



A framework for the analysis of school climate and student well-being

This chapter defines the concepts of school climate and student well-being as used by PISA, presents a framework for their analysis and lists the indicators analysed in the report.

HOW PISA 2018 MEASURES SCHOOL CLIMATE

A positive school climate is one of those things that is difficult to define and measure, but everyone recognises it when they see it. Visitors to a school, including parents and education inspectors, can identify a positive school atmosphere “within minutes” (DeWitt, 2016^[1]). The state of the school’s facilities, the tone of the conversations in corridors, the enthusiasm of the school staff and the way students interact during breaks are some of the signs that visitors can read to quickly and broadly assess a school’s climate. The 15-year-old students who sit the PISA assessment may not evaluate their school climate as consciously as adults do, but they certainly feel it. All students appreciate a school environment where bullying is unusual, making friends is relatively simple, and establishing genuine and respectful relationships with teachers is the norm – even if students cannot always put their feelings into words.

While the recipe for an ideal school has many ingredients, parents overwhelmingly cite school safety, a good reputation and a pleasant environment as the most important criteria they consider when choosing a school for their child (OECD, 2015^[2]) – and for good reason. A safe, supportive and healthy school climate can make a great difference in students’ lives. A positive school climate, for instance, can promote students’ academic achievement, well-being and self-esteem (Hoge, Smit and Hanson, 1990^[3]; MacNeil, Prater and Busch, 2009^[4]; Way, Reddy and Rhodes, 2007^[5]), and some of these effects persist for years (Hoy, Hannum and Tschannen-Moran, 1998^[6]). A positive climate can even mitigate the pervasive and strong link between socio-economic status and academic achievement (Berkowitz et al., 2017^[7]). Schools with safe, respectful and caring learning environments also protect students from engaging in maladaptive behaviours, such as truancy, smoking, drinking, using drugs, and other deviant and risky behaviours (Catalano et al., 2004^[8]; Gase et al., 2017^[9]; LaRusso, Romer and Selman, 2008^[10]). Teachers too can benefit from a positive school climate. For instance, teachers in disciplined and supportive schools report higher job satisfaction and less burnout (Aldridge and Fraser, 2016^[11]; Berg and Cornell, 2016^[12]; Mostafa and Pál, 2018^[13]). In other words, children are more likely to reach their social, emotional and academic potential in a safe, supportive and collaborative school environment.

Box III.1.1. Interpretation of the findings

Some caution is advised when interpreting the PISA indicators on school climate and well-being. While PISA aims to maximise the cross-national and cross-cultural comparability of complex constructs, it must do so while keeping the questionnaires relatively short and minimising the perceived intrusiveness of the questions. Despite the extensive investments PISA makes in monitoring the process of translation, standardising the administration of the assessment, selecting questions and analysing the quality of the data, full comparability across countries and subpopulations cannot always be guaranteed.

The indicators of school climate and well-being analysed in this report are based on students’ and principals’ reports, which are susceptible to several possible measurement errors: memory decay; social desirability (the tendency to respond in a manner that is more acceptable in one’s own social and cultural context, (Edwards, 1953^[22]); reference-group bias (what the comparison group is); and response-style bias (e.g. straight-lining, over-reporting, modesty, heaping, acquiescence). These biases can operate differently in different cultural contexts, thus limiting the cross-country comparability of responses (Benítez, van de Vijver and Padilla, 2019^[23]; van de Vijver et al., 2019^[24]; van Hemert, Poortinga and van de Vijver, 2007^[25]). Above all, readers should be particularly cautious when interpreting indicators with a strong subjective component, such as life satisfaction and student feelings, which are more likely to be influenced by cultural norms and the personality of the respondent.

In order to minimise the risk of misleading interpretations, a number of reliability and invariance analyses of the PISA indices used in this report have been carried out (see Annex A1 for more details), providing readers with an indication of how reliable cross-country comparisons are.

Further caution is advised when comparing the results across countries since 15-year-old students in some countries have already transitioned into upper secondary education, while in others they are still in lower secondary education. Some of the questions may be influenced by the education level in which students are enrolled, especially in those countries where transitioning into upper secondary education means transferring into a new school. For instance, parents may have fewer opportunities to interact with the school staff in upper secondary education, particularly when their child has been attending the new school for just a few months. Students may have also spent too little time in the new school to develop a strong attachment to the school, and the learning environment may be more competitive in upper secondary than in lower secondary education.

