



Pearson

The Heart of Great Teaching:

Pearson Global Survey of Educator Effectiveness

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Summary



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The quality of an education system cannot exceed the quality of its teachers.

”

BARBER & MOURSHED, 2007

Wherever learning flourishes, so do people. But those most affected by the quality of the learning process—students, teachers, parents, and even school administrators—are often left out of the conversations about teaching and learning. Pearson asked a range of citizens in 23 countries: **“What do you think are the most important qualities of an effective teacher?”**

The answers are human at heart. The most common response, regardless of grade levels the teacher teaches, public or private school, or gender of the respondent, is that relationships between teachers and students matter most.

The responses also vary based on the country’s level of human development. Less developed countries tended to value the teacher’s professionalism more strongly; however most differences were not dramatic. The differences we found between stakeholder groups and education contexts were not in which qualities were valued most, but in their prioritization.

There were also notable surprises from the findings—education professionals did not list some important research-based qualities and capabilities of an effective teacher. Overall, stakeholder responses reflect a student-centered focus, valuing the relationships required for learning and the understanding of students as learners above the teacher’s subject knowledge and teaching skills.

Student-Centered Focus:

Results from our survey in 23 countries reaffirm the notion that at its foundation, teaching is about relationships between teachers and students that ultimately foster student success.

Global Focus on Teacher Quality



Economists have drawn a link between a country's future economic growth and the quality of its education systems. When students learn more in school, they stay working longer, gain more skills, and participate more effectively in the workforce (Hanushek, Woessmann & Ruhose, 2016). Contributing to a vibrant, healthy economy, better educated individuals tend to live healthier lives and participate in a civil society. In fact, studies in developing nations indicate that **no country has ever achieved continuous and rapid growth without at least a 40% adult literacy rate** (CGD, 2005). Studies also indicate that to achieve a high quality education system, the focus has to be on developing a strong teacher workforce: "The quality of an education system cannot exceed the quality of its teachers" (Barber & Mourshed, 2007). Under more public and policy scrutiny, teachers around the world have been pushed into the spotlight.

Teachers are the heart—and the hands—of any education system. Decades of research have made it clear teachers make the biggest school-based difference in student learning. In fact, Stanford University economist Eric Hanushek (1992) has noted that the difference between a good and a bad teacher can be a full level of achievement in a single school year.

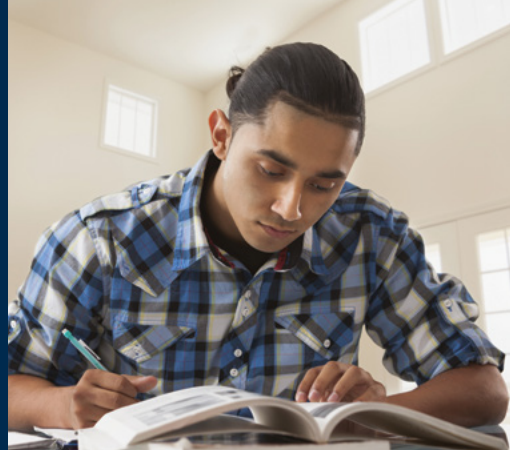
Investing in teacher quality is a path to a stronger economy that starts with defining what makes an effective teacher. A better understanding of what kinds of competencies are needed for teachers to have a positive impact on student learning has implications for teacher recruitment, preparation, licensing and certification, in-service training (professional development), evaluation, and retention. These need to be based on a common understanding, within each country, of what it means to be an effective teacher.

To create the common understanding, input from stakeholders for whom decisions about teaching matter the most is needed. An Oxfam International study of teacher competences and standards concludes that in order to build that common understanding, it is "absolutely necessary that the question as to what is considered a quality educator is investigated among stakeholders" (Bourgonje & Tromp, 2011, p. 145). By giving stakeholders a voice, policymakers gain insights into how those most affected by policies think and feel about them and provide an opportunity to help frame important policy decisions that directly impact their lives.

What happens when diverse voices aren't heard?

In Mexico, teachers have been involved in large, multi-year protests against top-down administration from the federal government of 2013 education reform. It has caused disruption in learning for students and loss of goodwill toward teachers (Brancho, 2013; Montes & de Cordoba, 2012; Zissis, 2015).

Study Overview



To contribute to the global discussion about what makes an effective teacher, Pearson surveyed students ages 15-19, teachers, principals, education researchers, education policymakers, and parents of school-aged children in 23 countries. Along with demographic items (e.g., respondent's city, gender, school or job experience), participants responded to two key items:

1. List a minimum of 3 and a maximum of 15 of what you think are the most important qualities of an effective (good) teacher.
2. Indicate the type of teacher you are thinking of as you create the list.

For the second part, we provided a matrix of grade levels and subject areas taught. This allows us to examine whether the list of qualities differs for different grade levels and subject areas. It is important to note: **we did not provide a list of qualities for respondents to endorse; we asked them to list their own, in their own words**, so as not to influence results. Moreover, we chose the word "qualities" rather than "competencies" in order to use clear language that any survey respondent could understand.

The study was driven by the following set of research questions:

1.

What do different stakeholder groups regard as the most important qualities of an effective teacher?

2.

Do these qualities differ by context?

3.

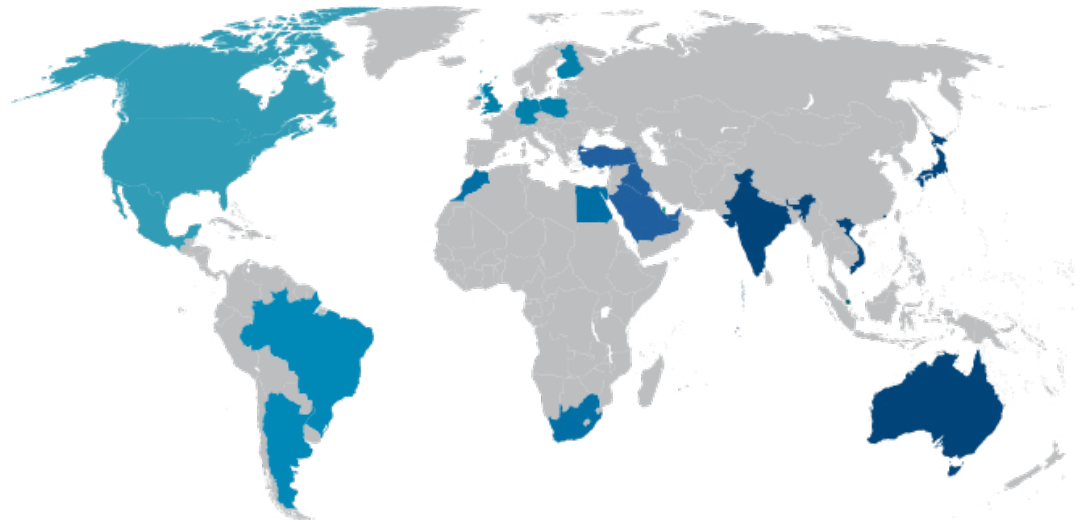
How do these qualities align with teaching standards and research on teacher effectiveness?

Figure 1 summarizes the methods we used for primary data collection. More detailed information is in the Further Details section of this report, including data collection and sampling methods, areas surveyed, coding of survey responses (**Table A3**), and who we surveyed (**Figures A1–A7**).



We collected data in 23 countries¹ around the globe from 13,225 participants, engaging third-party marketing research organizations to assist in the sampling design and to collect the data.

- Canada, U.S., Mexico
- Brazil, Argentina
- Finland, Germany, Poland, England
- Morocco, Egypt, South Africa
- Turkey, Saudi Arabia, Qatar, U.A.E., Iran
- India, Singapore, Vietnam, Hong Kong, Japan, Australia



To read the individual country reports, visit:

www.pearson.com/global-teacher-survey

¹ Hong Kong (a territory) and Singapore (a city state) are technically not countries.

What is Valued Most



What is Valued Most in an Effective Teacher?

Notably, survey participants did not focus first on how much a teacher knew, or even what kinds of teaching methods he or she used, but instead on the teacher's dispositions. Across all participating countries **the ability of the teacher to develop trusting, compassionate relationships with students was valued most**. This is true regardless of the respondent's gender, public or private school affiliation, or whether he or she was thinking of a primary or secondary teacher. The next most valued quality was a patient, caring, and kind personality. In other words, it appears that stakeholders most strongly value a teacher's ability to connect with students and personality characteristics that facilitate those connections.

Most
Important
Qualities
for Teachers
Across 23
Countries:

- 1 Ability to Develop Trusting, Productive Relationships
- 2 Patient, Caring, Kind Personality
- 3 Professionalism
- 4 Subject Matter Knowledge
- 5 Knowledge of Learners

The following describes each category of teacher qualities or characteristics endorsed most frequently by our survey respondents, and research supporting those qualities for effective teaching and learning.

Trusting, Compassionate Relationships with Students

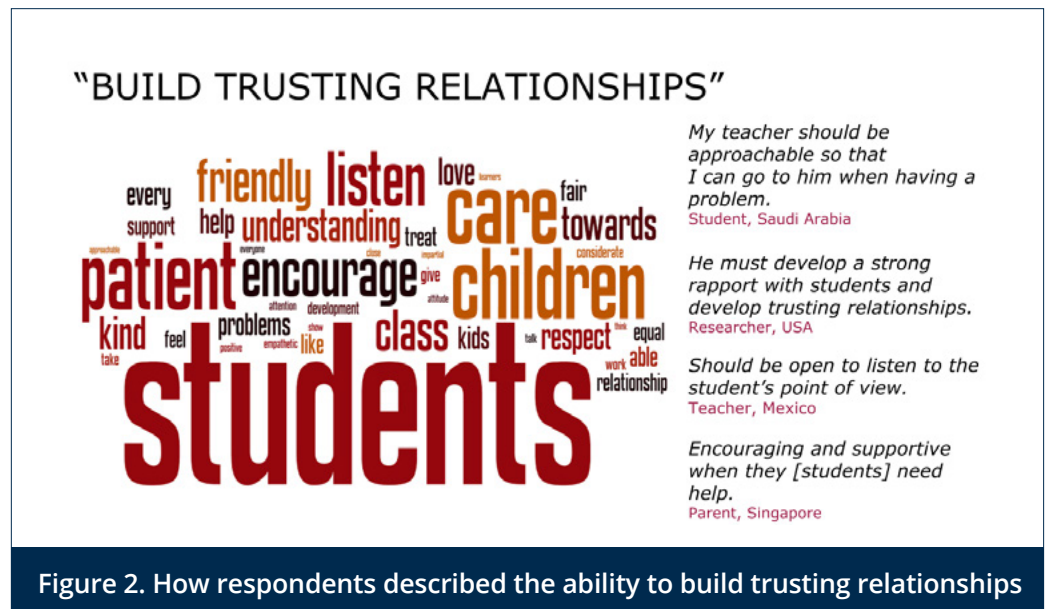
The ability to develop trusting, compassionate *Relationships* broadly includes the teacher’s ability to:

- relate to students,
- value and feel compassion for students as human beings, and
- serve as a role model or mentor.

