information and acquire and use new concepts, and how teachers and students interact with each other. Hofstede's proposed cultural dimensions—individualism/collectivism, power distance, masculinity/femininity, and uncertainty avoidance—provide a description of how specific aspects of widely held cultural beliefs and practices influence the way that teachers think and act in the classroom in different settings. These cultural dimensions are hypothesized to influence teachers' cognitive processes (i.e., how they interpret new information), their social processes (e.g., how they interact with peers and students), and their motivational processes (e.g., the reasons underlying their behaviors) (Klassen et al.,2010; Hofstede, 1986; Jiang, 2016).

If education is, at its essence, about relationships (e.g., Cornelius-White, 2007), then the dimensions of individualism/collectivism (strength of the ties that people perceive within an in-group) and power distance (level of societal acceptance of social hierarchy) play an important role in what we consider to be the most important non-cognitive attributes of novice teachers. The four countries in this study show variations on these two dimensions. England, as part of the UK, shows relatively high individualism, whereas Finland, Malawi, and Oman show relatively low levels of individualism (Hofstede, 2001). In terms of power distance, England and Finland show relatively low power distance, whereas Malawi and Oman show relatively high levels (Hofstede, 2001). Societal expectations and norms about how individuals and groups interact may influence perceptions of teachers' expected behaviors in and outside of the classroom.

1.2.1. Model of culture and teaching

In Fig. 1, we present a model of the interactions among cultural context, national educational environment, non-cognitive attributes, and teaching behaviors. The model proposes that shared cultural beliefs within a country shape perceptions about which teachers' attributes are viewed as important by providing social guidelines—spoken and unspoken—about expected teacher behaviors. In a school setting, shared beliefs about cultural dimensions such as collectivism and power distance can play a role in influencing how teachers perform their job. In settings with higher levels of collectivism, a teacher's need for autonomy over decisions about teaching practices may be less important than fulfilling a sense of duty fostered by the need to maintain positive relationships with colleagues (King & McInerney, 2016). In more individualist settings, a teacher may be encouraged to make idiosyncratic teaching decisions based on personal study and self-reflection. Teaching practices are influenced by culture through shared understanding of social norms and the weight given to considerations of collective versus individual expectations (Gelfand et al., 2011).

Cultural context also influences the broader educational environment, where national educational standards and expectations are influenced by a country's shared understanding of the relative importance of particular educational practices. Meng and Muñoz (2016) found that Chinese and American teachers perceived effective teaching differently, with Chinese expectations regarding instructional approaches and evaluation influenced by shared beliefs rooted in Confucianism. The educational environment simultaneously influences teachers' non-cognitive attributes (e.g., motivation to teach in certain ways) and teaching behaviors, with teachers choosing teaching approaches that serve a country's educational expectations while simultaneously meeting the expectations of culturally appropriate behaviors (Chia, 2015). Cultural context plays a key role in influencing the educational

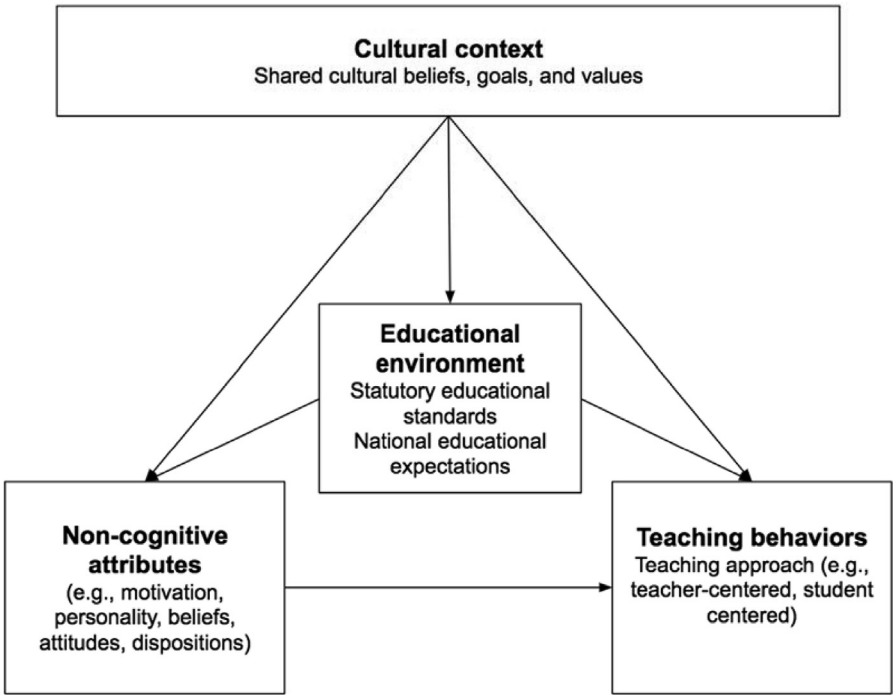

Fig. 1. Model of how cultural and national context influences educational environment, non-cognitive attributes, and teaching behaviors.

environment, the importance placed on teachers' non-cognitive attributes, and subsequent teaching behaviors in the classroom.

1.3. Background to the study

Identifying and assessing the critical cognitive and non-cognitive attributes is an important part of selecting candidates for initial teacher education (ITE). Our program of research focuses on using a situational judgment test (SJT) methodology to assess the non-cognitive attributes of applicants for ITE (e.g., Klassen, Durksen, Rowett, & Patterson, 2014; Klassen et al., 2017). SJTs present test-takers with teaching-related scenarios where judgment is required to choose expert-derived 'best' responses to the scenarios. SJTs have been used as a selection methodology in a range of professional disciplines, including medicine, business, and law (e.g., Lievens & Sackett, 2012), with increasing popularity due to their predictive validity, low adverse impact, and high level of candidate acceptability (Campion, Ployhart, & MacKenzie, 2014).

