



**The Learning Bar**

# The Learning Bar's Framework for Assessing Student Well-being

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## Introduction

The aim of virtually all school systems is to enable children to have fulfilling and successful careers and become contributing members of their local and global communities. Educators are called upon not only to develop children’s academic skills, but also to strengthen their social and emotional skills and provide opportunities for them to cultivate their unique talents and aptitudes. ‘Well-being’ is an overarching term used to capture the attitudes, feelings, and dispositions associated with achieving fulfilment and success. In the school setting, the term usually incorporates a long list of concepts – virtually everything that is *not* an academic outcome as well as many factors that influence student well-being.

The goal of this framework is three-fold. First, it provides a definition of well-being that is useful in the school context. In setting out this definition, a position is taken on the roles of two competing views of well-being: *hedonia* and *eudaimonia*, which are described below. Second, the framework describes the underlying constructs and identifies some observable indicators of well-being based on the definition. Third, the framework attempts to connect the indicators of well-being to actions that school staff, families, and community leaders can take to improve student well-being.

## Definition

Most definitions of well-being consider people’s subjective assessments about how they feel about various aspects of their life. Diener (2006, p. 400) defined well-being as “the different valuations people make regarding their lives, the events happening to them, their bodies and minds, and the circumstances in which they live”. His definition underpins the one used in the OECD’s Better Life Initiative: “*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, p. 29). Some definitions include indicators of mental health, including clinical mood disorders such as anxiety and depression (Twenge et al., 2019). The World Health Organization (WHO, n.d., para. 1) includes ‘social wellbeing’ in its long-standing definition of health: ‘a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity’. People’s overall satisfaction with life can therefore include objective markers of their access to basic human needs such as adequate food, clothing, and shelter; subjective evaluations of their physical health and emotional states; and whether they have a sense of purpose in life.

Well-being is therefore a subjective assessment by individuals about the quality of their lives. People’s responses to well-being questions depend on whether one asks about their current state versus their recall of their state in the past. If the question is about a state in the past, then what time span is considered? Responses also depend on whether the question involves a description of an emotional state versus an overall evaluation (Helliwell & Wang, 2012). For example, if we asked adolescents, “How satisfied are you with your life?” we would likely get different results depending on when we asked them: at the beginning of a school week, when they may be fretting about assignments that are due, or at the end of the week, when they may be thinking about plans for the forthcoming weekend. But if we introduced a time span and asked, “Thinking about the past week, how satisfied are you with your life?” the results would be less variable as their valuation would take into account the highs and the lows of the past week. A question about an emotional state, such as whether they feel happy when pursuing a personal goal, can yield a much different result than an overall evaluation of their satisfaction with life, such as “All things considered, how satisfied are you with your life as a whole these days?” Results can

also vary depending on the social context in which it is asked (Fraillon, 2004); a student may 'feel good' in school but not at home, or *vice-versa*.

The general question of life satisfaction is intended to capture the relative frequency of positive and negative emotions, but it does not consider the source of well-being (Diener, 2006; Waterman et al., 2010). *Hedonia* is the 'feel good' component of well-being associated with enjoyable experiences, being relaxed, or being engaged in exciting activities: "I like spending time doing social activities with friends"; "I prefer to spend time doing relaxing activities"; "I like doing activities that have a certain amount of risk."

In contrast, *Eudaimonia* conceives of well-being as getting to know one's true self, or 'daimon', and striving to be the best one can be. The core element is having a sense of purpose in life. It is "the development of a person's best potentials and their application in the fulfilment of personally expressive, self-concordant goals" (Waterman et al., 2010).

"I feel satisfied with my life because I have a clear sense of purpose for my life."

Eudemonic well-being is the feeling that comes when one is engaging in activities that are personally meaningful, making progress towards a goal, and achieving a goal with a high level of mastery (Benson & Scales, 2009; Ryan & Deci, 2001; Waterman, 1993; Waterman et al., 2010).

"I feel satisfied with my life because I can engage in activities that are meaningful to me."

It is inextricably tied to identity formation and career identity, which involve establishing goals, values, and beliefs that provide meaning to life (Waterman & Schwartz, 2013).

"I know who I really am."