As one policymaker in Brazil said, “*Students should feel safe and confident before the teacher, because he knows how to lead them in class and his interest and empathy builds their enthusiasm.*” In the literature, teaching is characterized as a complex relationship between the educator and the student where teachers “know and respond with intelligence and compassion” to students and their learning (Rogers & Raider-Roth, 2006). Barber (1995) refers to this relationship as part of the “unknown universe” of teaching:

...that crucial part of education that is to do with the classroom interaction of learner and teacher and with the extraordinary ability of teachers to generate sparks of learning, even in the most inauspicious of circumstances (p. 76).

In our sample, all six stakeholder groups reported this competency the most frequently in their list of qualities of an effective teacher. Notably, students reported it most often.



Researchers have documented the link between strong, collaborative relationships between teachers and students and learning outcomes (e.g., Zins et al., 2004; Singh & Sarkar, 2012). In a study by Gelbach and colleagues (2012) with middle school students and teachers in the United States, the researchers found that as teacher/student relationships improved, teachers interacted more frequently with the students, and students finished the semester with higher grades. Moreover, the achievement gap between under-served and well-served students dropped by 65 percent.

Teachers need to be able to build compassionate, trusting relationships with students to create a safe, positive, and productive teaching and learning environment. Research by cognitive psychologists emphasizes the importance of social relationships for enabling, supporting, and enhancing learning. In essence, trusting relationships reduce the perception of risk and therefore reduce the cognitive load required for tasks like learning (Coan & Sbarra, 2015). In the presence of supporting relationships, learning requires less effort. Former teacher and popular American author Jessica Lahey (2014) summed up the importance of positive social relationships between teachers and students in this way:

The teacher-student relationship impacts every aspect of the educational experience. When students don't feel safe, respected, or truly known by their teacher, they are less likely to invest and engage in their education. Conversely, when teachers feel distanced from or distrusted by their students, it's nearly impossible to muster the enthusiasm to walk into the classroom each day, let alone instill motivation or investment in our students.

Patient, Caring, and Kind Personality

Related to the ability to build trusting relationships with students, stakeholders focused on the teacher's personality characteristics associated with being a compassionate person, particularly with students. A student in Dubai said it well: *"We want a patient teacher because we require some time to absorb information he or she is providing."*

There is a significant body of research indicating that teacher dispositions are strongly related to student learning and development. Several key dispositions include a caring attitude and sensitivity to student differences. There is also research on the impact of work environment on teacher dispositions and burnout. For example, Kokkinos (2007) found that work environment stressors, particularly management of student misbehavior and time constraints, were associated with emotional exhaustion and burnout in primary school teachers. In such situations, teachers are more likely to be emotionally detached and to become more cynical toward their students in order to avoid subsequent stress. However, dispositions that make up a caring attitude, such as sociability, were found to function as buffers. The following illustrates survey participants' ideas in this category (*Patient, Caring*).

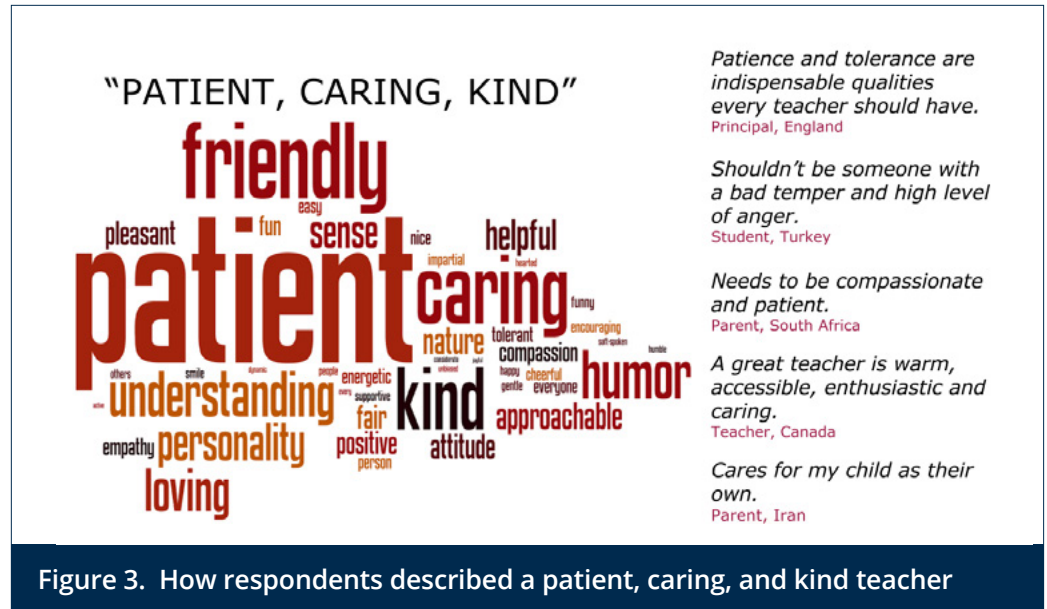


Figure 3. How respondents described a patient, caring, and kind teacher

Teacher Professionalism

The focus of the stakeholders then turned from dispositions needed to teach toward the teacher's *Professionalism*. This category has to do with workplace practices and responsibility as a professional (e.g., being respectful, honest, and punctual), including knowledge of local and national rules and regulations governing teaching in one's school. Having a calm demeanor, treating others with respect, being responsible, punctual, and disciplined are some of the most frequent responses in this category. Stakeholders often commented on how teachers should remain calm, with students in particular, and treat them with respect. Having a calm demeanor is likely related to the second most frequently cited quality of a patient, kind and caring personality, particularly with respect to patience. Of the six stakeholder groups, parents mentioned the importance of the teacher's professionalism the most frequently.

According to data from the OECD's 2013 Teaching and Learning International Survey (TALIS), 11% of principals from participating countries reported that teachers arrive late to school on at least a weekly basis (OECD, 2013). In some countries we surveyed, that percentage is much higher. In countries like Brazil, South Africa, and India, for example, public schools in particular struggle to have a teacher in the classroom on time—if they show up at all—and who remains in the classroom for the hours they are expected to teach each day. In some countries, teachers show up but fail to provide any instruction to their students. Instructional time relates to opportunity to learn. If students have no teacher to teach them, or one who does not use the time productively for learning, they miss the valuable opportunity to learn and to prepare for college and career success. As a parent in India stated, a teacher should *"regularly attend the classes,"* echoed by a parent across the world in Mexico, who said an effective teacher is *"disciplined—doesn't miss class."*



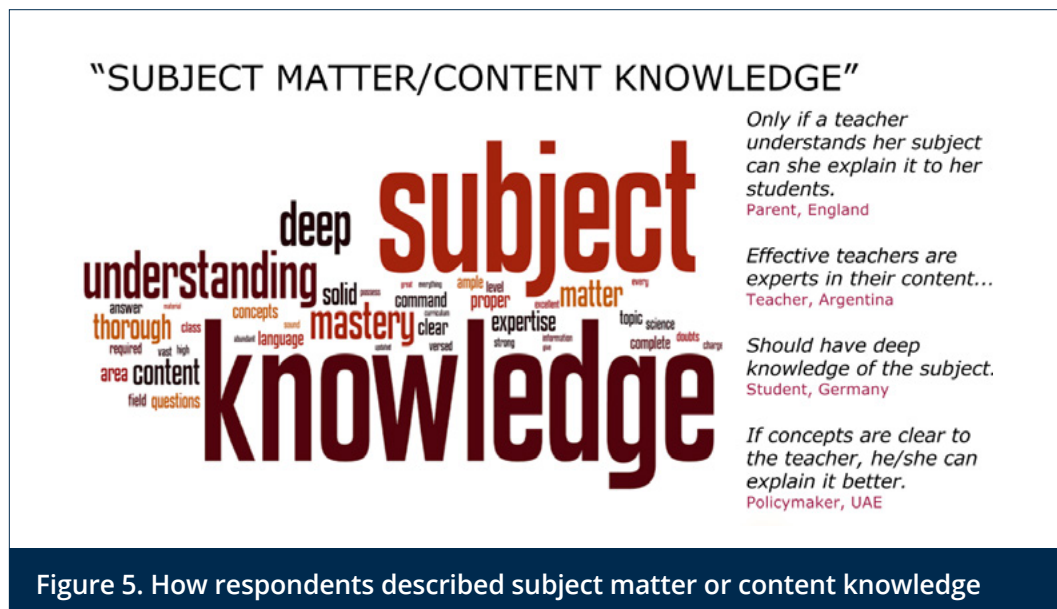
The fourth and fifth most valued competencies have to do with technical knowledge and skills specific to teaching. Subject matter knowledge was cited fourth-most frequently, and knowledge of learners was fifth.

Subject Matter Knowledge

A discussion of effective teachers would be odd indeed if it didn't include knowledge of the content they teach. Teacher preparation programs around the world focus on candidates attaining at least a working knowledge of their subject matter. In our sample of stakeholders from 23 countries, this competency came up fourth-most frequently (*Subject Matter Knowledge*). This category includes expertise in a given content or subject area as well as knowledge of the curriculum, learning objectives, and/or standards in that content area (e.g., Leu, 2005; Bransford et al., 2007; CEPPE, 2013). In our study, respondents frequently mentioned a deep knowledge of or expertise in the teacher's content area. A principal in Brazil made the connection between content knowledge and pedagogy when he noted that an effective teacher *"not only masters the content of the course, but also knows the best way to apply this content to produce knowledge and learning."*

Research supports the need for both subject matter and curriculum knowledge for effective teaching, along with strong pedagogical content knowledge. Research linking teacher subject matter knowledge to student learning has been carried out extensively in the STEM fields (Science, Technology, Engineering and Mathematics) in particular, although it is relevant in all fields. For example, in a study in the United States, researchers showed a clear link between teachers' mathematics content knowledge and their students' mathematics achievement in first and third grades (Hill, Rowan & Ball, 2005). Similarly, Australian researchers found that teacher professional development with a strong content focus had a significant direct effect on their teaching practice and student achievement (Ingvarson, Meiers & Beavis, 2005).

In a series of studies comparing how mathematics are taught by teachers in the U.S. and China, Cai and colleagues found that the teachers' subject knowledge played a key role in pedagogical practices (e.g., see Huang & Cai, 2007).