The choice of which non-cognitive attributes to target for SJT development is determined through a consensus-building process with a group of 'expert practitioners' (e.g., Bobrovitz, Parrilla, Santana, Straus, & Stelfox, 2013; Jones & Hunter, 1995). These attributes, once identified and defined, form the basis for SJT development, typically using a critical incident approach to generate test content that assesses the non-cognitive attributes under consideration (Campion et al., 2014). In this article, we investigate how the non-cognitive attributes identified as critically important for successful novice teaching in one setting are evaluated and extended in three other settings.

2. Research questions and methods

The current project began in the United Kingdom (specifically, England), with the work focused on identifying the non-cognitive attributes of effective novice teachers for the purpose of developing SJTs for selection into ITE programs. The three comparison cases (Finland, Malawi, and Oman) were involved in related projects focused on developing SJTs to select prospective teachers into ITE programs in each respective country. As a starting point in each setting, an evaluation of the key non-cognitive attributes associated with novice teacher effectiveness was undertaken, and it is this process that is reported in the current article.

The overarching question underlying the research pertains to the universality of teachers' non-cognitive attributes: *How does cultural context influence perceptions of the critical non-cognitive attributes of effective teachers?* Two research questions were posed in each comparison case. The first question was, *Are the non-cognitive attributes identified as critical for novice teacher success in the initial case (i.e., in England) salient in this setting?* The second question was related to the first: *Which additional non-cognitive attributes are critical for novice teacher success*? We did not differentiate between teaching in primary and secondary schools to answer these questions: each setting included participants with primary and secondary teaching experience. Responses to these questions provide new insights into the universality of the factors associated with effective teaching.

2.1. Overall methodological approach

We used a comparative case study approach, which consists of examining the similarities, differences, and patterns across data from groups that are working towards similar goals (Goodrick, 2014; Stake, 2006). This approach is beneficial when an understanding of context is important for the development of culturally-sensitive 'interventions' (in this case, a teacher selection test) and when an intervention is being implemented across multiple contrasting contexts (Goodrick, 2014). When designing a comparative case study, the findings generated in an *initial case* are examined, analyzed, and revised in each *comparison case* (i.e., Finland, Malawi, and Oman), thus providing understanding and explanation of how context influences the intervention under development. We chose the three comparison cases because (a) we were engaged in

educational research and development activities in these settings, and (b) the countries provided the highest levels of contrast on multiple indicators to the initial case.

The data-gathering methods in each setting varied according to local circumstances and organizational demands, but all included multiple rounds of data collection involving experienced teachers and teacher educators. The development goal in each setting was similar: to identify the non-cognitive attributes that would form the foundation for developing a test to be used for selection into a teacher education program. In England, the goal was to develop a tool for selecting applicants into multiple ITE programs across the country; in Finland and Oman, the goal was to develop a selection tool for a single university-based ITE program; in Malawi, the goal was to develop a selection tool for all eight of the country's public ITE sites. Ethical approval was granted for the whole project through the first author's university ethics review board.

A group consensus method (Bobrovitz et al., 2013; Jones & Hunter, 1995) was used to gather data in England and in each comparison case, using a range of data collection methods (individual and group interviews, workshops, and paper-and-pencil questionnaires). The following steps were followed in each comparison case:

(a) Definition of problem: In each comparison case the key purpose was to evaluate the proposed non-cognitive attributes of effective novice teachers initially identified in England, and to consider additional contextually-relevant attributes.
(b) Selection of subject-matter experts to participate in data collection: Experienced teachers and teacher educators involved in prospective teacher selection participated in structured discussions to discuss and evaluate content from the initial case and subsequently to consider local and national contextual factors to adapt the original content from England.
(c) Multiple rounds of feedback from panel: Each site included an iterative process that included multiple rounds of feedback, thus supporting the credibility of the findings.
(d) Establishment of consensus from concurrent (and sequential) analysis of data: Agreement on the critical non-cognitive attributes was reached following multiple rounds of data analysis at each site, thus supporting the validity of the analysis process.

3. Results

3.1. Initial case: identifying critical non-cognitive attributes in England

3.1.1. Overview of english teacher education system

England is a constituent country of the United Kingdom with a largely urban population of 53 million people, in the first quartile internationally for GDP per capita, and with a median age of 40.5 years (CIA World Factbook, 2017). Teacher education is usually delivered by universities, most frequently at the post-graduate level. In the last decade, ITE programs are increasingly provided directly by schools (e.g., *School Direct*), and by *Teach First*, an intensive work-based training targeted at high-achieving university graduates. In most English ITE programs, candidates are selected based on a combination of record of academic achievement (academic record from secondary and post-secondary education), successful completion of a national literacy and numeracy test, and typically, interviews, letters of reference, and a personal statement (Klassen & Dolan, 2015).

3.1.2. Establishing non-cognitive attributes

The primary purpose of the research conducted in the initial case was to develop an ITE selection tool (i.e., an SJT) to assess the critical non-cognitive attributes required for success as a novice teacher in UK schools. For a detailed overview of the SJT development process (see Klassen, Durksen, Rowett, & Patterson., 2014); Klassen et al., 2017). The foundational non-cognitive attributes were developed based on guidance from research in organizational psychology whereby an inductive approach is used to identify and define non-cognitive attributes (e.g., Campion et al., 2014). Data were gathered through multiple methods, including observation of practising teachers, individual and focus group interviews, and questionnaires with teachers and teacher educators.