The Learning Bar's framework views the sources of hedonia and eudaimonia well-being as hierarchical, including both physiological and psychological needs. It is consistent with Maslow's (1943) theory of human motivation, while accepting that dominant needs vary among local and wider contexts (Tay & Diner, 2011). For example, the main source of well-being for many students is having basic physiological needs met, such as adequate food and clothing, a safe environment, and a sense of belonging. Having these needs met likely dominates eudaimonic sources of well-being, such as self-acceptance and striving for excellence. When students' basic physiological needs are met, they are more likely to dedicate time and effort developing their talents and aptitudes.

The Learning Bar's well-being framework includes measures of anxiety and depression. Anxiety and depression are not typically considered indicators of well-being; however, some theorists consider the 'absence of discomfort' as a marker of hedonia (Huta & Waterman, 2014, p. 1427) and several studies have shown negative correlations between indicators of well-being and anxiety and depression (Neto, 1993; Paolini, Yanez, & Kelly, 2006). Thus, they are included in the Learning Bar framework.

Accordingly, we define student well-being as follows:

*Well-being is comprised of evaluations students make about the quality of their lives. The evaluations are derived from being physically and mentally healthy, feeling safe, having pleasurable experiences, being accepted by others, being engaged in experiences that are personally meaningful, and having a sense of purpose in life.*

## Indicators of Well-Being

Well-being is a *latent* or unobserved construct derived from theories rooted in psychology and philosophy (Huta & Waterman, 2014). These theories provide an indication of what we expect to observe among people who have varying levels of well-being (Wilson, 2005). The measurement process entails the categorization of ‘real-world’ observations, such as students’ self-reports about how they feel when engaging in certain activities, their behaviours when confronted with adverse situations, or their sense of belonging at school.

In developing a set of indicators for our school-based survey, we strived to meet three criteria: the indicators need to be reliable, meaningful, and tractable. These criteria are prerequisites for an indicator to be valid.

Reliability refers to the consistency of a measurement process. For example, if a student were assessed using a self-report measure of self esteem and then reassessed a week later, would the resulting scores be the same or similar? If all students in a school were assessed using a measure of self esteem, and then reassessed a week later, would the average or median scores for the school be the same or similar?

Educational indicators usually derive their meaning through comparisons to some standard, such as a national or international average; through comparisons among jurisdictions, such as comparisons of schools within a school district, province or state; and by tracking changes over time.

A tractable indicator is one that can be altered with educational policies and changes in practice at the school and classroom levels. The tractability of indicators is perhaps the biggest challenge for the measurement and reporting of well-being. For example, if a principal learns that his or her school has a relatively low level of well-being compared with other schools in the district, what actions can be taken to improve scores? If an intervention is implemented well, will it lead to improved scores on the set of indicators?

The Learning Bar’s well-being framework includes 12 core indicators, which are described below:

- (1) **Life Satisfaction.** The survey includes the question, “All things considered, how satisfied are you with your life as a whole these days?” Students rate their level of satisfaction on a scale from ‘0’ to ‘10’, where zero means ‘extremely dissatisfied’ and ‘10’ means ‘extremely satisfied’. This question is identical to the one used in the World Values Survey to gauge levels of

'happiness' among countries (Helliwell & Wang, 2012). It is also used in the Programme for International Student Assessment (PISA). This indicator allows a school to compare its results with other schools in a district, province, or state, and with national results for students in at least 80 other countries.