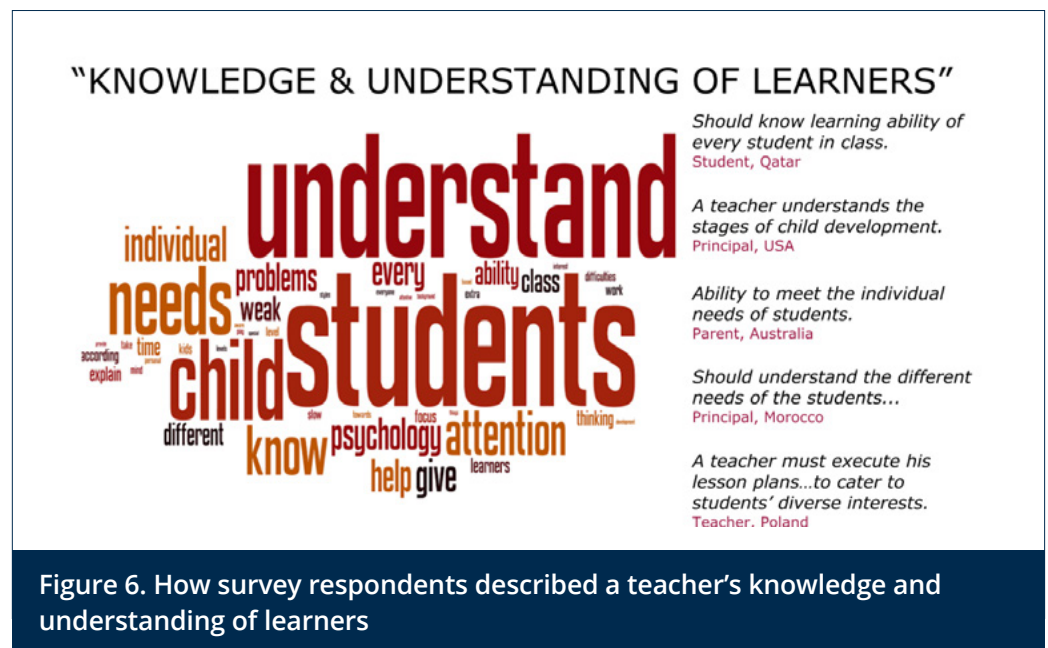


Knowledge and Understanding of Learners

The fifth-most frequently reported quality or competency of an effective teacher for the entire sample of stakeholders was the teacher's knowledge and understanding of learners. This is a broad category that includes knowledge of the cognitive, social, and emotional development of learners. Such *Knowledge of Learners* includes an understanding of how students learn at a given developmental level; how learning in a specific subject area typically progresses; awareness that students have individual needs and abilities; and an understanding that instruction should be tailored to meet each student's needs. This broad set of competencies appears often in the research on effective teaching, underscoring the notion that instructional practices should align with what learning science tells us about how humans learn and that *"one size does not fit all"* in teaching and learning (e.g., Bransford et al., 2007; Klem & Connell, 2004; Leu, 2005; OECD, 2013; Bourgonje & Tromp, 2011). It also belies a student-centered approach to education, emphasizing the importance of their learning needs as the means for driving instructional approaches.

Many of the stakeholder responses focused on teachers knowing their students' interests, understanding individual learning needs and personalizing learning. The figure below illustrates survey responses regarding this category.

There is a large body of research emphasizing the importance of understanding how learners learn, and their learning needs, as a critical competency of effective teaching. Cognitive scientists such as Clark and Mayer (2011) and Willingham (2009) continually reinforce the importance of aligning teaching strategies with the learner's cognitive development and with the brain's mechanisms for learning. Willingham, for example, notes that learning is driven by working memory, and the use of teaching strategies that support and enhance working memory is critical for helping students learn. He also reinforces the importance of targeting learning tasks to meet what Vygotsky (1978) called the "zone of proximal development" or ZPD for individual learners. That is, teachers should ensure that learning tasks are challenging, but not so challenging that a student gives up in frustration. The rationale for differentiating and personalizing learning is partly due to this need to align learning tasks to each student's ZPD.



Pyramid of Teacher Competencies

Our survey results suggest a pyramid model of how to think about teacher competencies. There is a large literature on the competencies of effective teachers, derived from research and the expertise of practitioners that frequently divides competencies into areas of knowledge, skills, abilities, and/or dispositions.

Our survey results suggest that respondents tend to think about teacher competencies in the following way:

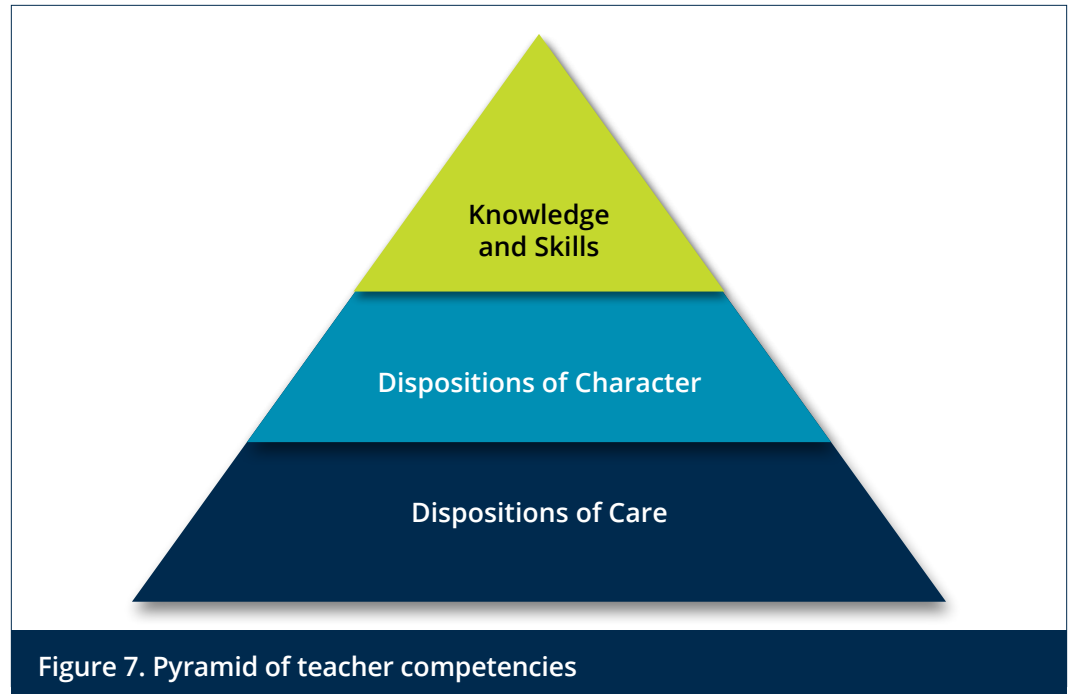
- dispositions of care (building trusting, compassionate relationships; patience, caring, and kindness),
- dispositions of character (professionalism in and dedication to one's work), and
- technical knowledge and skills (knowledge of subject matter and curriculum, and knowledge of learners and the ability to target learning tasks to their individual needs).

Our survey findings make it clear that all of the key education stakeholders we surveyed—students, parents, teachers, principals, policymakers, and researchers—value dispositions of care first and foremost among the competencies they regard as most important for being an effective teacher. Dispositions of character are the next most highly valued, followed by teaching-specific knowledge and skills.

The importance of dispositions of care and character may reflect an underlying belief that without them, a teacher's subject matter knowledge and pedagogical skills will do little to help students learn and succeed. There is a strong literature that supports such thinking. Having the knowledge and skills to act, Dotti (2009) notes, does not mean having the inclination to do so. In fact, researchers such as Ritchart (2002) view dispositions as the gap between abilities and actions: having dispositions of care and character, for example, enables teachers to use effective professional judgment and do the right thing for students. Research tells us that when teachers create a safe and supportive learning environment, students are more motivated and consistently engaged. Cognitive science tells us that these conditions reduce the cognitive load of learning by allowing individuals to shift their focus from potential risks to the learning task at hand.

As **Figure 7** illustrates, it may be that these dispositions serve as a foundation for effective teaching—i.e. the base of the pyramid—supporting the requisite professionalism and teaching-specific knowledge and skills. In combination, these three large domains of teacher competencies cultivate productive student learning and success.

“
Creating a climate where students feel cared for, where they belong, and where they are free to take risks and make mistakes as they learn new content and skills is critical for productive learning to occur.
”



Values and Roles in the Education System

As we undertook this study, we expected to find that different stakeholder groups would value different teacher qualities or competencies. For example, we assumed that the students would likely value the teacher's patience and kindness most, while the educators (the teachers and school administrators) and researchers and policymakers would emphasize the teacher's technical knowledge and skills. We found, instead, that the stakeholder groups overlapped quite a bit on what they valued most in an effective teacher. As the figure on the next page illustrates, we found that all the stakeholder groups shared 9 of their Top 10 most valued qualities, but in varying order, with the exception of what they valued first and foremost: all stakeholder groups valued the teacher's ability to build compassionate, trusting relationships with students as the most important quality of an effective teacher.

Shared Values

All stakeholder groups valued the teacher's ability to build compassionate, trusting relationships with students as the most important quality of an effective teacher.

What is Valued Most

Researchers	%	Policy makers	%	Parents	%	Administrators	%	Students	%	Teachers	%
Relationships	11.9	Relationships	13.1	Relationships	15.2	Relationships	14.9	Relationships	18.3	Relationships	13.9
Teaching Skills	8.5	Teaching Skills	8.3	Patient, Caring	13.5	Patient, Caring	7.4	Patient, Caring	13.4	Patient, Caring	9.4
Patient, Caring	8.5	Subject Knowledge	7.5	Professionalism	9.1	Know Learners	7.2	Professionalism	7.9	Subject Knowledge	7.8
Subject Knowledge	7.6	Professionalism	7.2	Subject Knowledge	7.4	Professionalism	7.0	Make Ideas Clear	7.3	Professionalism	7.5
Professionalism	7.2	Patient, Caring	7.1	Make Ideas Clear	6.9	Dedication	6.8	Engaging	6.5	Dedication	6.7
Dedication	6.5	Dedication	6.0	Dedication	6.5	Subject Knowledge	6.3	Know Learners	6.3	Know Learners	6.5
Know Learners	6.5	Know Learners	5.9	Know Learners	6.1	Teaching Skills	6.3	Teaching Skills	6.2	Engaging	6.3
Engaging	5.4	Engaging	5.7	Engaging	5.3	Engaging	4.7	Subject Knowledge	5.8	Teaching Skills	5.9
Make Ideas Clear	4.8	Make Ideas Clear	4.6	Teaching Skills	4.4	Class Mgt	4.6	Dedication	5.3	Make Ideas Clear	5.4
Class Mgt	4.6	Non-Cognitive Skills	4.4	Class Mgt	3.8	Make Ideas Clear	4.5	Class Mgt	3.4	Class Mgt	4.3

Figure 8. Top 10 qualities of an effective teacher by stakeholder group

Along with the top 5 teacher qualities reported as the most valued across the entire sample (see previous section), the following were the most frequently reported by each of the stakeholder groups:

- *Dedication*: Dedication to teaching and students' success
- *Teaching Skills*: Ability to use a variety of instructional methods and/or approaches (e.g., student-centered) to help students learn and master content, especially methods that are supported by research to enhance student learning
- *Engaging*: Ability to make learning engaging and to motivate and engage students in their own learning
- *Make Ideas and Content Clear*: Ability to make ideas and content clear for students and to make complex content understandable; includes strong communication skills
- *Classroom Management*: Ability to foster a productive learning environment. This category made the Top 10 list for all but the policy makers
- *Non-Cognitive Skills*: A focus on developing students' so-called non-cognitive skills, including 21st Century skills, such as learning how to learn, developing persistence, etc. This category made the Top 10 list of policy makers only

Some interesting differences in the priorities of the stakeholder groups include:

- Policymakers and researchers valued *Teaching Skills* the most highly (mentioned second most frequently). Students, parents, teachers, and principals also valued these skills, but not at the same level (they were seventh, eighth, or ninth most frequently mentioned). This suggests that researchers and policymakers believe that the teaching methods and approaches that teachers use to help students learn are of primary importance for the student's success. There is a large body of research that suggests that the teacher's choice of specific teaching methods for specific content is critical for improving learning.
- The ability to *Make Ideas and Content Clear* was most strongly valued by students and parents (fourth and fifth most frequently mentioned, respectively) compared to the other stakeholder groups, where this category was mentioned ninth or tenth most frequently. The ability to make ideas and content clear involves strong communication skills but it also assumes the choice of effective teaching methods, and as the students often noted, the desire to ensure that the students are learning before moving forward.
- The teacher's *Knowledge of Learners* was most strongly valued by principals in this study, where it was mentioned third most frequently, compared to the other stakeholder groups where it was mentioned sixth or seventh most frequently. As noted earlier, this specialized set of competencies includes knowledge of how children learn and develop, and aligning teaching methods to fit the individual needs of the student. It is not surprising that those with expertise in education would highlight this critical set of research-supported competencies for effective teaching.