3.1.3. Data collection and analysis

The non-cognitive attributes were identified and defined through a three-step process involving 150 education professionals (experienced teachers and teacher educators) who were invited to participate in interviews and workshops at 10 sites (3 secondary schools and 7 ITE program providers). Step 1 involved a job analysis that included full-day observations and in-depth interviews with two practising teachers from different schools (one mid-career and one newly qualified teacher). This first step was conducted to ground the research team in the daily activities of teachers and in the general functioning of schools.

Step 2 was designed to identify, discuss, and challenge the target attributes needed for successful novice teaching. Teachers and teacher educators from two schools ($n = 18$) and associated with two teacher education programs (one secondary and one primary; $n = 25$) participated in discussion panels to identify and define non-cognitive attributes. During the sessions, participants were encouraged to reflect on critical incidents (Gremler, 2004) that led to positive or negative teaching outcomes, e.g., *Think of a challenging event where a pre-service or newly qualified teacher showed good (bad) judgment. How was the situation resolved? What attributes were key to the success/failure of the situation?* After discussion of critical incidents and the associated attributes, participants were asked to evaluate the importance of the attributes for novice teachers. Data were collected and analyzed using a content analysis approach, with the evaluation of attributes determined by their frequency, intensity, and salience. The evaluation of the interview and workshop data resulted in the generation of 13 'starter' attributes (e.g., *caring, fairness, enthusiasm, reflection, resilience, organization*).

The 13 attributes were further analyzed and reduced using a data integration process that involved proposing clusters of attributes to participants, framed by the questions, *Which of these attributes are critical for the success in the teacher education program?* and *Which attributes are critical for the success of newly qualified teachers?* The starter attributes were discussed individually and then reduced into clusters, with operational descriptors generated through discussion. The data integration process produced three attribute clusters: *Empathy and Communication, Organization and Planning,* and *Resilience and Adaptability*.

Step 3 consisted of confirmation and revision of the attribute clusters and their behavioral descriptors through half-day workshops (with a total of 60 participants) held at four ITE programs across England. During the workshops, the attribute clusters were discussed, critiqued, and revised. Table 1 presents the three attribute clusters with their behavioral descriptors generated from the initial case. In the next sections, responses and adaptations to these initial three attribute clusters from the three comparison settings are presented.

Table 1
Description of non-cognitive attribute clusters from initial case (England).

Non-Cognitive Attribute Clusters	Behavioral Description
Empathy and Communication	Candidate demonstrates active listening, and engages in an open dialogue with both pupils and colleagues. Candidate seeks advice proactively and is responsive to both professional feedback and pupils' needs. Candidate has the ability to adapt the style of communication and nature of dialogue appropriately.
Organization and Planning	Candidate has the ability to manage competing priorities and display time management and personal organization skills effectively, using these skills to enhance positive learning interactions with pupils.
Resilience and Adaptability	Candidate demonstrates the capability to remain resilient under pressure. Demonstrates adaptability, and an ability to change lessons (and the sequence of lessons) accordingly where required. Candidate has an awareness of their own level of competence and the confidence to either seek assistance, or make decisions independently, as appropriate. Uses effective coping strategies.

Note. An earlier version of this table was published in Klassen et al. (2017).

3.2. Comparison case 1: identifying critical non-cognitive attributes in Finland

3.2.1. Overview of Finnish teacher education system

The second setting is Finland, a Nordic country with 5.5 million largely urban-based inhabitants (84%), in the first quartile internationally for GDP per capita, with a median age of 42.5 years (CIA World Factbook, 2017), and renowned for high student attainment in the PISA global education survey (OECD, 2017). Teacher education for primary and secondary teachers in Finland involves master's degree programs provided at ten universities. Entrance into ITE programs – particularly for primary school classroom teachers – is highly competitive with acceptance rates under 10%, meaning that universities are in a position to select the most well-suited candidates to their programs. The current two-stage admission process comprises a national written assessment of candidates' academic skills, and a locally arranged assessment of aptitude for the teaching profession using interviews, grades from the Finnish Matriculation Examination (held at the end of upper secondary school), and in some cases, tests of content skills or personality.

Recent changes, including digitalization and multiculturalism, present novel challenges to teacher education in Finland. The Teacher Education Development Programme (Finnish Ministry of Education and Culture, 2016a) emphasizes that students with the highest facility for teaching should be selected into ITE programs and that the aptitude of candidates ought to be assessed in student admissions. A recent Ministry of Education and Culture review (Finnish Ministry of Education and Culture, 2016b) concluded that admission methods used in Finnish higher education frequently lack evidence concerning reliability, validity, and their potential to predict future job performance. Therefore, the goal of the current study aligned closely with the broader aim in Finland to develop ways to identify non-cognitive attributes and to select ITE students in a more reliable and valid manner.

3.2.2. Data collection and analysis

Two workshops were organized in 2015 and 2016 to evaluate the initial English non-cognitive attributes and to consider locally adapted Finnish non-cognitive attributes. The first workshop involved an 'expert teacher panel' consisting of a volunteer sample of 11 experienced teachers (8 with primary teaching experience; 3 with secondary teaching experience) from local schools in central Finland and lecturers from one of the country's 10 universities providing teacher education programs. The participants were provided Finnish translations of the non-cognitive attributes developed in the English context and were asked to reflect on the non-cognitive attributes prior to the 1-day workshop. At the workshop, participants were asked to discuss in small groups the following questions: *Are the non-cognitive attributes identifed in England relevant in a Finnish educational context for selecting prospective teachers? How would you revise or complement the attributes to better fit the Finnish educational context?* In addition to critical discussion and challenging of the original target attributes, the workshop involved a generation of new contextualized attributes, and reviewing and revising the items (scenarios) and responses for a Finnish version of the SJT. The second workshop involved four expert teachers whose purpose was to review the new contextualized attributes and to create some new SJT scenarios and responses to match the Finnish context.