Everyone can play a part to improve school climate (OECD, 2016_[14]). Students can attend school regularly, avoid engaging in risky behaviours, treat other students respectfully and not disrupt the flow of instruction. Teachers can co-operate by exchanging ideas and sharing best practices. They can support students by showing an interest in every student, providing extra help or giving students opportunities to express their ideas. School leaders can design consistent disciplinary policies, react swiftly when problems arise, build trusting relationships with teachers, and ensure that a range of enriching extracurricular activities are offered at school. Parents can engage in school activities, interact with the school staff and provide emotional support to their children. Governments can ensure that all schools are well-equipped and -staffed (with, for example, sound buildings, safe and adequate facilities, educational resources and school psychologists) and provide special assistance to schools struggling with disruptive behaviour.

PISA can contribute to the already large body of research on school climate. While PISA 2018 cannot cover all the dimensions of school climate, the student and school questionnaires distributed with the assessment include more than 20 questions directly related to school climate. The parent questionnaire, which was distributed in 17 PISA-participating countries and economies, includes additional questions related to the school climate, a few of which are also examined in this report. The responses to these questions can be compared across and within the OECD countries, and partner countries and economies that participated in PISA 2018. Some of these indicators, such as disciplinary climate, sense of belonging at school and student truancy, can also be compared over time. Moreover, PISA measures of school climate can be analysed in relation to other PISA data on important student outcomes, such as academic achievement, expectations of further education and well-being, and to key factors that shape students' learning, such as teachers' practices.

Definition of school climate

School climate has been described as the “quality and character of school life” (Cohen et al., 2009_[15]), the “the heart and soul of the school” (Freiberg and Stein, 1999_[16]) and “the quality of relationships among students, teachers and school staff” (Hoy and Sweetland, 2001_[17]). School climate can be safe or unsafe, cohesive or divisive, collaborative or competitive. Above all, it is typically perceived as either positive or negative. In a positive school climate students feel physically and emotionally safe; teachers are supportive, enthusiastic and responsive; parents participate in school activities voluntarily; the school community is built around healthy, respectful and co-operative relationships; and everyone looks after the school premises and works together to develop a constructive school spirit. Terms similar to school climate include school environment, learning environment and school culture. In this report, school climate, school environment and learning environment are used interchangeably; school culture is used only to refer to the social or community dimension of the school climate.

School climate is a multidimensional construct that represents “virtually every aspect of the school experience” (Wang and Degol, 2016_[18]). While researchers have not reached a consensus on the indicators that make up school climate, four spheres of school climate emerge from previous research (Cohen et al., 2009_[15]; Thapa et al., 2013_[19]; Wang and Degol, 2016_[18]):

- **Safety:** includes maladaptive behaviours, such as bullying, disciplinary problems in the classroom, substance abuse and truancy, and also the rules, attitudes and school strategies related to these maladaptive behaviours. This sphere is renamed as student disruptive behaviour in this volume as only maladaptive behaviours are examined.
- **Teaching and learning:** includes aspects of teaching, such as academic support, feedback and enthusiasm, aspects of the curriculum, such as civic learning and socio-emotional skills, and indicators of teacher professional development and school leadership, such as teacher co-operation, teacher appraisal, administrative support and the school vision.
- **School community:** includes aspects of the school community, such as student-teacher relationships, student co-operation and teamwork, respect for diversity, parental involvement, community partnerships, and outcomes of these indicators, like school attachment, sense of belonging and engagement.
- **Institutional environment:** includes the school resources, such as buildings, facilities, educational resources and technology, and indicators of the school organisation, such as class size, school size and ability grouping.