“Responses from groups did not differ by qualities mentioned, but by frequency.”

It is important to note that although differences occur in the rank ordering of frequency of mentions by each stakeholder group, the majority of the responses were, in general, not dramatically different. The differences ranged from about 1 to 4 percentage points in the frequency of reporting the above categories. Given the methods of this study, it is unclear if those differences are meaningful regarding the priorities and beliefs of education stakeholders about what it takes to be an effective teacher.²

Value Versus Development

Does a country's level of human development affect what is valued in teachers? As we analyzed the data for each country, we expected to see a pattern of results that would be related to the level of human development, including the following: In countries in which the education system was less developed, we expected to find stronger appreciation of the teacher's professionalism and the more fundamental technical competencies such as subject matter knowledge and classroom management.

² Because we asked each stakeholder to generate his/her own list of qualities of an effective teacher, it may be that what was most salient at the time—i.e. whatever came most readily to mind—was reported. However, we did emphasize that we wanted qualities that they thought were MOST important, and therefore we interpret the results to indicate their priorities.

This assumption was based on information regarding the challenges each country faced in developing a professional teaching workforce, for example:

- In countries where teaching conditions in public schools were largely challenging and difficult (e.g., India, South Africa, Brazil), there were associated problems with teacher absenteeism and tardiness, and in some cases, poor treatment of students.
- In countries where student achievement was low, as measured by international tests, it was often the case that basic teacher knowledge and skills, including subject matter knowledge, was poor due to insufficient teacher preparation programs (e.g., India, South Africa).
- For the countries with more developed education systems (e.g., Japan, Singapore, Finland), we expected to find more emphasis on research-supported teaching practices such as integrating technology for learning, using student-centered approaches, personalizing instruction, use of assessment to monitor learning and adjust instruction accordingly, and an emphasis on deeper learning (versus rote memorization or exam scores).
- We also thought the more developed countries would emphasize practices like teacher collaboration and leadership, which have been supported by research as critical factors in developing teacher effectiveness.

To find out whether our assumptions were accurate, we grouped the 23 countries³ by their Human Development Index (HDI) scores and compared the three groups on their Top 10 most valued qualities of an effective teacher. The HDI, developed by the United Nations Development Program, is a combination of three key dimensions in human development: a long and healthy life, being knowledgeable and having a decent standard of living.⁴ Being knowledgeable is crudely measured by a combination of years of schooling for adults 25 years and older, and expected years of schooling for children of school entering age.

HDI Category	Country	HDI Group
High HDI	Australia, Germany, England, Finland, USA, Canada, Singapore, Hong Kong, Japan, Qatar	1 or more SD* above the mean
Medium HDI	Poland, Saudi Arabia, United Arab Emirates, Iran, Turkey, Argentina, Mexico, Brazil	At or up to 1 SD* above the mean
Low HDI	Egypt, Morocco, South Africa, India, Vietnam	Below the mean

*Note: SD = standard deviation. We created z-scores for all 188 countries in the United Nations data set with HDI scores, and grouped the 23 countries participating in our study by how much they varied from the UN data set's mean. Higher scores mean greater development in the combination of the three general domains. Countries in the UN dataset with the highest HDI scores include Norway and Australia and the lowest scores were held by the Central African Republic and Niger.

Table 1. Countries surveyed grouped by Human Development Index (HDI)

³ Because the costs of data collection can be prohibitively high in countries without a decent internet presence, we naturally have more countries in the higher than the lower end of the HDI spectrum.

⁴ See <http://hdr.undp.org/en/content/human-development-index-hdi> for a description of the index and its components.

What is Valued Most

In our comparisons across the three HDI groups, we weighted the survey responses to ensure that each country's data in our study contributed equally to their HDI group. The following figure compares the Top 10 most frequent responses about what matters most in an effective teacher across the three HDI groups.

Highest HDI	%	Middle HDI	%	Lowest HDI	%
Relationships	18.1	Relationships	14.4	Relationships	13.9
Patient, Caring	11.6	Professionalism	9.2	Patient, Caring	12.3
Knowledge of Learners	7.9	Patient, Caring	8.7	Professionalism	7.9
Subject Knowledge	6.9	Teaching Skills	7.9	Make Ideas Clear	7.8
Professionalism	6.7	Subject Knowledge	7.5	Subject Knowledge	7.3
Engaging	6.1	Engaging	6.7	Dedication	6.4
Dedication	6.0	Make Ideas Clear	6.0	Teaching Skills	6.0
Make Ideas Clear	5.7	Dedication	5.7	Knowledge of Learners	6.0
Class Management	5.0	Knowledge of Learners	5.4	Engaging	5.4
Teaching Skills	4.5	Class Management	3.3	Class Management	3.0

Figure 9. Top 10 qualities reported by Human Development Index (HDI), Weighted

“
Despite the different challenges, the relationship between teachers and students still mattered most.
”

When we compared countries based on their progress in human development, we found some of the differences we expected regarding what was most valued in an effective teacher. However, we were surprised to find that despite their level of development, all groups of countries valued the teacher’s ability to develop trusting compassionate *Relationships* with students first and foremost. That is, despite the different challenges countries face in developing an effective teaching workforce and an education system that reaches all students and provides them with opportunities to learn, the relationship between teachers and students still mattered most.

We found that each of the three HDI groups reported the same Top 10 most valued qualities for an effective teacher, but in a different order and at different frequencies. **Figure 9** illustrates the differences in frequencies between the three groups graphically.

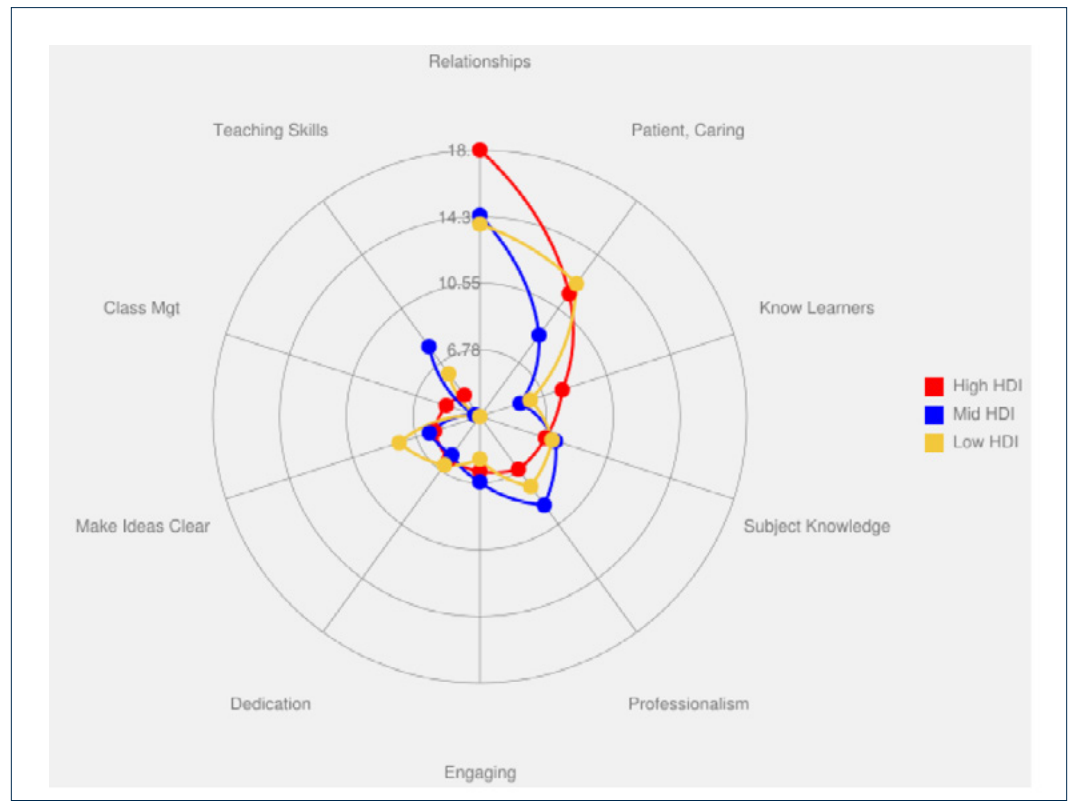


Figure 9. How HDI is associated with the most valued competencies

“
Countries with the lower HDI scores tended to value the teacher’s professionalism more strongly, but differences were not large.
”

As we hypothesized, we found that the countries with the lower HDI scores tended to value the teacher’s *Professionalism* more strongly (second or third of their Top 10 list) than the countries with higher HDI scores (fifth of their Top 10). But like the stakeholder comparisons, the differences were not dramatic, ranging from about 1-2.5 percentage points in reporting frequency. We also found that the high HDI group valued the teacher’s *Knowledge of Learners* (third in their Top 10) more than the lower scoring countries (where it was eighth and ninth). This set of competencies requires an understanding of child development and psychology, as well as how to identify individual learning needs and adapt instruction to meet them. In countries where teacher preparation programs are struggling for rigor and teaching is primarily lecture-based and whole group-focused, this set of competencies may not be either well understood or common among teachers.

The ability to *Make Ideas, Concepts Clear* was valued more by the countries in the lowest HDI group, as the fourth versus the seventh or eighth most frequent for the middle and high HDI groups. It may be that this is a broader, less sophisticated way to express the importance of skills that help students to learn compared to other categories such as *Knowledge of Learners*. And unexpectedly, the middle HDI group valued *Teaching Skills* (fourth most frequently reported) more than the low (seventh) and high (tenth) HDI groups, with the difference ranging between about 2 and 3.5 percentage points. It is not clear why this pattern would emerge.

Math and Science Education

We also grouped the countries in our study by OECD 2015 rankings in Math and Science, to evaluate if those that ranked higher value or prioritize a different set of qualities than those ranked lower. **Table 2** shows the OECD rankings of 21 of the 23 countries participating in our study, and how they were grouped for our analysis.⁵ Note that India and Egypt were not part of these rankings and were therefore not part of this analysis.⁶ Similar to our HDI analyses, in our comparisons across the two OECD ranking groups, we weighted the survey responses to ensure that each country’s data in our study contributed equally to their group.

⁵ We tried various groupings based on rankings, including quintiles, quartiles and thirds, but the groups were lopsided, with more countries in the high and the low end and few in the middle groups. We went with splitting them in half to ensure more equal group sizes for the comparisons.

⁶ In 2015 the OECD conducted the largest ranking of education systems to date, to show the link between education and economic growth. The rankings are based on a combination of international assessments, including the OECD’s PISA tests, the TIMSS tests run by US-based academics and TERCE tests in Latin America, to allow comparison of developed and developing countries on a single scale (Coughlan, 2015).