3.2.3. Response to the initial non-cognitive attributes

Overall, the participants in the workshop concluded that the non-cognitive attributes from England were relevant, but not sufficiently developed for the Finnish educational context. The behavioral descriptions of the attributes were adapted and expanded for the Finnish context. The attribute cluster of *Organization and Planning* was adapted by including an emphasis on considering students' needs to promote their wellbeing and to use a range of integrative teaching methods to advance learning. The attribute cluster *Resilience and Adaptability* was complemented by teachers' motivational attributes to learn new ideas and benefit from critical feedback for professional growth as well as an ability to maintain professional boundaries when balancing work and personal life. The attribute cluster of *Empathy and Communication* was expanded to include ethical and moral dimensions which were considered essential components of Finnish culture. It was considered important that teachers acknowledge the unique, distinctive qualities of each child and adhere to advancing the interest of the students. When teachers face ethical dilemmas that are difficult to solve, general moral rules and principles—inherent in Finnish culture—serve to guide action and inhibit inadequate action or choices (e.g., failure to remain objective in evaluating students; Barrett, Casey, Visser, & Headley, 2012).

3.2.4. Changes for the Finnish context

In addition to changes made to SJT content and adaptation of existing attributes, the panel also considered the need for a new contextualized attribute *Cooperation and Fostering of Community* (see Table 2 for a description of the methods in each setting and the changes made to the initial attribute clusters). The new attribute arose from a consideration of Finnish culture and teaching practices, in line with prominent theoretical models (Skidmore, 2000; Vygotsky, 1980; Wenger, 1998) which see learning as a joint activity that incorporates discussion and other collaborative learning techniques. In this view, effective teachers are skilful in creating and maintaining positive classroom (and work) culture by fostering two-way communication and treating others with respect. The behavioral description of the attribute includes providing opportunities to fellow teachers and students to exercize autonomy and agency, and to express their opinions and ideas, but also highlights skills to manage and support productive collaborative learning environments.

Table 2
Summary table of non-cognitive attribute clusters across countries.

Country	Summary of methods for data collection	Changes made to initial non-cognitive attribute clusters	Additional non-cognitive attributes
England (initial case)	Three-step process involving 150 education professionals in 10 sites (secondary schools and ITE providers). Step 1 was in-depth job analysis of teaching. Step 2 included discussion panels to identify non-cognitive attributes. Step 3 consisted of four workshops to confirm and revise attribute clusters.	n/a	n/a
Finland	Two-step process with two separate workshops involving 15 members of an 'expert teacher panel' (experienced teachers and teacher educators) with the goal of evaluating and supplementing the initial attribute clusters.	Revision of content to reflect Finnish context: **Empathy & Communication** – inclusion of ethical and moral dimensions reflecting Finnish culture. Importance of recognizing the distinctive qualities of each child. **Resilience & Adaptability** – recognition of teachers' motivation to learn new ideas and benefit from critical feedback. Recognition of ability to maintain professional boundaries and to balance work and personal life. **Organization & Planning** - greater emphasis on awareness of student well-being. Teachers' motivation to learn new ideas; attention to ethical and moral dimensions.	**Cooperation and Fostering of Community -** Candidate recognizes the importance of building community within schools through cooperation with colleagues and families.
Malawi	Three-step process with two separate multi-day workshops with 16 participants (experienced teacher educators and ministry representatives) focused on evaluating initial attribute clusters and identifying new attributes. A further one-day meeting (with ITE program principals) was held to further refine the attribute clusters.	Revision of content to reflect Malawian context. Revised initial attribute clusters were: **Empathy & Communication** – Ability to listen and engage in a dialogue to build relationships with learners and colleagues, using appropriate communication skills. Responsive to the needs of learners and colleagues and able to adapt the style of communication according to these needs. **Organization & Planning** – Ability to manage and prioritize competing demands and to manage time and resources effectively. Ability to take both a short- and long-term view. **Resilience & Adaptability** – Ability to remain stable and focused under pressure, and uses appropriate coping strategies. Demonstrates adaptability, and an ability to change lessons accordingly when required. Is comfortable with facing challenges and finding appropriate ways to adapt and cope with their challenges.	***Autonomy*** - Able to work under minimal supervision. Has confidence to make decisions, and can be relied upon when working independently. ***Integrity & Community Relationships*** - Shows professional transparency and accountability for actions and is able to build trust in students, parents, and fellow teachers. Displays good conduct in all situations and is able to manage emotions, likes and dislikes, in a balanced manner. Shows awareness of, and respect for, community culture and protocols in both rural and urban settings. ***Motivation & Commitment*** - Shows positive and enthusiastic attitude towards teaching in all settings and is driven by a passion for improving learning, not for external rewards. Applicant is committed to the profession and to developing his or her teaching career. Ability to motivate learners and fellow teachers. ***Reflection & Creativity*** – Candidate examines classroom practice in a reflective and realistic way, and willing to seek assistance when necessary. Strives to improve teaching and is committed to life-long learning. Shows creativity in developing strategies and new teaching ideas and should have the ability to make and effectively use TALULAR (Teaching and Learning Using Locally Available Resources).
Oman	Three-step process. Step 1 involved document analysis of relevant literature from Omani MoE and national university ITE program. Step 2 involved interviews with 8 teacher experts (teacher educators, school principals, supervisors) to establish a framework of non-cognitive attributes. Step 3 involved a questionnaire on initial and new attributes completed by 181 education professionals.	Revision of content to reflect Omani context. Greater emphasis on 'communication' in the **Empathy & Communication** attribute cluster, defined as 'Candidate is humanistic in relation to others and demonstrates active listening. Candidate is responsive to pupils' needs, and able to adapt the style of communication to suit recipients.'	***Professional Ethics*** – Candidate shows high consideration for Islamic and Omani values, and professional ethics; demonstrates respect for pupils and colleagues and treats others fairly; and accepts taking responsibility and is trustworthy. ***Enthusiasm & Motivation*** – Candidate shows strong and reliable commitment to be a teacher; takes pleasure in doing teaching tasks, and seeks professional development.