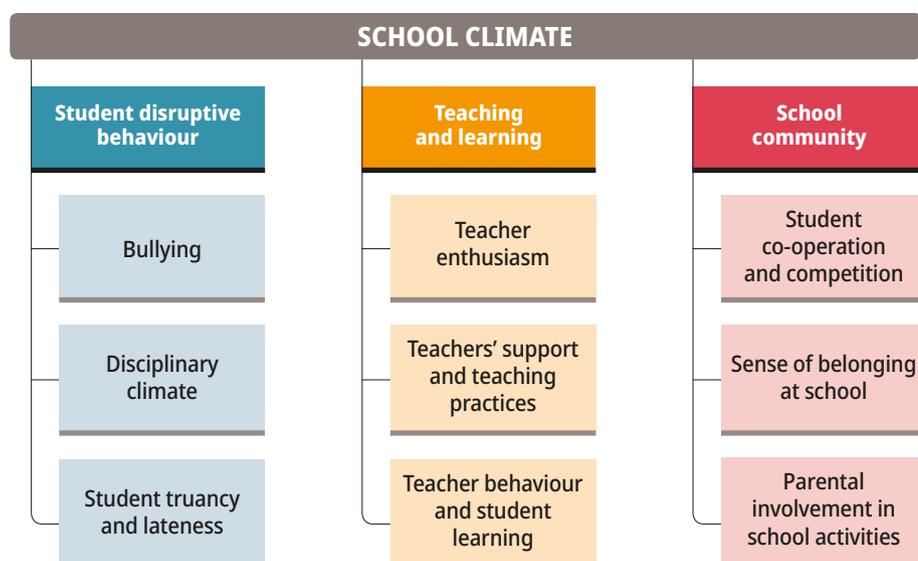
This report analyses in detail a great number of the indicators included in the first three spheres. Other aspects of school climate are examined in other volumes of PISA 2018 Results. For instance, the institutional environment is covered mostly in *PISA 2018 Results (Volume V): Effective Policies, Successful Schools* (OECD, forthcoming_[20]), and respect for diversity and civic learning are covered in *PISA 2018 Results (Volume VI): Are Students Ready to Thrive in Global Societies?* (OECD, forthcoming_[21]). Other indicators not covered in this report, such as student-teacher relationships, school leadership and teacher co-operation, were analysed in previous PISA and TALIS (Teaching and Learning International Survey) reports.

PISA 2018 indicators of school climate

PISA 2018 questionnaires cover several dimensions of school climate. This report focuses on nine aspects of school climate, grouped into three broad spheres, which are mentioned below (Figure III.1.1):

- The **student disruptive behaviour** sphere refers to the physical and socio-emotional security of the members of the school, the disciplinary climate and the frequency of student disruptive behaviours. The report includes aspects of bullying, disciplinary climate, and student truancy and lateness.
- The **teaching and learning** sphere refers to the classroom practices and teacher behaviours that shape the learning experience and promote the socio-emotional development of children. This report includes indicators of teacher enthusiasm, teachers' support and teaching practices in language-of-instruction lessons (see Box III.1.2), and teacher behaviours affecting student learning.
- The **school community** sphere refers to the nature of the relationships that students, teachers, the school principal, parents and the local community establish within the school setting. This report includes indicators of student competition and co-operation, sense of belonging at school and parental involvement.

Figure III.1.1 School climate as measured in PISA 2018



Each chapter focuses on one, or a few, questions from the student and school questionnaires (other questionnaires are used only occasionally), and is structured as follows: a brief introduction and literature review are followed by descriptive findings (e.g. frequencies, averages), cross-tabulations by students' and schools' characteristics (e.g. gender, socio-economic profile; see Box III.1.3), education level, immigrant background (see Box III.1.4), school location (see Box III.1.5), type of school (see Box III.1.6), and additional analyses looking at how the indices and items are related to reading performance and other student outcomes.

Box III.1.2. How PISA defines language of instruction

Language-of-instruction refers to the main language that teachers use in their lessons, which is usually the same as the language of the PISA assessment. For instance, in the Czech Republic, students were asked about "Czech-language lessons", in Mexico about "Spanish classes" and in Norway about "Norwegian lessons". However, in some countries and economies, the term <test language> was adapted differently, usually to include the term "literature". Some of these exceptions include the following:

- **Bulgaria:** Bulgarian language and literature
- **Belarus:** Belarusian language and literature
- **Chile:** Language and communication
- **Estonia:** Estonian language and literature

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- **Greece:** modern Greek language and literature
- **Hungary:** Hungarian language and literature
- **Korea:** Korean language arts
- **Peru:** Communication
- **Romania:** Romanian language and literature
- **The Russian Federation:** Russian language and literature
- **The Slovak Republic:** Slovak language and literature
- **Ukraine:** Ukrainian language and literature, together with foreign literature
- **Uruguay:** Spanish language or literature
- **United States:** English/Language arts classes

Box III.1.3. **How PISA 2018 defines socio-economically advantaged and disadvantaged students and schools**

PISA asked students several questions related to the education level and occupation of their parents, and their home possessions. These questions were combined to create the PISA index of economic, social and cultural status whose average is 0 and standard deviation is 1 across OECD countries.