Top Half of OECD Ranking	Bottom Half of OECD Ranking
1. Singapore	41. Turkey
2. Hong Kong	45. UAE
4. Japan	51. Iran
6. Finland	54. Mexico
10. Canada	60. Brazil
11. Poland	62. Argentina
12. Vietnam	66. Saudi Arabia
13. Germany	68. Qatar
14. Australia	73. Morocco
20. United Kingdom (incl. England)	75. South Africa
28. United States	

Note: Numbers denote the Math and Science ranking out of 76 countries. Two participating countries in our study—India and Egypt—were not part of the OECD ranking.

Table 2. Countries surveyed grouped by OECD Math and Science rankings

Our analyses indicated somewhat similar findings from the HDI groupings, which is not surprising given that those with the highest OECD rankings are also higher in HDI scores; the same is true for the lower rankings. **Figure 10** (following page) shows how those in the top versus the bottom half of the OECD rankings compare on their Top 10 most valued qualities of an effective teacher.

As we found with the previous analyses comparing contexts, the two groups valued essentially the same qualities (the same 9 of their Top 10), with some slight differences in priority. The higher ranking countries in Mathematics and Science prioritized *Knowledge of Learners* more so than their lower ranking counterparts (third versus ninth out of their Top 10 lists). We found the same for the countries with higher HDI scores. An emphasis on knowledge of learners reflects a student- versus teacher-centered approach to teaching and learning, emphasizing the student’s learning needs and how they learn as the key driver of instructional approaches versus the teacher’s preference or teaching habits. We also found that *Teaching Skills* were mentioned tenth most frequently in the higher ranking countries, but fifth most frequently for the lower ranking countries. This may also reflect a more student-centered approach in the higher ranking countries, with teaching skills or pedagogical approach being driven by the student’s learning needs. Again, these differences were no larger than about three percentage points, which may or may not be meaningful from a policy perspective.

Top Half of OECD Rankings	%	Bottom Half of OECD Rankings	%
Relationships	18.4	Relationships	13.2
Patient, Caring	11.7	Patient, Caring	10.1
Knowledge of Learners	7.6	Professionalism	8.8
Subject Knowledge	6.7	Subject Knowledge	7.6
Professionalism	6.7	Teaching Skills	7.5
Dedication	6.3	Engaging	6.7
Make Ideas Clear	6.1	Dedication	6.3
Engaging	5.6	Make Ideas Clear	6.1
Class Management	4.9	Knowledge of Learners	5.1
Teaching Skills	4.4	Creativity	3.0

Figure 10. Top 10 most valued qualities by countries' Math and Science rankings

When we compared other contexts, public and private schools shared all of their Top 10, in virtually the same order. Similarly, regardless of whether respondents were thinking of a primary or secondary teacher, the Top 10 most valued qualities were the same. Males and females also shared their Top 10 most valued qualities for an effective teacher, and their top 4 were the same. The methods for our comparisons as well as the figures illustrating the findings graphically (**Figures A8–A10**), can be found in the Further Details.

Human Development Influence

When we compared countries based on their progress in human development and international test scores, we found minor differences.

What Surprised Us



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No matter who you are or where you live, people endorse similar qualities of what makes an effective teacher.

”

The key research questions driving this study were

1.

whether there were important differences in the qualities that different groups of education stakeholders value for a teacher to be regarded as effective;

2.

whether context made a difference in the qualities most valued; and

3.

the extent to which the qualities most valued aligned with the national teaching standards and with research on effective teachers and effective teaching.

We Value the Same Things

Regarding research questions 1 and 2, **we expected to find important differences** between what is most valued by stakeholder groups and by level of development of a country's education system. We also expected differences in what is valued most for teachers in public (government) and private schools; for primary and secondary teachers; and perhaps, what is valued most by males and females. However, **we were surprised by the general consistency in findings across the groups**. Reviewing the comparisons across the stakeholder groups, they all endorsed the importance of teachers building trusting, compassionate relationships with and relating well to students as the most important quality or competency of an effective teacher. Additionally, the stakeholder groups shared 9 of their Top 10 most valued qualities. Similarly, regardless of context, productive relationships

between teachers and students mattered most, and the same Top 10 most valued qualities or competencies were shared. **The differences between the stakeholder groups and the contexts were not in which qualities were valued most, but in their prioritization.** However, the different priorities, as reflected by the frequency of reporting, do not appear to be dramatically different—they ranged from about 1 to 4 percentage points difference, at most. Our survey design does not allow us to determine if these differences are meaningful when it comes to teacher and teaching policies.

Alignment with Research on Effective Teaching

Regarding research question 3, we found that survey responses were well aligned to documented competencies of effective teachers and teaching practices supported by research, and with the teaching standards in many countries.

Researchers note that in order to support student learning, teachers need a complex array of knowledge and skills, based on what we know about how humans learn. Moreover, these requirements are changing in light of the types of knowledge and skills that today's students require to survive and succeed (Darling-Hammond, 2006; Greenhill, 2010; OECD, 2013). Bransford et al. (2007) broadly define the areas of knowledge and attending skills required for effective teachers as:

- Knowledge of learners and how they learn and develop within social contexts.
- Knowledge of subject matter and curriculum goals.
- Knowledge of teaching, including subject matter, diverse learners, use of assessment, and classroom management.

Reports like *21st Century Knowledge and Skills in Educator Preparation* and others have added knowledge and use of technology, as well as broader dispositions and professional skills including (but not limited to) general intelligence and analytical thinking; strong communication skills; leadership; collaborative learning; and continuous reflection on one's own practice to learn and improve (Greenhill, 2010).

In **Table 3**, we align the categories of responses we gathered from stakeholders in all 23 countries with important competencies cited in the literature and/or supported by research on effective teachers and teaching. For comparability, we focused on broader categories of knowledge, skills, and attributes or dispositions for all teachers instead of specific skills required for teaching specific content areas or grade bands. We included the category of qualifications/credentials/degrees due to decades of research on how these relate to teacher quality, and because they were mentioned, although rarely, by survey respondents.

Knowledge	Skills/Abilities	Attributes/Dispositions	Credentials, Credentials, Degrees
<p>Subject matter/content knowledge (1)</p> <p>General pedagogy, pedagogical content knowledge (1, 20)</p> <p>Knowledge of learners: how they learn; cognitive, social & emotional development (12)</p> <p>Knowledge & understanding of curriculum (1)</p> <p>Knowledge of technology, ICT and how to integrate for learning (4)</p> <p>Knowledge of assessment & assessment techniques (13)</p>	<p>Attention to different needs (cognitive, social & emotional), family & cultural backgrounds of learners; cultural competence (12, 24)</p> <p>Pedagogical methods and skills (20)</p> <p>Ability to reflect on teaching practice & modify to fit different learner needs (12, 14)</p> <p>Ability to create and manage an effective learning environment (7, 8, 11)</p> <p>Ability to communicate effectively; make difficult concepts clear & understandable (9)</p> <p>Ability to communicate enthusiasm for learning to learners; ability to motivate learners to learn (6)</p> <p>Ability to develop good relationships within the school & community (18)</p> <p>Ability to plan, implement, & assess teaching & learning (7, 13, 12, 20)</p> <p>Ability to utilize technology, ICT for learning (4)</p> <p>Proficiency in English; ability to teach English language learners (23)</p> <p>Research skills and mindset (26)</p> <p>Ability to help learners develop skills for college & career success; (e.g., creativity, collaboration, life-long learning mindset, etc.) (31)</p> <p>Builds good relationships with parents & families, keeping them updated on their child's progress (25)</p>	<p>Sense of caring, responsibility, & compassion for learners (5, 11)</p> <p>Interest in learners as individuals; healthy, trusting learner-teacher relationships (11)</p> <p>Flexible, open-minded; always learning mindset (5, 14)</p> <p>Professionalism, high morale, & dedication to learners and to teaching (2, 17)</p> <p>Good character & ethics (19)</p> <p>Collaborative; works well with others (18)</p> <p>Contributes to school & development of teaching profession; takes on leadership roles (10)</p> <p>Continued learning and personal development (14)</p> <p>Enthusiasm & creativity (2, 3)</p> <p>Self-efficacy, belief in self (15)</p> <p>Strong general intelligence; critical, analytical thinker (16)</p> <p>Holds high expectations & maintains a challenging, rigorous curriculum for all learners (27)</p> <p>Sees teaching as part of a socio-political system in which education serves a specific role or purpose; preparing learners to contribute to & participate in society (28)</p> <p>Values the learning process and deeper learning (vs. focus on outputs such as test scores) (32)</p>	<p>Having proper qualifications & preparation (22)</p> <p>Ongoing training to continue to develop professionally (14, 22)</p>

Note: Numbers reflect the category codes used in this study, shown in **Table A3** in the Further Details.

Table 3. Survey results aligned with documented competencies of effective teachers

In our study, we were surprised to find that a small percentage of responses from the education professionals—teachers, principals, education researchers, and policymakers—included specific knowledge and skills that are well understood to enhance student learning. Regarding classroom practices associated with enhancing student learning, we expected to find greater endorsement of the following categories:

- Uses assessment for monitoring student learning. All of the teaching standards for each of the participating countries included this competency and its attendant knowledge, skills, and dispositions as a key capability for teachers (*Assessment*). Moreover research and professional literature from around the globe highlight **the importance of assessment for monitoring and enhancing student learning**. In fact, renowned University of London education researcher Dylan Wiliam (2007) as well as other researchers and teaching experts suggest that the ability to consistently assess student learning progress and adjust instruction accordingly is the single most important aspect of teaching practice to enhance student learning. We therefore expected to see this competency mentioned far more frequently by education researchers and policymakers, principals and teachers. In our study, no more than **2.1%** of these stakeholders' responses endorsed the teacher's capability in assessing and monitoring student learning and progress.
- Provides a challenging, rigorous curriculum for all students. Making learning *Challenging* and rigorous for all students, in the belief that all can learn is another critical competency for effective teachers. A "watered-down" curriculum, in fact, has been shown to increase drop-out, repeating grades, and/or needing remediation (Stronge, 2007). As noted earlier, Soviet psychologist Lev Vygotsky as well as more modern cognitive psychologists note the importance of targeting the learner's Zone of Proximal Development with tasks that are not too challenging or too easy for the learner. Given that the level of challenge is critical to the learning process, we expected more of the education professionals to address this particular competency of effective teachers. Yet in our study, no more than **1%** of these stakeholders' responses were related to this capability.
- Focuses on deeper learning. When teachers focus on the learning process itself, emphasizing the importance of a deep conceptual understanding and mastery of content versus outcomes such as grades and exam scores, students benefit. *Deep Learning* is needed for knowledge transfer—i.e. the ability to apply learning effectively to novel situations. Deep learning includes the following three domains (Martinez, McGrath, & Foster, 2015):
 - Cognitive: students understand content principles and concepts and develop a strong academic foundation
 - Interpersonal: students learn to work collaboratively and to solve complex problems
 - Intrapersonal: students learn how to monitor and direct their own learning

Globally, there has been a renewed focus among researchers and practitioners on the importance of teaching for deeper learning, which may be in response to the strong emphasis on testing and student achievement versus college and career readiness over the past decade. Recent research in the U.S., for example, concluded that a deeper learning curriculum improved students' content knowledge, problem solving skills, graduation rates, college enrollment to selective institutions, collaboration skills, academic engagement, and motivation (Zeiser et al., 2014). In our study, we were somewhat surprised that less than **0.3%** of responses from the education professionals addressed the teacher's focus on deeper learning.