This new non-cognitive attribute was informed, first, by the prevailing view that teacher collaboration allows valuable sharing and information exchange and supports achieving higher standards in teaching. Second, the newly instigated Finnish National Core Curriculum (2016) played an influential role with its emphasis on shared learning and constructive cooperation among students, and on a two-way educational dialogue between students and teachers.

3.2.5. Implications for education in Finland

Within the current Finnish government's key project to reform teacher competencies and education, critical emphasis is placed on ITE selection criteria and admission processes, with a need to develop evidence-based approaches. In the expert panel discussions, the non-cognitive target attributes from the original English context did not map cleanly onto the Finnish context; however, there was significant overlap in the attribute clusters indicating a relatively narrow cultural distance between British and Finnish views of critical teacher competencies. Given the complex, multi-faceted job of teaching (Hamre et al., 2013), Finnish teachers—as teachers elsewhere—are increasingly faced with the need to broaden their role towards multi-professionalism and team-work. The Finnish researchers are currently continuing with the

development of a contextualized SJT with Finnish applicants seeking admission to ITE for primary school settings.

3.3. Comparison case 2: identifying critical non-cognitive attributes in Malawi

3.3.1. Overview of Malawian teacher education

The second comparative case is Malawi, an African country with 15.8 million people living in predominantly (84%) rural settings (National Statistical Office, 2015), in the fourth quartile internationally for GDP per capita, and with a median age of 16.5 years (CIA World Factbook, 2017). The key priorities from the National Education Sector Plan 2008–2017 were to increase the number of qualified primary school teachers in order to address a high pupil-teacher ratio (estimated at 70:1 [World Bank, 2017]), and to improve 'teaching inputs,' including teacher training and resources (Ministry of Education, Science and Technology, 2008).

The work conducted in Malawi reported in this article focused on developing selection methods for prospective primary school teachers, with the country currently employing 71,363 primary school teachers (42% female) in 5641 primary schools (serving children aged 6–13 years, although it is common for older students to attend due to repeated grades; Malawi Education Statistics, 2015). For primary school teaching, delivery of ITE is through eight large public and eight smaller private Teacher Training Colleges (TTCs). Until now prospective teachers have been selected through the Department of Teacher Education and Development (DTED). However, following a study by Hau and Nampota (2016) and in line with the government's decentralization policy, selection, beginning with the 2017–18 intake, was conducted by the TTCs themselves under the supervision of DTED.

Selection of teacher candidates is competitive; in 2015, there were approximately 20,000 applicants for 4490 places in TTCs. The teacher education selection process involves screening of written applications to check that candidates possess the stipulated entry criteria (e.g., secondary school certificate). Those meeting the criteria are then invited to various centres across the country where school certificates are checked before a cognitive skills test consisting of multiple choice questions on English, numeracy, and reasoning skills is administered.

The Ministry of Education, Science and Technology (MoEST) has recently raised the issue of the importance of attracting candidates with both a strong motivation to teach and a talent for teaching. It has therefore been keen to complement the cognitive skills test with an assessment of non-cognitive attributes. At the same time, MoEST has raised the entry qualifications of student teachers in order to increase the profile of the teaching profession.

There are currently two other key initiatives in primary teacher education. The first is the introduction of National Standards for Teacher Education building on the National Standards for Primary and Secondary Education introduced in 2015. These standards recognize the importance of the partnership between each TTC and its Teaching Practice School. The other is the revision of the curriculum for initial primary teacher education to make the two-year program more practice-based and reflective with better integration between practice and theory. Improved teacher selection, national standards, and a revised curriculum are thus the current framework for developments in primary teacher education in Malawi.

3.3.2. Data collection and analysis

Data collection in Malawi began with two workshops (three days and two days in length, respectively), each with 8 participants representing key stakeholders. The participants in the two workshops included representatives from MoEST, DTED, and all eight public (and one private) TTCs. Participants came from a range of primary and secondary school teaching backgrounds. The purpose of the workshops was (a) to identify the most important non-cognitive attributes associated with effective novice teachers, (b) to review how current selection methods mapped on to these attributes, and (c) to begin work on developing SJTs that would target the most important non-cognitive attributes. A group consensus method (e.g., Bobrovitz et al., 2013) was used to evaluate the non-cognitive attributes developed in England, to seek multiple rounds of feedback about the existing and any proposed non-cognitive attributes, and finally, to establish consensus from the participants involved. The workshops consisted of multiple sessions that included small group work to discuss the most important non-cognitive attributes of student teachers, larger group discussions, and presentation of findings to the group. As a final step, the non-cognitive attributes developed in the two workshops were presented and further refined at a meeting of 14 principals (or their representatives) from public and private TTCs.

3.3.3. Response to the initial non-cognitive attributes

Participants endorsed the three existing non-cognitive attributes derived from the research in England, but suggested numerous changes to the behavioral descriptors associated with the attributes. For example, in the attribute cluster *Resilience and Adaptability,* participants added the behavioral descriptor 'is comfortable with challenges to own knowledge' as a refinement of this attribute in the Malawian context. For the cluster *Organization and Planning,* participants agreed on the importance of ability to take 'both a short- and long-term view.' There was consensus in the workshops that the three attribute clusters were important for novice (and prospective) teachers, but there was also a strong sentiment that teaching in Malawi presented unique challenges, especially concerning resources, rural isolation, and community integration, that were not adequately represented in the initial attribute clusters. The changes to the initial attribute clusters are shown in Table 2.