A socio-economically advantaged student is a student in the top quarter of the PISA index of economic, social and cultural status (ESCS) in his or her own country/economy. A socio-economically disadvantaged student is a student in the bottom quarter of that index in his or her own country/economy.

A socio-economically advantaged school is a school in the top quarter of the school index of ESCS in the relevant country/economy. A socio-economically disadvantaged school is a school in the bottom quarter of the school index of ESCS in the relevant country/economy. To calculate the school index of ESCS, the average ESCS of students in each school is calculated using student weights.

Box III.1.4. **How PISA 2018 defines immigrant and non-immigrant students, and schools with a low or high concentration of immigrant students**

PISA asked students in which country their parents were born. Based on their answers, students were classified as not having an immigrant background (non-immigrant students) when at least one parent was born in the country of assessment, and as having an immigrant background (immigrant students) when both parents were born in another country.

A school with a low concentration of immigrant students is a school where less than 10% of students have an immigrant background. A school with a high concentration of immigrant students is a school where at least 10% of students have an immigrant background.

Box III.1.5. **How PISA defines rural and city schools**

PISA asked school principals which of the following definitions best describes the community in which their school is located:

- A village, hamlet or rural area (fewer than 3 000 people)
- A small town (3 000 to about 15 000 people)
- A town (15 000 to about 100 000 people)
- A city (100 000 to about 1 000 000 people)
- A large city (with over 1 000 000 people)

Rural schools are those where the principal answered “a village, hamlet or rural area”, whereas city schools are those where the principal answered either “a city” or “a large city”.

Box III.1.6. How PISA defines public and private schools

Schools are classified as either public or private, according to whether a private entity or a public agency has the ultimate power to make decisions concerning its affairs (Question SC013). Public schools are managed directly or indirectly by a public education authority, government agency, or governing board appointed by government or elected by public franchise. Private schools are managed directly or indirectly by a non-government organisation, such as a church, trade union, business or other private institution.

HOW PISA 2018 MEASURES STUDENTS' WELL-BEING

When parents around the world are asked what they want for their children, some mention “achievement” or “success”, but most reply “happiness”, “confidence”, “friends”, “health”, “satisfaction”, “freedom from bullying” and the like (OECD, 2015_[2]; Seligman et al., 2009_[26]; The Children’s Society, 2015_[27]). Findings in this report (see Chapter 10), also show that parents overwhelmingly cite school safety, a good reputation and a pleasant environment as important criteria they consider when choosing a school for their child. In short, people value well-being. Many of the countries participating in PISA not only want to know how their students fare academically, but also how they get on with their lives.

Some of the differences in children’s well-being outcomes appear very early in life (Rothbart et al., 2011_[28]), and continue to develop throughout their school years (Rothbart and Jones, 1998_[29]). What happens in school is key to understanding whether students enjoy good physical and mental health, how happy and satisfied they are with different aspects of their lives, how connected to others they feel, and the aspirations they hold for their future (Bradshaw, Hoelscher and Richardson, 2007_[30]; Currie et al., 2012_[31]; Rees and Main, 2015_[32]). For instance, a positive class atmosphere where effort is encouraged and rewarded, and in which children are accepted and supported by their teachers, regardless of their intellect and temperament, can have a positive effect on students’ well-being (Huebner et al., 2004_[33]; Torsheim, Aaroe and Wold, 2001_[34]).

Measuring the well-being of 15-year-old students, the target PISA population, is particularly important, as students at this age are in a key transition phase of physical and emotional development. Asking students about themselves gives adolescents the opportunity to express how they feel, what they think of their lives and what aspirations they have for their future.

One advantage that PISA holds is that these well-being indicators can be examined across a large number of economies and in relation to cognitive as well as social and emotional outcomes, such as academic achievement and expectations of further education, and to key factors that shape students’ learning. This report also focuses on the relationship between school climate and students’ well-being. Even if the well-being indicators examined in this section do not refer specifically to the school context – for instance, students are asked how satisfied they feel about their lives in general – adolescents spend a large part of their lives at school and school friends play a pre-eminent role in their social lives.