- (2) **General Health.** Students are asked to rate their general health on a scale from '0' to '10', where zero means 'poor' and '10' means 'excellent'. This question was developed by The Learning Bar for the PISA for Development study and will be used by several countries in the PISA 2021 study. As with the measure of Life Satisfaction, results for a school can be compared with those of other schools and districts and with national results for several countries.
- (3) **Orientation to Well-being.** Students' orientation to well-being distinguishes between hedonic and eudaimonic orientations to well-being. This measure includes a set of Likert-style items, with hedonic items pertaining to values and behaviours (e.g., "I prefer to spend my time doing activities that are fun."); eudaimonic items about engagement in personally expressive goals (e.g., "I am happy when I can pursue my personal goal."); and eudaimonic items about whether students have a sense of purpose in life (e.g., "I have a clear sense of purpose for my life"). The scores on the scale can be treated as a general measure of well-being as both hedonic and eudaimonic measures are correlated with general life satisfaction and the combination yields a stronger measure (Huta & Ryan, 2010).
- (4) **Goal-Oriented.** Goal orientation refers to a person's ability to set a relevant, attainable goal and exert deliberate and persistent effort to achieving it. It entails creating a plan, developing strategies, and monitoring progress towards achieving the goal. Those with a *learning goal orientation* focus on acquiring new skills and applying them, rather than comparing their results with others or seeking favourable judgements (Gaumer Erickson, Soukup, Noonan, & McGurn, 2018). The indicator includes items pertaining to setting relevant and attainable goals, exerting deliberate and persistent effort, creating a plan, developing strategies, and monitoring progress towards achieving a goal.
- (5) **Self-Regulation.** Self-regulation is the "conscious control of thoughts, behaviors and emotions" (McClelland and Tominey, 2016, p. 4). It goes hand-in-hand with executive function, which refers to a set of processes that enable children and adults to adapt to the demands of their context in a flexible way, especially when there are competing distractions. For the classroom teacher, the two most important executive functions are *inhibitory control* and *attentional flexibility*. Students exhibit *inhibitory control* when they can choose an appropriate response – one that will enable them to achieve their desired goals – rather than acting on impulse. They exhibit *attentional flexibility* when they can maintain focus on a task and can change their focus to another task when required. The measure includes items pertaining to students' ability to consciously control emotions and behaviours and maintain focus on a task.
- (6) **Cultural Awareness.** *Cultural awareness* refers to students' understanding of the differences between themselves and those from other cultures in their shared beliefs, values, attitudes, and behaviours, and how these differences affect how they learn individually and in groups (Davis & Wright, 2009; Earley & Ang, 2003). It is measured with items pertaining to students' values, attitudes and behaviours concerning their own culture and other cultures.

- (7) **Self-esteem.** Self-esteem refers to a person's belief and confidence in their abilities and worth (Marsh, 1990; Rosenberg, 1965; Smith & Mackie, 2007). The construct is arguably as broad as well-being itself, but we consider it an indicator of well-being because it has moderate to strong correlations with well-being (Diener & Diener, 1995; Du, King, & Chi; 2017). Also, several studies have examined school-based interventions aimed at improving self-esteem (Gurney, 1987). An important aspect of self esteem, especially during adolescence, is students' perception of their body and their assumptions about how others perceive them. There is a clear relationship between body image and self esteem (O'Dea, 2012; van den Berg, Mond, Eisenberg, Ackard, & Neumark-Sztainer, 2010).
- (8) **Feel Safe at School.** Feeling safe at school pertains to students' feeling of safety at school as well as going to and from school.
- (9) **Sense of Belonging at School.** Students' sense of belonging at school pertains to their feelings of being accepted and valued by their peers and by others at school. It reflects 'the extent to which students feel personally accepted, respected, included, and supported by others in the school social environment' (Goodenow, 1993, p. 80).
- (10) **Positive Relationships.** Positive relationships refer to students' friendships with their peers that help them form positive social connections and meaningful participation within the school.
- (11) **Anxiety.** Anxiety is characterized by excessive, uncontrollable, and often irrational worry about events or activities (American Psychiatric Association, 2013). Students suffering anxiety tend to have feelings of fear, worry more than other students, and are overly concerned about what other students or the teacher think about them. Anxiety is measured with questions that ask students how often they experience feelings or display symptoms associated with anxiety. The Learning Bar's questions were used in the OECD study, *PISA for Development*.
- (12) **Depression.** Depression is a mental state characterized by feelings of sadness, discouragement and inadequacy that persist for long periods, from two or three weeks to several years. Students suffering anxiety can lose interest in school activities, feel tired almost every day, or are unable to concentrate. They may also have recurrent thoughts of suicide (American Psychiatric Association, 2013). Depression is measured with questions about how often students experience feelings or display symptoms related to depression. The Learning Bar's questions were used in the OECD study, *PISA for Development*.

Each of the indicators is assessed in the Learning Bar's OurSCHOOL survey with a parsimonious set of Likert-style items that yield reliable measures of the various facets of well-being. The survey also includes demographic information on sex, parental education, family structure, Indigenous status, and immigrant status. These data provide a comprehensive portrait of the well-being of Canadian youth and allow one to examine inequalities in well-being between the sexes and among students with differing ages, ethnicities, and socioeconomic backgrounds.