3.3.4. Changes for the Malawian context

In addition to endorsement of the three non-cognitive attribute clusters, participants in the two workshops proposed and developed four additional attributes believed to be essential to the success of novice teachers in Malawi: *Autonomy; Integrity and Community Relationships; Motivation and Commitment;* and *Reflection and Creativity.* The four new attributes emerged through small- and whole-group discussions in the first workshop and were refined in subsequent sessions. A full description of the four additional non-cognitive attributes is found in Table 2.

The new non-cognitive attributes reflect the economic, social, and educational context of Malawi, and in particular, the demands of teaching in rural schools. Discussion in the workshops focused on the importance of attracting and developing prospective teachers who showed the capability to work independently (*Autonomy*) and to integrate successfully into village schools (*Integrity and Community Relationships*). Current discussion amongst the TTCs and government ministries about teacher selection informed the emergence of the attribute cluster focused on commitment to teaching in rural settings (*Motivation and Commitment*). Recent discourse in Malawi on life-long learning and reflective practice also underpinned the emergence of the attribute cluster *Reflection and Creativity*. The proposed changes were aligned with government priorities to improve access to education across the country by increasing the numbers of qualified teachers, and to provide equal access to education provision in rural, difficult-to-staff, schools (MoEST, 2008). The initial and new non-cognitive attributes developed through the series of workshops and discussions with the education ministry underpin a teacher selection process

considered for implementation in 2017–2018.

3.4. Comparison case 3: identifying critical non-cognitive attributes in Oman

3.4.1. Overview of Oman teacher education system

The third comparative setting is the Sultanate of Oman, situated on the Arabian peninusula with 4.5 million predominantly (78%) urban inhabitants (World Bank, 2017), in the first quartile internationally for GDP per capita, and with a median age of 25.6 years (CIA World Factbook, 2017). Although Oman, as a developing country, has witnessed a rapid quantitative and qualitative improvement in its educational system since the 1970s, international test results (i.e. TIMSS, PIRLS) reveal a set of challenges in terms of the quality of teaching and level of student achievement (Omani Ministry of Education, 2011a, b). The Omani Ministry of Education (MoE) undertakes the recruitment, evaluation, and on-the-job training of teachers, whereas the Ministry of Higher Education undertakes the role of preparing prospective teachers through higher education institutes. Only a few institutions in Oman currently offer ITE programs: Sultan Qaboos University (SQU), the College of Education in Al-Rustaq, and a few private universities with limited vacancies. The main publicly funded supply of teachers comes from the College of Education at SQU. The annual intake of the College of Education at SQU varies, but since 2008 has been restricted to about 300 students (Omani Ministry of Education, 2012). The demand for new teachers in Oman is witnessing a dramatic change, with a report by the MoE suggesting a need for about 22,000 teachers in the next five years (Omani Ministry of Education, 2016).

Although there is a lack of Ministry guidance on the definition of teachers' effectiveness in Oman, results from recent studies in Oman show that non-cognitive attributes, such as motivation and personality traits, are important for effective teaching from the perspective of teachers, students, school administrators, and supervisors (Al-Ani, Al-Barwani, & Al-Buloshi, 2012). Recent studies warn about low levels of commitment and motivation of new teachers entering the teaching profession. For example, about half of the participants in a study on the career paths of university graduates preparing to be secondary school teachers stated that they are only 'somewhat' or 'not at all' committed to teaching as a career when they graduated (Chapman, Al-Barwani, Al Mawali, & Green, 2012).

The selection of prospective teachers in Oman is based mainly on academic records from secondary school with little explicit concern about the candidates' non-cognitive attributes. The selection of candidates who apply for teacher education programs is based solely on their scores on the General Education Certificate (i.e., taken in the final year of school, grade 12). Similarly, the selection of candidates who apply for a teaching job at the MoE is based solely on cognitive factors: candidates must have a Bachelor Degree or a higher diploma in Education, and they must pass an admission test in the relevant subject. Prospective teachers' non-cognitive attributes have played little part in selection, but there is a growing interest in (a) identifying the non-cognitive attributes associated with effective teaching, and (b) including an evaluation of non-cognitive attributes in the selection process (Al Hashmi & Klassen, 2016).

3.4.2. Data collection and analysis

Data collection in Oman followed a three-step process. Step 1 was undertaken by the lead Omani researcher, and involved a document analysis of the relevant literature from the Oman MoE and the national university (SQU) entrance policies. Step 2 included explorative semi-structured interviews with eight College of Education instructors, school principals, and supervisors in order to develop a framework of non-cognitive attributes associated with effective novice teachers. Interview participants had experience working in 'basic' (grades 5–10) and 'secondary' (grades 11–13) schools. Interview data were analyzed for descriptive content, resulting in a list of 43 descriptors of effective novice teachers. The list of descriptors was then divided into broad themes in two stages; first, the descriptors were mapped onto the three non-cognitive attribute clusters generated in England, and second, remaining attributes were clustered into two new attributes. The two new Omani-specific attributes—*Professional Ethics* and *Enthusiasm and Motivation*—were developed to capture the full set of attributes identified by participants (see Table 2 for behavioral descriptors).

Step 3 consisted of administration of an Arabic-language questionnaire based on the initial attributes plus the two new attributes developed in Steps 1 and 2. The purpose of the questionnaire was to determine whether a broad consensus could be achieved among a wide range of Omani education experts (181 teachers, supervisors, and school principals) on the salience of the five non-cognitive attributes developed in previous steps. Participants (58% female) rated the importance of each non-cognitive attribute for *practicing* teachers and for *prospective* (i.e., student) teachers using a 10-point scale (1 = *Not relevant* to 10 = *Very relevant*).