Definition of student well-being

Student well-being refers to the psychological, cognitive, material, social and physical functioning and capabilities that students need to live a happy and fulfilling life (OECD, 2017_[35]). Well-being is a dynamic state: without sufficient investments in developing capabilities in the present, students may be less likely to enjoy well-being as adults.

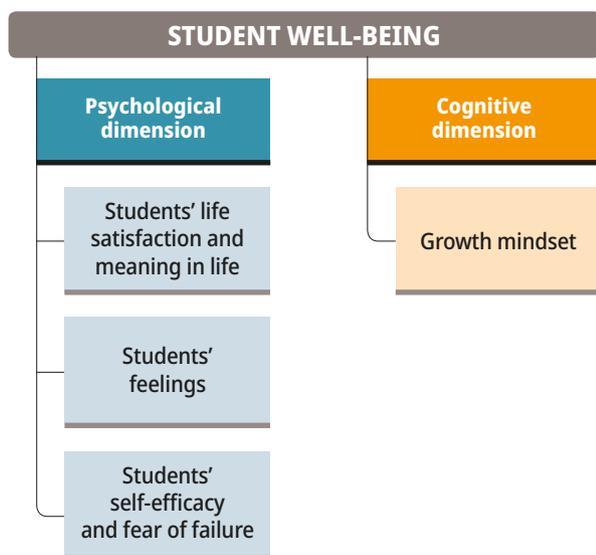
The five domains of student well-being identified in the *Framework for the Analysis of Student Well-Being in the PISA 2015 Study* (Borgonovi and Pál, 2016_[36]) are:

- **cognitive well-being**, which refers to the knowledge, skills and foundations students have to participate effectively in today’s society, as lifelong learners, effective workers and engaged citizens
- **psychological well-being**, which includes students’ evaluations and views about their lives, their engagement with school, and the goals and ambitions they have for their future
- **physical well-being**, which refers to students’ health status, engagement in physical exercise and the adoption of healthy eating habits (Statham and Chase, 2010_[37])
- **social well-being**, which refers to the quality of their social lives (Rath and Harter, 2010_[38]), including their relationships with their family, their peers and their teachers, and how they perceive their social life at school (Pollard and Lee, 2003_[39])
- **material well-being**, which refers to the material resources that make it possible for families to provide for their children’s needs and for schools to support students’ learning and healthy development.

PISA 2018 indicators of student well-being

The indicators of student well-being examined in this volume are summarised in Figure III.1.2. They represent only a fraction of the well-being indicators covered in the PISA 2018 questionnaires. Other measures of well-being are covered in other parts and volumes of the *PISA 2018 Results* report. For example, the school-climate section in this volume analyses indicators on bullying, sense of belonging at school and co-operation; *PISA 2018 Results (Volume I): What Students Know and Can Do* (OECD, 2019_[40]) presents results on students' knowledge and skills in reading, mathematics and science; *PISA 2018 Results (Volume II): Where All Students Can Succeed* (OECD, 2019_[41]) describes the household resources available to students; and *PISA 2018 Results (Volume V): Effective Policies, Successful Schools* (OECD, forthcoming_[20]) looks at the school resources provided to students. Many other indicators are covered in the well-being questionnaire, but only students' satisfaction with different aspects of their lives is analysed in this report (see Chapter 12) as only nine countries and economies distributed the questionnaire.

Figure III.1.2 Well-being as measured in PISA 2018



This volume covers the following indicators of well-being:

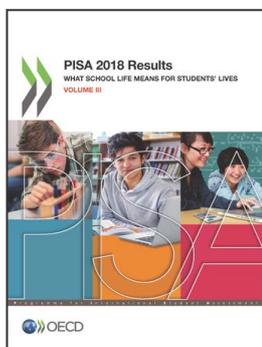
- **Life satisfaction**, which refers to students' overall evaluation of their lives. Life satisfaction is a useful summary indicator of well-being widely used by national statistical offices (OECD, 2019_[42]). Students' meaning and purpose in life – also referred to as *eudaemonia* – is analysed together with life satisfaction.
- **Students' feelings**, referred to as student affect in academic research, is the extent to which students experience certain emotions and moods, usually at a particular point in time (Watson, Clark and Tellegen, 1988_[43]). Together with life satisfaction and *eudaemonia*, student feelings is one of the three measures of subjective well-being included in the PISA 2018 student questionnaire. Subjective well-being can be defined as “good mental states, including all of the various evaluations, positive and negative, that people make of their lives and the affective reactions of people to their experiences” (OECD, 2013_[44]).
- **Self-efficacy** refers to the extent to which individuals believe in their own ability to engage in certain activities and perform specific tasks, especially when facing challenging circumstances (Bandura, 1977_[45]). PISA has traditionally asked about students' self-efficacy in specific subjects, such as mathematics and science. PISA 2018 focuses instead on students' perceptions about their general competence. Students' fear of failure, the flip side of the coin, is analysed together with self-efficacy.
- **Growth mindset** is the belief that someone's ability and intelligence can develop over time (Dweck, 2006_[46]). Growth mindset is closely related to the notion of personal growth (i.e. feeling of continued self-improvement), a traditional dimension of well-being (Ryff and Keyes, 1995_[47]; The Children's Society, 2015_[27]).

The well-being part of the report is organised into four short chapters (Figure III.1.2), grouped into two of the dimensions described above: the psychological dimension and the cognitive dimension. Each chapter focuses on one, or a few, questions from the student questionnaire (other questionnaires are used occasionally), and is structured as follows: a brief introduction and literature review are followed by descriptive findings (e.g. frequencies, averages), cross-tabulations by students' and schools' characteristics, and additional analyses looking at how the indices and items are related to reading performance, other student outcomes and the school climate.