## What Schools, Families and Communities Can Do

Modern approaches to validity focus on the use and interpretations of an assessment: “Validity refers to the degree to which evidence and theory support the interpretation of test scores for proposed uses of tests” (AERA-APA-NCME, 2014, p. 11). When a survey such as the OurSCHOOL student survey is used to collect data on a set of indicators of well-being, its validity rests on the coherence and clarity of the argument that links survey results to the intended interpretation and use (Kane, 2013). Therefore, one cannot claim that a survey is either valid or invalid; rather, one must ask whether the proposed interpretations and uses of the survey results are valid. For example, when a principal and the school staff receive the OurSCHOOL results, how are they interpreted and used? What kinds of decisions are being made?

Establishing ‘use validity’ is a rigorous process that entails specifying the sequence or network of inferences and assumptions that lead to each use or ‘claim’. The first step in the process is considering the content of the assessment. For this set of well-being indicators, the content was reviewed by several experts to assess the definitions of the indicators and the representativeness of the items for measuring each indicator. The next step requires examination of the characteristics of the individual items, the factor structure of the measure, and the reliability of results for each indicator. The psychometric properties for eight of the indicators have been examined for large samples of students aged 8 to 18. Four of the indicators – orientation to well-being, goal orientated, self-regulation, and cultural awareness – are new measures and a psychometric assessment of their properties is forthcoming. The data collected will afford an opportunity to examine the relationships among the set of 12 indicators and assess whether the results vary in predictable ways with students’ age, gender, Indigenous status, immigrant status and socioeconomic background.

Ultimately, we wish to make some ‘claims’ that validate the use of the survey results. Willms (2018) stated:

Educational policy entails setting goals and developing a course of action for achieving them. The ‘course of action’ requires the identification of a small set of strategies for achieving the outcomes and a plan for their execution. It involves setting priorities, identifying short- and long-term targets aligned with the goals, and monitoring progress towards achieving these targets. It also requires policies about how best to allocate available resources. Monitoring data are at the heart of developing a set of strategies and making plans for their execution. (p. 41)

Thus, a very exacting validity ‘claim’ would be that the data collected on student well-being can be used to set goals and develop a set of strategies for improving well-being. For example, a principal might report, “The survey results indicated that our students had relatively low levels of well-being and high levels of anxiety and depression compared with the students in other schools in the province. We used the survey results to set goals and develop a set of strategies for improving student well-being and reducing levels of anxiety and depression. After three years the results showed a marked improvement in student well-being and lower levels of anxiety and depression”.

We do not know of any school survey with well-established ‘use validity’ or of any research study that has attempted to meet such rigorous criteria. Moreover, educational change does not occur in such a linear fashion as the statement above suggests. Schools alter course due to external factors such as

changes in funding, union requirements, pressures from parents, new priorities of the Ministry, etc. Thus, one can seldom attribute a causal connection for any single project or intervention (Earl, Carden, & Smutylo, 2001). The approach taken with the Educational Prosperity model advocates using data to set goals and develop strategies but recognizes that several nonlinear events lead to change (Willms, 2018). Many schools are using the OurSCHOOL survey data to initiate a dialogue in the school that focuses on logical links between school policies, interventions, and changes in classroom and school practice. Goals relevant to the school's context are embedded within school improvement plans and school staff monitor year-over-year changes for a core set of indicators.

Willms (2018) argued that educational research has not and likely never will provide conclusive *cause-effect* relationships for the scientific management of schools. However, the research provides support for focusing on a small set of factors when building the foundations of a successful school system. In an address on “adolescent success”, Willms (2019) set out some guidelines or challenges for schools, families and communities that are striving to improve student well-being:

### Build and Strengthen Personal Assets

Ensure every student is receiving support directly from at least one staff member who is striving to build and strengthen the student's academic skills, commitment to learning, and family and community support. The school monitors each student's progress.

**Academic Skills.** The school sets explicit goals to increase the student's literacy and numeracy skills.

**Commitment to Learning.** The school sets explicit goals for increasing the student's perceived value of schooling.

**Family and Community Support.** The school establishes effective partnerships with the family and community leaders to build the student's skills and confidence.

### Provide Personally Expressive Activities

Provide opportunities for each student to engage in activities that are ‘self-defining’ – activities that are consistent with a student's natural talents and uniqueness.