3.4.3. Response to the initial non-cognitive attributes

Participants' feedback on the semi-structured interviews suggested broad support for the existing attribute clusters. Findings from the questionnaire suggested that each of the existing attribute clusters was relevant for practicing teachers in Oman, with mean scores for the attribute clusters between 9 and 10 when applied to practicing teachers and similarly supportive when applied to prospective teachers. Participants proposed a greater emphasis on 'communication' in the Empathy and Communication attribute cluster, with a revised definition: 'Candidate is humanistic in relation to others and demonstrates active listening. Candidate is responsive to pupils' needs, and able to adapt the style of communication to suit recipients.'

3.4.4. Changes for the Omani context

At the end of the review process, the key change to the attributes from England were the two new attribute clusters developed in Oman: *Professional Ethics* and *Enthusiasm and Motivation.* The two new attributes developed in Oman align with national educational policies and cultural values dominant in the Omani context. The changes reflect the importance of values such as commitment (to the profession's values and ethics), and loyalty (to national and professional goals) and personal discipline. The newly developed criteria implemented for the interview process for new undergraduate candidates at SQU emphasize the importance of commitment to be a teacher and equally a high consideration for Islamic and Omani values for new teachers. The results reflect the importance of community relationships and national values in an Omani context, consistent with findings by previous Omani studies on effective teaching (e.g., Al Barwani, Al-Ani, & Amzat, 2012).

4. Discussion

Teachers' non-cognitive attributes are associated with teacher effectiveness (e.g., McIntyre et al., 2017), but the nature and salience of these attributes may vary across settings. The novel contribution of this article is that we applied a cross-national approach to examining perceptions of non-cognitive attributes of novice teachers. Through the use of a naturalistic comparative case research design—which examined the similarities, differences, and

patterns across settings (cases) with a shared goal—we showed that the three clusters of non-cognitive attributes developed in one setting were perceived as important in settings that contrasted in terms of cultural dimensions, language, economic level, geography, and history. It was agreed that *Empathy and Communication, Organization and Planning,* and *Resilience and Adaptability* are attribute clusters that are critical for the success of novice teachers, although with slightly different interpretations in each country. At the same time, important differences were noted across settings, with contextualized definitions and additional key attributes being suggested in each of the three comparison cases.

As noted by Markus (2016) and others, most of the world is not WEIRD (Western, Educated, Industrialized, Rich, and Democratic), and assumptions about attitudes, values, and motives may not be shared outside of a particular cultural milieu. In the current study, beliefs about the importance of non-cognitive attributes of novice and prospective teachers developed in one setting were tested across settings, with results showing some support for a core of *etic*, or universal, attributes, but also a degree of variation between settings, with additional *emic* attributes emerging in comparison settings. Perceptions of the most important personal characteristics of effective teachers are not universal, but vary according to national education expectations and the predominating cultural beliefs.

Our model of culture and education (Fig. 1) proposed that cultural context influences a range of educationally important factors, including how the education environment (e.g., national policies and expectations) evolves and is communicated, how personal characteristics are valued and expressed, and the kinds of teacher behaviors that are perceived to be effective in a classroom (Meng & Muñoz, 2016). Indeed, previous studies have shown country-related differences in what 'effective' means in relation to teachers' classroom behaviors (e.g., Chia, 2015; Grant, Stronge, & Xu, 2013), with significant differences between Chinese and American teachers' on ratings of classroom management, monitoring student progress, and providing feedback (Meng & Muñoz, 2016). Although considerable cultural variation exists within countries, the results from the current study suggest that beliefs about the attributes of effective novice teachers are expressed in different ways across countries. Agreement was found for core attributes, but as suggested in our model, there are culturally-relevant variations in the importance placed on key non-cognitive attributes.

4.1. Similarities in non-cognitive attributes between countries

Although a few studies have compared cross-national differences in *levels* of teachers' non-cognitive attributes (e.g., Fackler & Malmberg, 2016), less attention has been paid to the salience of attributes across contexts. We found that participants in each of the comparison cases endorsed the three non-cognitive attribute clusters developed in England, suggesting that some fundamental attributes associated with effective teaching are shared across country and cultural boundaries. Changes to the content of the three non-cognitive attribute clusters were made through the review process in each setting, although the broad themes of the proposed attributes remained the same. One finding of the current research stems from the question of whether perceptions of teacher attributes are universal: we posed the question at the conceptual level across contrasting countries and found converging evidence that certain core beliefs span contexts.

4.2. Differences in non-cognitive attributes between countries

The sources of the variations in important non-cognitive attributes stem from a wide variety of factors, including urban-rural split. The relatively high number of proposed *new* non-cognitive attributes in Malawi may reflect the country's current demand for teachers for rural settings, reflecting the relatively higher level of rurality (84%) in comparison to the other three countries in the study, with England at 17%, Finland at 16%, and Oman at 22% (World Bank, 2017). Models of cultural dimensions such as those proposed by Hofstede (2001) and Schwartz (1994) also help explain some of the differences. Definitions of collectivism vary widely, but Brewer and Chen (2007) proposed the distinction between *relational collectivism* and *group collectivism*, with the former emphasizing relationships to others and responsiveness to others' needs, and the latter referring to social identification, obligation, and conformity to group norms. In this study, participants from the higher collectivism countries proposed additional non-cognitive attributes reflecting Brewer and Chen's group collectivism, characterized by community or shared values.