References

- Aldridge, J.** and **B. Fraser** (2016), "Teachers' views of their school climate and its relationship with teacher self-efficacy and job satisfaction", *Learning Environments Research*, Vol. 19/2, pp. 291-307, <http://dx.doi.org/10.1007/s10984-015-9198-x>. [11]
- Bandura, A.** (1977), "Self-efficacy: Toward a unifying theory of behavioral change", *Psychological Review*, Vol. 84/2, pp. 191-215, [http://dx.doi.org/10.1016/0146-6402\(78\)90002-4](http://dx.doi.org/10.1016/0146-6402(78)90002-4). [45]
- Benítez, I., F. van de Vijver** and **J. Padilla** (2019), "A mixed methods approach to the analysis of bias in cross-cultural studies", *Sociological Methods & Research*, p. 004912411985239, <http://dx.doi.org/10.1177/0049124119852390>. [23]
- Berg, J.** and **D. Cornell** (2016), "Authoritative school climate, aggression toward teachers, and teacher distress in middle school", *School Psychology Quarterly*, Vol. 31/1, pp. 122-139, <http://dx.doi.org/10.1037/spq0000132>. [12]
- Berkowitz, R.** et al. (2017), "A research synthesis of the associations between socioeconomic background, inequality, school climate, and academic achievement", *Review of Educational Research*, Vol. 87/2, pp. 425-469, <http://dx.doi.org/10.3102/0034654316669821>. [7]
- Borgonovi, F.** and **J. Pál** (2016), "A framework for the analysis of student well-being in the PISA 2015 study: Being 15 in 2015", *OECD Education Working Papers*, No. 140, OECD Publishing, Paris, <http://dx.doi.org/10.1787/5jlpszwghvwb-en>. [36]
- Bradshaw, J., P. Hoelscher** and **D. Richardson** (2007), "An index of child well-being in the European Union", *Social Indicators Research*, Vol. 80/1, pp. 133-177, <http://dx.doi.org/10.1007/s11205-006-9024-z>. [30]
- Catalano, R.** et al. (2004), "The importance of bonding to school for healthy development: Findings from the social development research group", *Journal of School Health*, Vol. 74/7, pp. 252-261, <https://doi.org/10.1111/j.1746-1561.2004.tb08281.x>. [8]
- Cohen, J.** et al. (2009), "School climate: Research, policy, practice, and teacher education", *Teachers College Record*, Vol. 111/1, pp. 180-213, <http://dx.doi.org/10.1007/s11205-006-9024-z>. [15]
- Currie, C.** et al. (2012), *Social Determinants of Health and Well-Being among Young People. Health Behaviour in School-Aged Children (HBSC) Study: International Report From The 2009/2010 Survey (Health Policy for Children and Adolescents, No. 6)*, WHO Regional Office for Europe, Copenhagen, Denmark. [31]
- DeWitt, P.** (2016), "5 ways to foster a positive school climate", *Education Week's Blogs: Peter DeWitt's Finding Common Ground*, http://blogs.edweek.org/edweek/finding_common_ground/2016/06/5_ways_to_foster_a_positive_school_climate.html (accessed on 5 June 2019). [1]
- Dweck, C.** (2006), *Mindset*, Random House, New York, NY. [46]
- Edwards, A.** (1953), "The relationship between the judged desirability of a trait and the probability that the trait will be endorsed", *Journal of Applied Psychology*, Vol. 37, pp. 90-93, <http://dx.doi.org/10.1037/h0058073>. [22]
- Freiberg, H.** and **T. Stein** (1999), "Measuring, improving and sustaining healthy learning environments", in Freiberg, H. (ed.), *School Climate: Measuring, Improving and Sustaining Healthy Learning Environments*, Falmer Press, Philadelphia, PA. [16]
- Gase, L.** et al. (2017), "Relationships among student, staff, and administrative measures of school climate and student health and academic outcomes", *Journal of School Health*, Vol. 87/5, pp. 319-328, <http://dx.doi.org/10.1111/josh.12501>. [9]
- Hoge, D., E. Smit** and **S. Hanson** (1990), "School experiences predicting changes in self-esteem of sixth- and seventh-grade students", *Journal of Educational Psychology*, Vol. 82/1, pp. 117-127. [3]
- Hoy, W., J. Hannum** and **M. Tschannen-Moran** (1998), "Organizational climate and student achievement: A parsimonious and longitudinal view", *Journal of School Leadership*, Vol. 8/4, pp. 336-359, <http://dx.doi.org/10.1177/105268469800800401>. [6]
- Hoy, W.** and **S. Sweetland** (2001), "Designing better schools: The meaning and measure of enabling school structures", *Educational Administration Quarterly*, Vol. 37/3, pp. 296-321, <http://dx.doi.org/10.1177/00131610121969334>. [17]
- Huebner, E.** et al. (2004), "Life satisfaction in children and youth: Empirical foundations and implications for school psychologists", *Psychology in the Schools*, Vol. 41/1, pp. 81-93, <http://dx.doi.org/10.1002/pits.10140>. [33]
- LaRusso, M., D. Romer** and **R. Selman** (2008), "Teachers as builders of respectful school climates: Implications for adolescent drug use norms and depressive symptoms in high school", *Journal of Youth and Adolescence*, Vol. 37/4, pp. 386-398, <http://dx.doi.org/10.1007/s10964-007-9212-4>. [10]
- MacNeil, A., D. Prater** and **S. Busch** (2009), "The effects of school culture and climate on student achievement", *International Journal of Leadership in Education*, Vol. 12/1, pp. 73-84, <http://dx.doi.org/10.1080/13603120701576241>. [4]
- Mostafa, T.** and **J. Pál** (2018), "Science teachers' satisfaction: Evidence from the PISA 2015 teacher survey", *OECD Education Working Papers*, No. 168, OECD Publishing, Paris, <http://dx.doi.org/10.1787/1ecdb4e3-en>. [13]
- OECD** (2019), *PISA 2018 Assessment and Analytical Framework*, PISA, OECD Publishing, Paris, <https://dx.doi.org/10.1787/b25efab8-en>. [42]
- OECD** (2019), *PISA 2018 Results (Volume I): What Students Know and Can Do*, PISA, OECD Publishing, Paris, <https://dx.doi.org/10.1787/5f07c754-en>. [40]
- OECD** (2019), *PISA 2018 Results (Volume II): Where All Students Can Succeed*, PISA, OECD Publishing, Paris, <https://dx.doi.org/10.1787/b5fd1b8f-en>. [41]