**Prosocial Activities.** The school encourages the student to become involved in one or more volunteer or community-service activities.

**Performance Activities.** The school provides opportunities for the student to engage in performance-based activities, such as a sports team, a drama club, or a school band.

**Social Activities.** The school provides opportunities for the student to participate in the social life of the school. This could include, for example, being involved in student government or taking part in a science fair.



## Strengthen Social and Emotional Skills

Explicitly teach every student how to understand and manage emotions, develop positive relationships, and set and achieve positive goals.

**Self-Regulation Skills.** The school develops the student’s ability to consciously control thoughts, behaviours, and emotions. The student learns how to adapt to the demands of the school context in a flexible way.

**Positive Relationships.** The school equips the student with the skills to develop friendships with peers and adults that strengthen social connections and promote a sense of belonging in the school.

**Goal Oriented.** The school teaches a student how to plan and to set and achieve academic and personal goals. The student is taught leadership skills – the ability to inspire others to achieve a common goal.

## A Surveillance System for Assessing Student Well-being

A surveillance system collects reliable data, continuously and systematically, and analyses and interprets those data for planning, implementation, and the evaluation of public policy (Thacker & Berkelman, 1988). Surveillance systems are the foundation for developing policy and making evidence-based decisions. They can also raise the profile of an important health issue. Educational surveillance has emphasized the measurement and reporting of students’ academic achievement, particularly their proficiency in reading, mathematics, and science. The scope and reach of the Learning Bar’s OurSCHOOL survey system provides an opportunity for schools, districts, and larger jurisdictions to monitor student well-being with indicators that can positively affect school policy and practice. It can also serve as a health surveillance system that provides consistent, reliable data for estimating the magnitude of youth mental health problems, including their geographic and demographic distributions.

The Learning Bar’s approach to the measurement, analysis and reporting of student well-being meets the criteria for a strong surveillance system for student well-being. The framework for well-being provides a definition that is meaningful in the school context. It identifies twelve indicators that can be measured reliably at the individual student level and aggregated to the school level to provide information that school staff can use to set goals, identify strategies for improving student well-being, and use evidence-based approaches to achieving its goals. The indicators can also be aggregated to the district, state or province, and national levels for a surveillance system on youth mental health.

## References

- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (2014). *Standards for educational and psychological testing*. Washington, DC: American Psychological Association.
- American Psychiatric Association (2013). *Diagnostic and Statistical Manual of Mental Disorders*. 5th ed. Arlington, VA: American Psychiatric Publishing.
- Davis, K. D., & Wright, J. C. (2009). Culture and cultural intelligence. In K. D. Davis (Ed.), *Cultural intelligence and leadership: An Introduction for Canadian Forces leaders*. Kingston, ON: Canadian Defence Academy Press.
- Diener, E. (2006), Guidelines for National Indicators of Subjective Well-Being and Ill-Being, *Journal of Happiness Studies*, 7 (4), 397-404.
- Diener E., & Diener M. (1995). Cross-Cultural Correlates of Life Satisfaction and Self-Esteem. *J Pers Soc Psychology*, 68, 653–63.
- Du, H., King, R. B., & Chi, P. (2017). Self-esteem and subjective well-being revisited: The roles of personal, relational, and collective self-esteem. *PloS one*, 12(8), e0183958. <https://doi.org/10.1371/journal.pone.0183958>
- Earl, S., F. Carden and T. Smutylo (2001). “Outcome mapping: Building learning and reflection into development programs”. Ottawa: International Development Research Centre.
- Earley, C., & Ang, S. (2003). *Cultural intelligence: Individual interactions across cultures*. Stanford, CA: Stanford University Press.
- Gaumer Erickson, A. S., Soukup, J. H., Noonan, P. M., & McGurn, L. (2018). *Self-Regulation formative questionnaire technical report*. Retrieved from <http://www.researchcollaboration.org/uploads/Self-RegulationQuestionnaireInfo.pdf>.
- Gurney, P. W. (1987). Self-Esteem in the Classroom: II: Experiments in Enhancement. *School Psychology International*, 8(1), 21–29. <https://doi.org/10.1177/014303438700800103>
- Helliwell, J. F., & Wang, S. (2012). The state of world happiness. In J. F. Helliwell, R. Layard, and J. Sachs (Eds.), *World Happiness Report 2012* (pp. 10-57). New York: UN Sustainable Development Solutions Network.
- Huta, V., & Ryan, R. M. (2010). Pursuing pleasure or virtue: The differential and overlapping well-being benefits of hedonic and eudaimonic motives. *Journal of Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, 11(6), 735–762. <https://doi.org/10.1007/s10902-009-9171-4>
- Huta, V., & Waterman, A. S. (2014). Eudaimonia and its distinction from hedonia: Developing a classification and terminology for understanding conceptual and operational definitions. *Journal of*