- Uses technology to enhance learning. In 21st Century schools, teaching and learning are both expected to be impacted, if not transformed, by *Technology* (e.g., Greenhill, 2010). In many (but notably, not all) of our study's participating countries, the teaching standards addressed the importance of the teacher's familiarity with and use of technology for learning. When technology is integrated into effective teaching practices, research indicates it is capable of optimizing and even transforming the teaching and learning process (McKnight et al., 2016). Given the current emphasis on technology for learning, we were surprised to find that less than **1%** of responses from education researchers, policymakers, principals, and teachers addressed this key competency for an effective teacher.

Research and professional literature also emphasizes a set of competencies outside of the classroom that characterize effective teachers, that we also expected to encounter more frequently in the education professionals' responses. Pre-eminent education researcher Linda Darling-Hammond (2010) notes the importance of these external (to the classroom) competencies for effective teaching, and research on effective schools show these practices to be important as well (e.g., Fullan, 2003). These include:

- Functioning as a leader in the school and contributing to his/her profession. Supporting colleagues to improve teaching practices, and contributing to decision-making at the school and even the district or regional levels, are key features of teacher leadership. Teacher *Leadership* helps to improve morale and raises the level of instructional excellence in schools where teachers share ideas and successful practices, and support each other. Moreover, teacher leadership helps teachers to improve their own practice (Natale-Fisk, Gaddis, Bassett, & McKnight, 2016). Taking on leadership roles is addressed in the teaching standards of many of the participating countries and part of the professional literature on competencies of an effective teacher (e.g., Darling-Hammond, 2010).

- Collaborating with colleagues and the community to support learners. There is a growing body of research indicating that teacher *Collaboration* is a key means for improving instruction, developing teaching excellence and improving learner outcomes (e.g., Goddard, Goddard, & Tschannen-Moran, 2007; Saunders et al., 2009). Teachers who are collaborative not only help their colleagues, but learn from them as well for improving their practice. Competencies related to collaborating with colleagues and the community to support teaching and learning were present in a number of the teaching standards of the countries participating in this study.
- Engaging with families to support learners. In the school improvement literature, researchers and experts note the importance of teachers involving *Families* in their child's learning, to both monitor and support that learning. Darling-Hammond (2010) notes the importance of this set of competencies for effective teaching, and research on effective schools show these practices to be important as well for supporting and enhancing student learning (e.g., Fullan, 2003). Engaging families in their child's learning is explicitly addressed in many of the teaching standards for the countries participating in this study.

A Word of Caution

We caution against using these survey results to inform a checklist approach to defining effective teaching. Experts argue that teaching should not be reduced to a list of behaviors and skills—it only takes us further away from a clear understanding of what it means to teach (Rodgers & Raider-Roth, 2006). Teaching involves a complex multitude of factors that occur in a variety of ways, with many moving parts, and there is no single winning pattern of knowledge, skills, dispositions, and so on. But, research indicates some common practices and shared understandings of what it means to be effective as a teacher.

Additionally, it is important to note that in order for teachers to be effective in their work, they need a variety of supports outside of their training and expertise. Leadership support, a collegial, collaborative working environment, and access to needed resources to do their work are all key supports that when present, allow teachers to focus on effectively supporting students and their learning. Without those supports, even the most expert teachers can struggle to help students to learn and to thrive.

We caution against using these results to create a checklist approach to teacher evaluation.

Implications for Teachers and Teaching

”

The values uncovered align well with research on effective teaching.

“

To meet the global goal of placing an effective teacher in front of every student, researchers and policymakers acknowledge that it is critical to formulate a clear definition of teacher effectiveness (Bourgonje & Tromp, 2011). “Effectiveness” in any field is defined as the ability to produce intended or expected outcomes. The results from this survey can serve as a starting point for developing a shared definition of valued outcomes and effectiveness as it relates to teaching. The data reflect what stakeholders value most regarding the qualities of an effective teacher, giving us insights into the types of educational outcomes they desire. The good news is that research on effective teaching supports these values, and they are well-aligned with the teaching standards specified by many of the countries participating in our study, for primary and secondary school teachers.

At the International Summit on the Teaching Profession, U.S. National Teacher of the Year Sean McComb observed, **data are “only as powerful as the questions it inspires, the policies it informs, and the practices we are spurred to examine”** (McComb, 2016). The value of our study is in the use of these results to shape critical discussions needed for reviewing policies regarding how to best prepare teachers, who to hire and perhaps who to ‘counsel out’ of the profession, what kind of ongoing professional development is needed, how to evaluate job performance and expertise, and who to reward and/or promote.

The data also suggest that key education stakeholders the world over value a student-centered approach to teaching and learning, fostered by the teacher’s ability to build trusting, compassionate relationships with students, and his or her knowledge and understanding of how their students learn and their learning needs. This is in contrast to the view of teachers as a strict disciplinarian whose role it is to impart knowledge and facts and to make students behave. Although some responses in some countries reflect this more teacher-centered view of teaching and learning, it was not the predominant view. These results have implications for the future of teaching and learning, particularly in light of the 21st Century focus on technology for learning and movement toward online and self-driven learning.

To our knowledge, this is the first international study in which key stakeholders—students, parents, teachers, principals, education researchers, and policymakers—have been given the chance to share their ideas about what it takes to be an effective teacher. Recent global events demonstrate what happens when key stakeholders are left out of the decision-making. In countries such as Pakistan, Israel, Brazil, Mexico, Hong Kong, the United States, and many more, teachers have taken to the streets to protest education policies in order to have their voices heard. In some cases, these protests have led to strikes and/or violence, leaving students without classrooms and opportunities to learn.⁷ Giving voice to those for whom teacher policies have the greatest impact is a critical place to start the important discussions and build the trusting relationships that are necessary for forging sensible, viable policy-making to improve teaching and learning globally. And, these results provide a consensus for where to start.

Results from our survey in 23 countries reaffirm the notion that at its foundation, teaching is about relationships between teachers and students that ultimately foster student success, as these communities define it.

⁷ For example, see the June 19, 2015 *Atlantic* article “When Teachers Protest”, at: <http://www.theatlantic.com/education/archive/2015/06/teachers-protest-world/396143/> by Wong and Ross.

Importance of Disposition and Character in Our Teachers

Our survey findings make it clear that all of the key education stakeholders we surveyed—students, parents, teachers, principals, policymakers, and researchers—value dispositions of care first and foremost among the competencies they regard as most important for being an effective teacher.

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Further Details



The following information is for those who want further details in the methodology of this study. We include information on the following:

- Where and who we surveyed
- How survey responses were coded
- How context comparisons were conducted (e.g., countries grouped by HDI scores, stakeholders affiliated with government versus private schools, etc.)

Who We Surveyed

In total, we surveyed 13,225 key education stakeholders in 23 countries. The following breaks down the sample size per country. In all countries, we aimed for a minimum of 530 individuals.

Country	Sample Size	% of Sample	Country	Sample Size	% of Sample
Argentina	529	3.6%	Japan	852	5.6%
Australia	523	3.5%	Mexico	529	3.6%
Brazil	533	3.6%	Morocco	530	3.6%
Canada	530	3.6%	Poland	530	3.6%
Egypt	530	3.6%	Qatar	530	3.6%
England	530	3.6%	Saudi Arabia	530	3.6%
Finland	530	3.6%	Singapore	351	2.4%
Germany	530	3.6%	South Africa	1,240	8.4%
Hong Kong	382	2.6%	Turkey	530	3.6%
India	612	4.1%	USA	629	4.2%
Iran	530	3.6%	Vietnam	556	3.8%
			United Arab Emirates	659	4.4%

Table A1. Number of participants per country

Further Details

We engaged a third-party marketing research organization in each country to assist in designing the sampling plan and to carry out the data collection for this study. The following indicates the organizations with which we engaged for the participating countries.

Participating Countries	Data Collection Agency
Vietnam	Cimigo
Hong Kong	
Singapore	
Japan	
Australia	Helme Consulting
India	Nielsen India
South Africa	Dashboard Marketing Intelligence
USA	
Canada	
Mexico	
Argentina	
Brazil	
England	
Germany	
Poland	
Finland	
Qatar	
Saudi Arabia	
Iran	
Turkey	
Morocco	
Egypt	

Table A2. Participating countries and data collection agencies

Figure A1 shows the grade levels represented by the respondents in the survey. Note that the majority of students who participated were in secondary school. Post-secondary generally refers to school levels reported by researchers and policymakers.

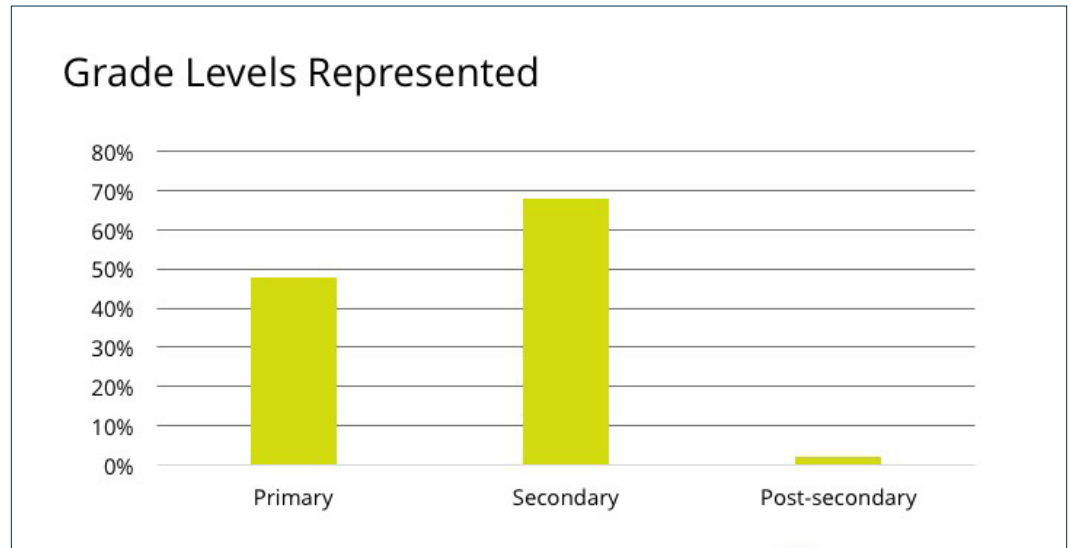


Figure A1. Grade levels represented by survey respondents

Figures A2–A6 summarize key characteristics of each of the surveyed groups. For the **students**, slightly more males participated and most attended public (government) schools. Ages ranged from 9-29, with a median of 17. Most students (76%) were thinking of secondary school teachers when determining the qualities of effective teachers.