- OECD (2017), *PISA 2015 Results (Volume III): Students' Well-Being*, PISA, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264273856-en>. [35]
- OECD (2016), *PISA 2015 Results (Volume II): Policies and Practices for Successful Schools*, PISA, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264267510-en>. [14]
- OECD (2015), "What do parents look for in their child's school?", *PISA in Focus*, No. 51, OECD, Paris, <https://dx.doi.org/10.1787/888932957498>. [2]
- OECD (2013), *OECD Guidelines on Measuring Subjective Well-being*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264191655-en>. [44]
- OECD (forthcoming), *PISA 2018 Results (Volume V): Effective Policies, Successful Schools*, PISA, OECD Publishing, Paris. [20]
- OECD (forthcoming), *PISA 2018 Results (Volume VI): Are Students Ready to Thrive in Global Societies?*, PISA, OECD Publishing, Paris. [21]
- Pollard, E. and P. Lee (2003), "Child well-being: A systematic review of the literature", *Social Indicators Research*, Vol. 61/1, pp. 59-78, <http://dx.doi.org/10.1023/A:1021284215801>. [39]
- Rath, T. and J. Harter (2010), *Wellbeing: The Five Essential Elements*, Gallup Press, New York, NY. [38]
- Rees, G. and G. Main (2015), *Children's Views on Their Lives and Well-Being in 15 Countries: A Report on the Children's Worlds Survey, 2013-14*, Children's Worlds Project, York, UK. [32]
- Rothbart, M. and L. Jones (1998), "Temperament, self-regulation, and education", *School Psychology Review*, Vol. 27/4, pp. 479-491. [29]
- Rothbart, M. et al. (2011), "Developing mechanisms of self-regulation in early life", *Emotion Review*, Vol. 3/2, pp. 207-213, <http://dx.doi.org/10.1177/1754073910387943>. [28]
- Ryff, C. and C. Keyes (1995), "The structure of psychological well-being revisited", *Journal of Personality and Social Psychology*, Vol. 69/4, pp. 719-727, <http://dx.doi.org/10.1037/0022-3514.69.4.719>. [47]
- Seligman, M. et al. (2009), "Positive education: Positive psychology and classroom interventions", *Oxford Review of Education*, Vol. 35/3, pp. 293-311, <http://dx.doi.org/10.1080/03054980902934563>. [26]
- Statham, J. and E. Chase (2010), *Childhood Wellbeing: A Brief Overview*, Childhood Wellbeing Research Centre, http://www.cwrc.ac.uk/documents/CWRC_Briefing_paper.pdf (accessed on 19 June 2019). [37]
- Thapa, A. et al. (2013), "A review of school climate research", *Review of Educational Research*, Vol. 83/3, pp. 357-385, <http://dx.doi.org/10.3102/0034654313483907>. [19]
- The Children's Society (2015), *The Good Childhood Report 2015: The Subjective Well-Being of Children in the UK*, The Children's Society, <https://www.childrenssociety.org.uk/sites/default/files/TheGoodChildhoodReport2015.pdf> (accessed on 19 June 2019). [27]
- Torsheim, T., L. Aaroe and B. Wold (2001), "Sense of coherence and school-related stress as predictors of subjective health complaints in early adolescence: Interactive, indirect or direct relationships?", *Social Science & Medicine*, Vol. 53/5, pp. 603-614, [http://dx.doi.org/10.1016/S0277-9536\(00\)00370-1](http://dx.doi.org/10.1016/S0277-9536(00)00370-1). [34]
- van de Vijver, F. et al. (2019), "Invariance analyses in large-scale studies", *OECD Education Working Papers*, No. 201, OECD Publishing, Paris, <http://dx.doi.org/10.1787/254738dd-en>. [24]
- van Hemert, D., Y. Poortinga and F. van de Vijver (2007), "Emotion and culture: A meta-analysis", *Cognition & Emotion*, Vol. 21/5, pp. 913-943, <http://dx.doi.org/10.1080/02699930701339293>. [25]
- Wang, M. and J. Degol (2016), "School climate: A review of the construct, measurement, and impact on student outcomes", *Educational Psychology Review*, Vol. 28/2, pp. 315-352, <http://dx.doi.org/10.1007/s10648-015-9319-1>. [18]
- Watson, D., Clark, L.A. and A. Tellegen (1988), "Development and validation of brief measures of positive and negative affect: The PANAS scales", *Journal of Personality and Social Psychology*, Vol. 54/6, pp. 1063-1070, <http://dx.doi.org/10.1037//0022-3514.54.6.1063>. [43]
- Way, N., R. Reddy and J. Rhodes (2007), "Students' perceptions of school climate during the middle school years: Associations with trajectories of psychological and behavioral adjustment", *American Journal of Community Psychology*, Vol. 40/3-4, pp. 194-213, <http://dx.doi.org/10.1007/s10464-007-9143-y>. [5]



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