In Finland, the attribute cluster *Cooperation and Fostering of Community* reflected the Finnish value of building community within schools. In Malawi, the attribute cluster *Integrity and Community Relationships* reflects the Malawian valuing of community culture and the importance of teachers' roles in rural communities. However, the focus on collectivism in Malawi was nuanced with the addition of an attribute focused on *Autonomy*, highlighting the importance of teachers, especially in rural settings, to be capable of working independently. In Oman, the attribute *Professional Ethics* reflects the shared value of religious and national beliefs. In each of these settings, participants highlighted the importance of shared community values in a way that teachers in England did not.

The four countries in the study also varied in levels of power distance (Hofstede, 2001), with England and Finland showing relatively low levels, and Malawi and Oman showing relatively high levels on the dimension. In Malawi, the attribute cluster Integrity and Community Relationships noted the vertical relationships between teacher and supervisors: *Shows professional … accountability … Shows awareness of, and respect for, community … protocols*. In Oman, awareness of vertical relationships characteristic of higher levels of power distance were noted in the attribute Professional Ethics: *Candidate shows high consideration for Islamic and Omani values*. In Malawi and Oman, the tension between novice teachers' assistance-seeking and autonomy—already noted in the initial *Resilience and Adaptability* attribute cluster—was emphasized in the *Autonomy* attribute (Malawi) and in the *Professional Ethics* attribute (Oman). Participants from all four settings noted the importance of the development of professional autonomy in novice teachers, but recognized that the process is developmental, gradual, and varies among individuals (Xu, Özek, & Hansen, 2015).

4.3. Implications

The program of research underpinning the current study is focused on developing tools for the selection of prospective teachers. National context influences the kinds of selection procedures implemented, how selection procedures are administered, and how selection methods are validated (Steiner, 2012). Selection procedures in education in many settings are ad hoc and untested (Goldhaber, Grout, & Huntington-Klein, 2014). Our goal is to develop selection tools that are built on a foundation of culturally-tested, practitioner-endorsed, and empirically supported non-cognitive attributes. An important implication stemming from the current study is that selection practices should reflect cultural variation in key non-cognitive attributes. When candidates for teacher education are selected, one-size-fits-all selection tools are not appropriate for across settings. More broadly, although we found some similarities across contexts, we also found that perceptions of critical teacher attributes vary across countries, suggesting the importance of etic and emic perspectives.

4.4. Limitations

One challenge facing researchers conducting cross-national research in naturalistic settings is that it is difficult to control for variations in participant characteristics, data collection, and the real-time decisions made while conducting research. One limitation of the study is that the specific methods used to generate and evaluate the non-cognitive attributes varied between settings. In England, multiple sites including schools and universities were used, whereas in Finland the workshops were based in a single university, albeit with participants from a range of settings. In Malawi, the participants were associated with multiple ITE sites and government ministries, while in Oman, a range of data sources, sites, and participants were included. However, the variation of data sources in each site and across settings is also a strength that reduces the risk of biases stemming from data collected in single sites using mono-method research designs.

A related limitation pertains to the diversity of participant backgrounds and target teaching level (primary or secondary) for identifying non-cognitive attributes. Participants came from a range of primary and secondary school backgrounds, and the target teaching level (i.e., primary or secondary) varied across contexts. Previous studies have found differences in teachers' non-cognitive attributes across teaching levels (e.g., self-efficacy in Lee, Cawthon, & Dawson, 2013), but not in the existence of the attributes. The diversity of participant backgrounds (from primary and secondary teaching backgrounds), coupled with the practice of discussing critical non-cognitive attributes across teaching levels, partially mitigates this limitation. However, further work differentiating non-cognitive attributes across teaching levels may be informative.

The group consensus methodology used in each setting was valuable in providing insight into normative value systems in each setting, but masked the individual variation that exists within each country. The idea of 'shared' cultural values within a country is based on the notion, articulated by Hofstede (2001), of "the collective programming of the mind that distinguishes the members of one group or category of people from another" (p. 9). However, recent studies (e.g., Schwartz, 2014) show that although mean levels of cultural dimensions may differ between countries, the within-country differences are strong; that is, individuals vary greatly on any assumed shared cultural dimension. Schwartz also points out that societal-level cultural dimensions are most clearly expressed in the functioning of institutions and organizations, including schools and education. Although the group consensus method used in this study may mask individual variation, the method also robustly highlights the values that are believed to be important to institutions within a country, individual variation notwithstanding.

A further limitation of the study is that the attributes identified in England may have subtly or explicitly influenced the perceptions of participants in the other three cases, who for multiple reasons may have been reluctant to openly criticize or change the attributes presented for discussion. A deeper (and different) understanding of essential non-cognitive attributes may have emerged from using methodologies that started from a blank slate and allowed perceptions of attributes to emerge without *a priori* assumptions. Finally, although the study includes a diverse range of settings, including those not typically included in cross-national educational research, the inclusion of only four settings limits claims of universality of the findings.

5. Conclusion

Teaching is inherently cultural: societal beliefs, goals, and values play a role not only in classroom behaviors, but in the personal characteristics we value in current and prospective teachers. Research based in single settings, or even in multiple settings that share similar cultural dimensions, cannot effectively evaluate the universality of these attributes. The current study posed a question about the universality of the non-cognitive attributes of effective novice teachers. Our response is that although certain attributes of effective teachers such as resilience, empathy, and organization might be considered *etic* or broadly universal, there is also considerable variation from an *emic* perspective, with national and cultural context playing an important role. For future studies, more empirical work testing the robustness of the dimensions is clearly needed, but researchers do not need to conduct exhaustive studies in countless countries to explore the universality of valued attributes of effective teachers. Rather, research that includes a thoughtful combination of contrasting cultural profiles and educational contexts has the potential to increase our understanding of educational universals, and their scope, impact, and importance.

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