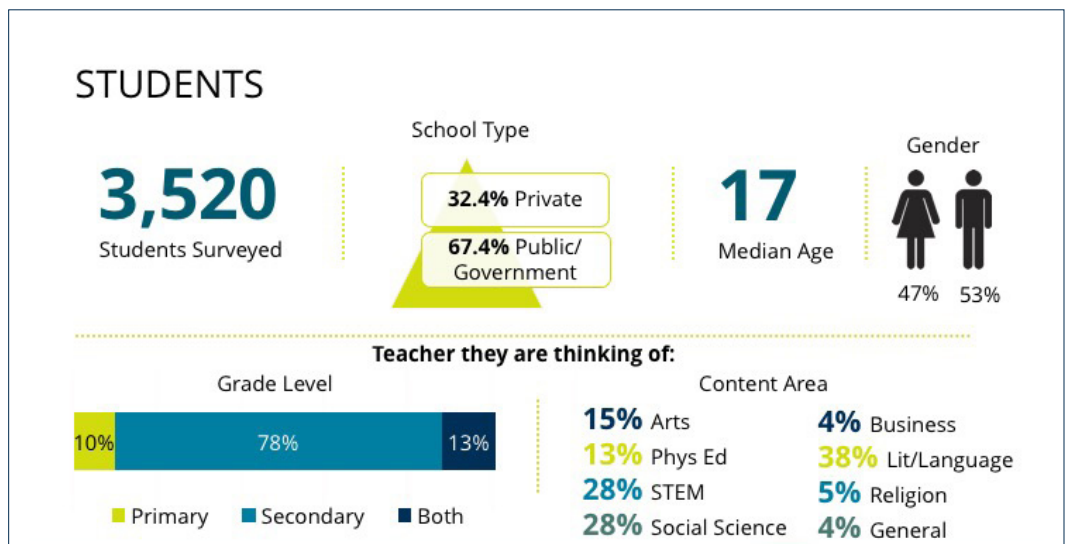


Figure A2. Surveyed student characteristics

Note: Phys Ed = Physical Education; Lit = Literature; STEM = Science, Technology, Engineering & Math; Soc Science = Social Science (e.g., Psychology, Sociology, etc.).

For **parents**, slightly more females responded, and most (61%) sent their children to public (government) schools. More parents were thinking of secondary school teachers (47%) than primary teachers (31%) when determining the qualities of effective teachers.

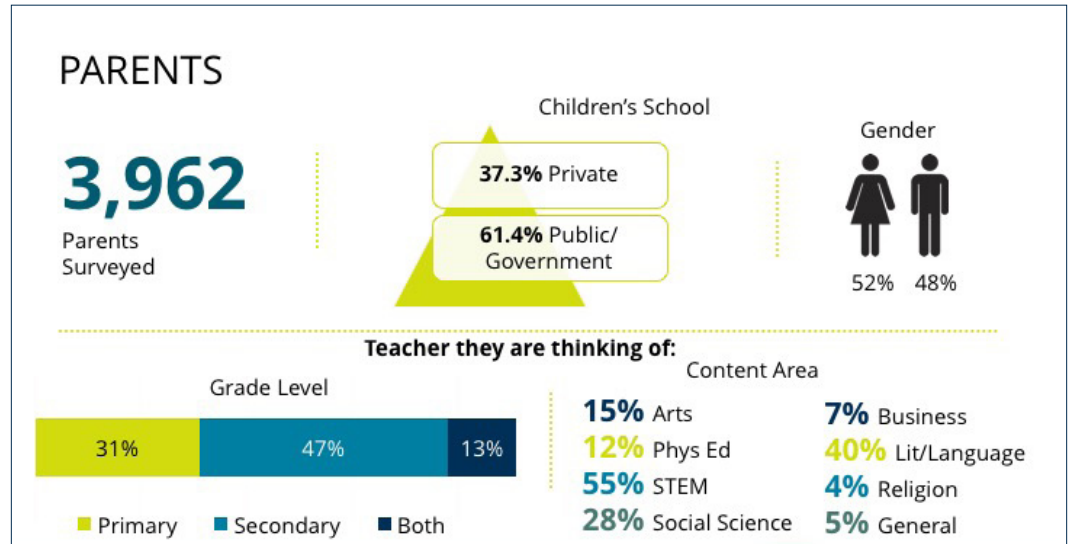


Figure A3. Surveyed parent characteristics

Note: Phys Ed = Physical Education; Lit = Literature; STEM = Science, Technology, Engineering & Math; Soc Science = Social Science (e.g., Psychology, Sociology, etc.).

The **teacher** respondents represented a wide range of experience, from 0-52 years on the job, and the median of 9 years suggests that on average, these were experienced teachers. Most (65%) taught in public (government) schools, and most (61%) were female.

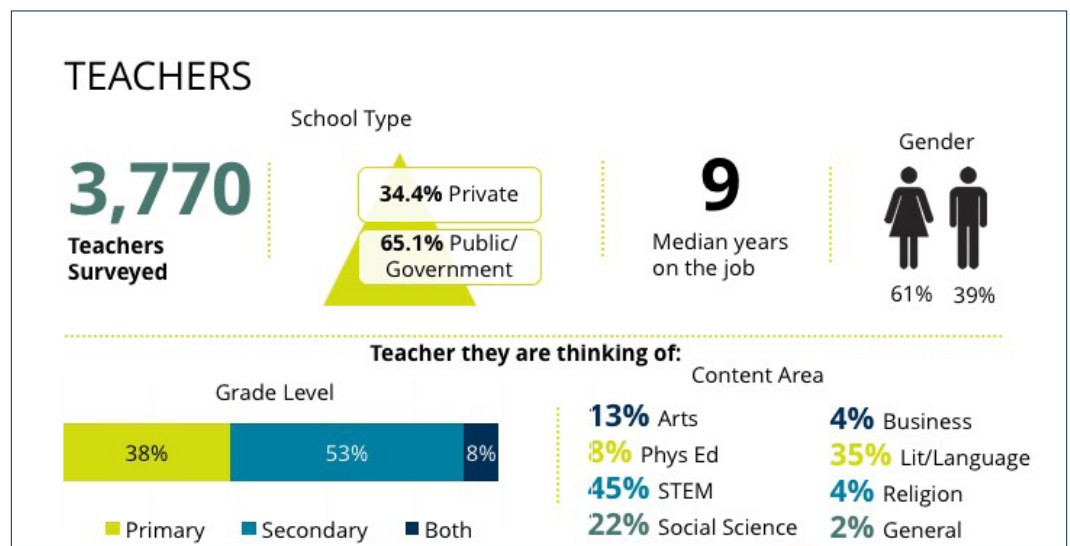
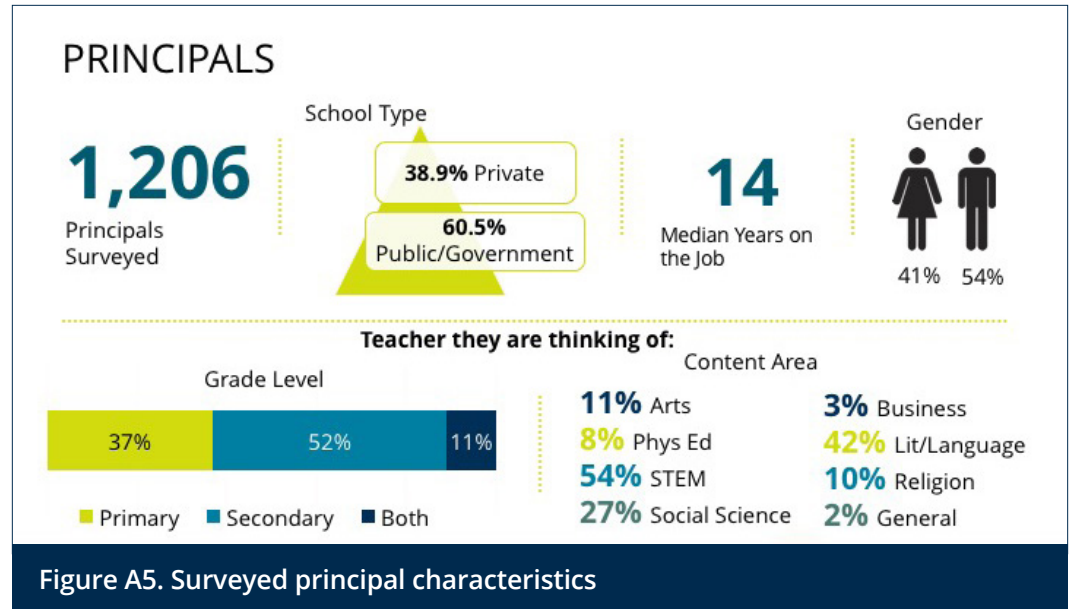


Figure A4. Surveyed teacher characteristics

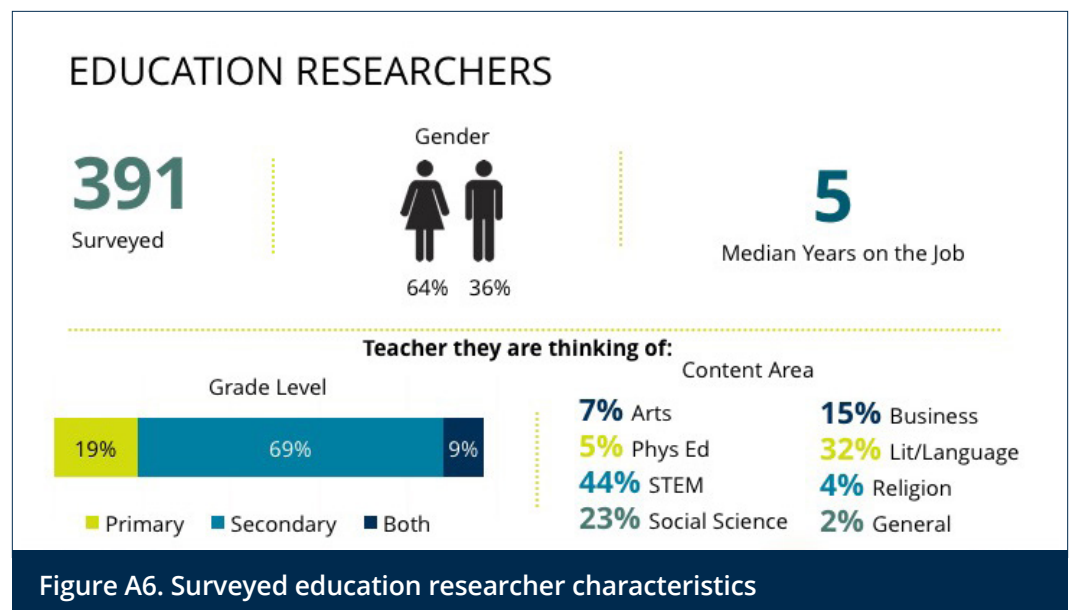
Note: Phys Ed = Physical Education; Lit = Literature; STEM = Science, Technology, Engineering & Math; Soc Science = Social Science (e.g., Psychology, Sociology, etc.).

The surveyed **principals** also represented a range of experience, from 0.2-45.8 years on the job, with a median of 14 years. On average, this is an experienced group of principals. Most (61%) worked in public (government) schools. More males than females participated in the survey.



Note: Phys Ed = Physical Education; Lit = Literature; STEM = Science, Technology, Engineering & Math; Soc Science = Social Science (e.g., Psychology, Sociology, etc.).

The **education researchers** we surveyed had 0.2-40 years of experience, with a median of 5 years at their current job, indicating that on average, this was a less experienced group. Fewer were female (40%) and most were thinking of secondary school teachers (69%) when determining the qualities of effective teachers.



Note: Phys Ed = Physical Education; Lit = Literature; STEM = Science, Technology, Engineering & Math; Soc Science = Social Science (e.g., Psychology, Sociology, etc.).