*Happiness Studies: An Interdisciplinary Forum on Subjective Well-Being*, 15(6), 1425–1456. <https://doi.org/10.1007/s10902-013-9485-0>

Kane, M. T. (2013). Validating the interpretations and uses of test scores. *Journal of Educational Measurement*, 50, 1–73.

Marsh, H. W. (1990). "Causal ordering of academic self-concept and academic achievement: A multiwave, longitudinal path analysis". *Journal of Educational Psychology*. 82 (4): 646–656. [doi:10.1037/0022-0663.82.4.646](https://doi.org/10.1037/0022-0663.82.4.646).

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*. 50(4): 370–96.

McClelland, M. M., & Tominey, S. L. (2016). *Stop, think, act: Integrating self-regulation in the early childhood classroom*. New York: Routledge.

Neto, F. (1993). The Satisfaction with Life Scale: Psychometric properties in an adolescent sample. *Journal of Youth and Adolescence*, 22, 125–134.

O'Dea, J. A. (2012). Body image and self-esteem. In T. F. Cash (Ed.), *Encyclopedia of body image and human appearance* (pp. 141–147). Elsevier Academic Press.

OECD (2013). *OECD Guidelines on Measuring Subjective Well-being*. OECD Publishing. <http://dx.doi.org/10.1787/9789264191655-en>.

Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.

Smith, E. R., Mackie, D. M. (2007). *Social Psychology* (Third ed.). Hove: Psychology Press. ISBN 978-1-84169-408-5.

Tay, L.; Diener, E. (2011). Needs and subjective well-being around the world. *Journal of Personality and Social Psychology*. 101(2): 354–365.

Thacker, S. B., & Berkelman, R. L. (1988). Public Health Surveillance in the United States. *Epidemiologic Reviews*, 10: 164–90.

Twenge, J. M., Cooper, A. B., Joiner, T. E., Duffy, M. E., & Binau, S. G. (2019). Age, Period, and Cohort Trends in Mood Disorder Indicators and Suicide-Related Outcomes in a Nationally Representative Dataset, 2005–2017. *Journal of Abnormal Psychology*. Advance online publication. <http://dx.doi.org/10.1037/abn0000410>

van den Berg, P. A., Mond, J., Eisenberg, M., Ackard, D., & Neumark-Sztainer, D. (2010). The link between body dissatisfaction and self-esteem in adolescents: similarities across gender, age, weight status, race/ethnicity, and socioeconomic status. *The Journal of adolescent health : official publication of the Society for Adolescent Medicine*, 47(3), 290–296. <https://doi.org/10.1016/j.jadohealth.2010.02.004>

Waterman, A. S., Schwartz, S. J.; Zamboanga, B. L.; Ravert, R. D.; Williams, M. K.; Agocha, V. B.; Yeong Kim, S.; & Donnellan, M. B. (2010). The questionnaire for eudaimonic well-being: Psychometric properties, demographic comparisons, and evidence of validity. *The Journal of Positive Psychology*, 5(1), 41-61.

Willms, J. D. (2018). *Learning Divides: Using Monitoring Data to Inform Education Policy*. Montreal: UNESCO Institute for Statistics.

Willms, J. D. (2019). Educational Prosperity: A Life Course approach. Keynote speech at the 11<sup>th</sup> National Conference on Adolescent Success. Brisbane, Australia.  
<https://www.adolescentsuccess.org.au/Conference-2019>

Wilson, M. (2005). *Constructing measures: An item response modeling approach*. Mahwah, NJ: Lawrence Erlbaum.

World Health Organization. (n.d.). *Frequently asked questions*. Retrieved from  
<http://www.who.int/suggestions/faq/en/>

World Health Organization (2017). *Global Accelerated Action for the Health of Adolescents (AA-HA!): Guidance to support country implementation*. Geneva: World Health Organization.