The **education policymakers** we surveyed had 0.8-40 years of experience, with a median of 8 years at their current job. Fewer were female (32%) and most were thinking of secondary school teachers (65%) when determining the qualities of effective teachers.

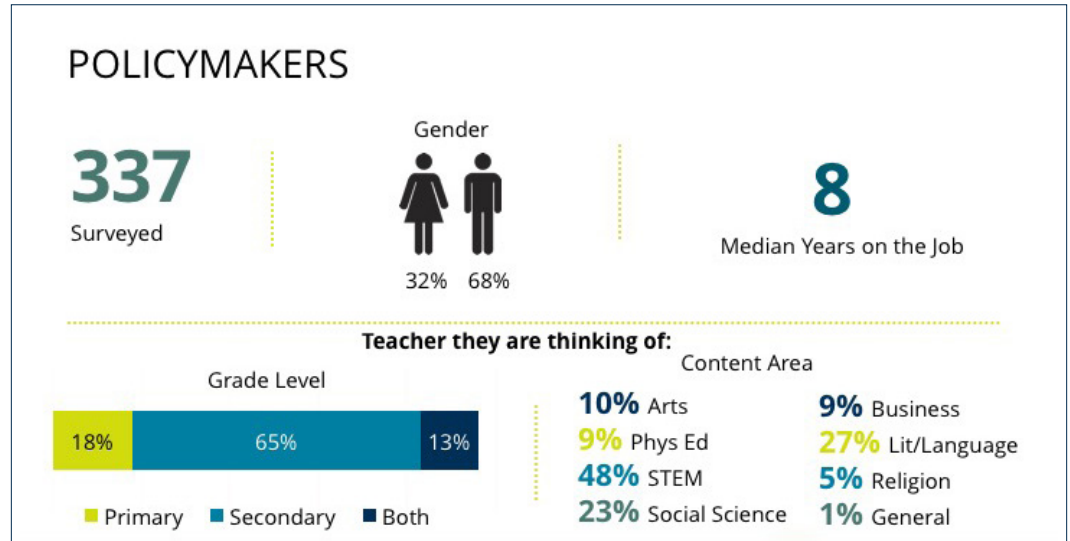


Figure A7. Surveyed education policymaker characteristics

Note: Phys Ed = Physical Education; Lit = Literature; STEM = Science, Technology, Engineering & Math; Soc Science = Social Science (e.g., Psychology, Sociology, etc.).

Coding Survey Responses

We created a coding scheme for all responses. As a starting place, we used research about the competencies of effective teachers as a guide. Teachers, principals, education policymakers and researchers with expertise in teacher effectiveness then reviewed the list and provided feedback. As our research team coded more responses, we updated and revised the list, aiming for categories that were not so broad as to be unhelpful, and not so specific as to be too complex for comparisons across stakeholder groups and countries. Our final list and a description of each category is below in **Table A3**.

We measured interrater agreement using Fleiss’s Kappa statistic, specifying 0.75 or higher as the goal. We trained raters until they could meet this requirement.

Characteristic	Description
(1) <i>Subject Knowledge</i>	Mastery or expertise in one’s content or subject area. Includes knowledge of the curriculum, learning objectives and/or standards in the given subject area
(2) <i>Dedication</i>	Dedication, passion, or commitment to one’s work as a teacher; commitment to help all learners succeed
(3) <i>Creativity</i>	Qualities indicating the ability to think creatively, adapt, or embrace new ideas or teaching styles; includes being innovative
(4) <i>Technology</i>	Familiarity and/or fluency with and ability to use technology for teaching & learning; keeping current or up-to-date with technology
(5) <i>Patient, Caring Personality</i>	Positive personality characteristics, e.g., patient, caring, kind, fair, humorous, friendly
(6) <i>Engaging</i>	Ability to make class fun and/or engaging and motivates learners to learn
(7) <i>Planning</i>	Ability to effectively plan lessons as well as being organized more generally; ability to organize the learning for the learner
(8) <i>Class Management</i>	Ability to effectively manage classrooms, learner behavior, and time for learning; develop classroom routines to maximize learning time; create a productive learning environment
(9) <i>Make Ideas, Content Clear</i>	Ability to present information in a clear, accessible manner
(10) <i>Leadership</i>	Qualities related to being a leader, e.g., decision-making skills, visionary, influential etc.
(11) <i>Relationships</i>	Ability to understand and establish trusting, productive relationships with learners; includes a mentoring role
(12) <i>Know Learners</i>	Understand how learners learn and develop, cognitively, socially, and emotionally, and adapt content to meet the needs of a range of learners/diverse learner populations, including those with special needs; attend to the individual needs of learners
(13) <i>Use of Assessment</i>	Assessment literacy, including the ability to develop and/or use assessments (both formal and informal) to evaluate learning, provide feedback to learners from the assessments, and/or monitor or track learning progress
(14) <i>Always Learning</i>	Willingness/passion/desire to learn and develop, to challenge oneself to improve, reflect on own practice, & accept constructive criticism. Includes desire to stay updated on relevant knowledge and skills in their field; engaging in ongoing professional development
(15) <i>Belief in Self</i>	Confidence in oneself

Table A3. Coding categories of characteristics/competencies of effective teachers

Further Details

Characteristic	Description
(16) <i>Intelligence</i>	General intelligence and/or being well-informed; a strong general fund of knowledge (not specific to the content being taught); critical thinking, analytical and problem-solving abilities
(17) <i>Professionalism</i>	Workplace professionalism and responsibility (e.g., honesty, loyalty, punctuality); awareness of and compliance with rules and policies of the education system
(18) <i>Collaborative</i>	Ability to work well with colleagues; shares knowledge and skills with colleagues; cooperative and works with others to improve as a team
(19) <i>Moral</i>	Good moral character or general ethics; principled; can include religiosity and spirituality
(20) <i>Teaching Skills</i>	Knowledge and use of various pedagogical/teaching techniques, general as well as specific to a given content area; pedagogical content knowledge
(22) <i>Qualifications</i>	Possessing necessary preparation and credentials for teaching the grade levels and subject matter
(23) <i>English Fluency</i>	Having the knowledge and skills to teach English to non-native speakers
(24) <i>Cultural Competence</i>	Knowledge, appreciation and respect for different cultures and backgrounds; tolerant, unbiased regarding different learner backgrounds
(25) <i>Families</i>	Ability to communicate and build relationships with learners' parents and families; includes families in learner's education
(26) <i>Research</i>	Ability to conduct and understand research; studying one's own practice and the impact on learners (e.g., action research, lesson study)
(27) <i>Challenging</i>	Belief that all learners can learn; maintaining a challenging, rigorous curriculum for all learners
(28) <i>Political context and/or beliefs</i>	The teacher as part of a political system in which education serves a specific role or purpose; reinforces political beliefs (especially in closed societies); or holds specific political beliefs (e.g., democratic, communist)
(31) <i>Non-cognitive skills</i>	Focus on teaching learners the skills required to be successful in college and/or a career, e.g., learning how to be an independent learner, how to work collaboratively with others; also known as 21st Century and/or "non-cognitive" skills. Includes career guidance for learners
(32) <i>Deep Learning</i>	Values the learning process and focuses on "deeper" learning and knowledge transfer vs. rote learning (memorization of and ability to recall facts) and exam scores
(21, 29, 30) <i>"Other"</i>	Either odd responses (e.g., "eccentric," "well-traveled") or responses too general to code, e.g., "experienced" or "effective" (essentially repeating the question).

Table A3. Coding categories of characteristics/competencies of effective teachers (continued)

Note: Numbers reflecting coding system the research team used for survey responses, and checking alignment with teaching standards and research.

Context Comparisons

To address whether context made a difference in which qualities or competencies were valued most for an effective teacher, we had respondents indicate whether they worked at, went to (students) or sent their children to (parents) a public (government) or private school. We also asked the grade level(s) of the teacher they were thinking of when they generated their list of most important qualities, and the respondent’s gender. Because there were different proportions of stakeholders in each of the comparison groups (e.g., more males were policymakers, researchers, and principals in our gender comparisons) we needed to weight the frequencies of the qualities they reported so that within each context comparison, we were not inadvertently finding differences attributable to the different proportions of stakeholder groups instead of the target comparison. For example, for public and private schools, within each group we created weights that would statistically balance the proportion of stakeholders in each of those two categories, and applied them to the frequency counts for each of the qualities they reported as most important for being an effective teacher. We did the same for the primary and secondary and the gender comparisons. **Figures A8–A10** illustrate the Top 10 most valued qualities for each of the contexts we evaluated.

Public	%	Private	%
Relationships	16.0	Relationships	15.3
Patient, Caring	11.3	Patient, Caring	11.8
Professionalism	8.1	Professionalism	8.2
Subject Knowledge	7.1	Subject Knowledge	6.8
Knowledge of Learners	6.5	Make Ideas Clear	6.5
Make Ideas Clear	6.3	Knowledge of Learners	6.2
Dedication	6.3	Dedication	6.0
Engaging	5.9	Engaging	5.8
Teaching Skills	5.6	Teaching Skills	5.7
Class Management	3.9	Class Management	4.0

Figure A8. Top 10 most valued qualities by public (government) or private schools

Primary	%	Secondary	%
Relationships	16.1	Relationships	15.3
Patient, Caring	12.7	Patient, Caring	10.7
Professionalism	7.6	Professionalism	8.0
Subject Knowledge	6.7	Subject Knowledge	7.4
Knowledge of Learners	6.5	Make Ideas Clear	6.6
Dedication	6.1	Dedication	6.3
Engaging	5.7	Knowledge of Learners	6.3
Make Ideas Clear	5.6	Engaging	5.9
Teaching Skills	5.4	Teaching Skills	5.8
Class Management	3.9	Class Management	3.9

Figure A9. Top 10 most valued qualities for primary and secondary teachers

Note: These are qualities that are most valued for the grade level (primary or secondary) of the teacher the respondent was thinking of when taking the survey.

Males	%	Females	%
Relationships	15.2	Relationships	15.8
Patient, Caring	10.1	Patient, Caring	12.6
Professionalism	8.5	Professionalism	7.6
Subject Knowledge	7.4	Subject Knowledge	6.6
Make Ideas Clear	6.6	Dedication	6.6
Engaging	6.2	Knowledge of Learners	6.5
Knowledge of Learners	6.2	Make Ideas Clear	6.0
Teaching Skills	6.1	Engaging	5.6
Dedication	5.8	Teaching Skills	5.4
Class Management	3.9	Class Management	3.9

Figure A10. Top 10 most valued by gender

We applied the same general method to our country comparisons—i.e. the three HDI score groups and the two OECD Mathematics and Science rankings groups—but with a slight difference. Rather than generating weights based on the sample sizes of the stakeholder groups, the weights were derived from the sample sizes of the countries. Because there were different sample sizes for several of the countries in this study, (e.g., Japan had more than 530 participants while Singapore had fewer) we needed to weight the frequencies of the qualities they reported so that within each of these country context comparisons, we were not inadvertently finding differences attributable to the different proportions of stakeholders within those countries instead of the target comparison. For example, for the comparisons of the two OECD ranking groups, within each group we created weights that would statistically balance the proportion of stakeholders in each country within each comparison group, and applied them to the frequency counts for each of the qualities they reported as most important for being an effective teacher. We did the same for the HDI comparisons.

