

# RESEARCH SUMMARY



## *Implementation practices and student outcomes associated with the learner profile attribute “open-minded”*

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### Background

The learner profile, a key element of the International Baccalaureate (IB) Middle Years Programme (MYP), includes 10 attributes that are interwoven throughout the programme’s learning objectives. The focus of this study is the attribute “open-minded”. The learner profile suggests that to foster open-mindedness:

*“We critically appreciate our own cultures and personal histories, as well as the values and traditions of others. We seek and evaluate a range of points of view, and we are willing to grow from the experience.” (www.ibo.org)*

This definition of open-mindedness reflects both a way of thinking—open-mindedness as an intellectual virtue—and a way of seeing the world—open-mindedness as international-mindedness.

This research has two broad aims. First, it seeks to examine the open-mindedness of students in the MYP, and second, it seeks to understand how IB World Schools develop open-mindedness among their students.

### Research design

This research is based on a mixed-methods approach. Researchers developed an online survey consisting of 44 statements to generate quantitative data in relation to students’ open-mindedness in a variety of contexts. Mokken Scale Analysis was employed to identify clusters of questions that collectively measured different facets of open-mindedness. Out of the 44 survey questions examined, the researchers identified eight distinct modes of open-mindedness.

1. **Cultural and religious open-mindedness:** This mode refers to an individual’s critical receptiveness towards the values, practices and behaviours of other cultures and religions.
2. **Problem-solving open-mindedness:** This aspect of

open-mindedness reflects how critically receptive respondents are in approaching problems.

3. **Open-mindedness to challenge and critique:** The third mode measured in the survey represents how receptive respondents are to challenges of their opinions or values.
4. **Moral open-mindedness:** Moral open-mindedness refers to how open individuals are to alternative moral positions and beliefs and how critical they are prepared to be about their own moral code.
5. **Collaborative open-mindedness:** Collaborative open-mindedness refers to how receptive the respondent is to working with other people to solve a particular problem.
6. **Open-mindedness towards cultural difference:** This mode relates to how aware of cultural differences the respondent is and how much value he or she assigns to these differences.
7. **Open-mindedness towards cultural primacy:** This is similar to the previous mode but focuses on the value an individual perceives in learning about and from other cultures.
8. **Belief open-mindedness:** The final mode is similar to moral open-mindedness but focuses less on what is thought to be “right and wrong” and more on an individual’s broader belief system.

The survey was completed by 672 students, aged 11–16, across 6 schools in the United Kingdom. Five schools offered the MYP, and for comparative purposes, researchers included one non-IB school in the study. This school was selected on the basis of several factors, including demographic profile (appropriate age range) and academic achievement; that is, the school, a state-sector academy school, would be considered academically high-performing on measures used by the national inspectorate, OFSTED.

Simple descriptive analyses were used to explore the prevalence of the open-mindedness modes across the different schools. Regression analyses were then undertaken to establish whether the differences in student open-mindedness between schools were significant.

In addition to the quantitative data collection, the researchers made visits to four case study schools. A total of 88 school leaders, teachers and students participated in interviews or focus groups during this phase. Lastly, researchers analysed school websites and key documents from the schools. Table 1 offers information about the participating schools.

| School name | IB school | Descriptor   |
|-------------|-----------|--|
| Alpha       | No        | State sector, comprehensive                            |
| Beta        | Yes       | Independent sector, international school               |
| Gamma       | Yes       | Independent sector, international school               |
| Delta       | Yes       | State sector, comprehensive                            |
| Epsilon     | Yes       | State sector, comprehensive                            |
| Zeta        | Yes       | Independent sector, international school (faith-based) |
| Theta       | Yes       | Independent sector, international school               |

Note: Theta did not participate in the survey portion of the study.

Table 1. Participating schools

## Findings

### Student survey outcomes

#### Results 1: How open-minded are the students?

The descriptive data provided in Table 2 indicates how students at the six participating schools measured on the eight modes of open-mindedness, while holding constant the effects of demographic variables. Measures of central tendency are given as mean scores, and dispersion of results are illustrated as standard deviations for each school. School Alpha is a non-IB school while all other schools offer the MYP.

As seen in Table 2, the average open-mindedness scores across the schools show that students are typically more open-minded in some areas than in others, regardless of which school they attend. For example, open-mindedness when referring to one's beliefs or moral code is generally low, while students tend to be more open-minded about problem-solving or dealing with other cultures and religions. This may suggest that some modes of open-mindedness are easier to cultivate than others.

| Open-mindedness mode   | Alpha |         | Beta    |         | Gamma |         |
|------------------------|-------|---------|---------|---------|-------|---------|
|                        | Mean  | Std dev | Mean    | Std dev | Mean  | Std dev |
| Cultural and religious | 26.2  | 4.0     | 28.8    | 4.5     | 30.8  | 3.9     |
| Problem-solving        | 11.9  | 1.8     | 11.8    | 2.2     | 12.6  | 1.8     |
| Challenge              | 4.7   | 1.3     | 4.9     | 1.3     | 5.2   | 1.3     |
| Moral                  | 3.8   | 1.2     | 4.0     | 1.6     | 4.1   | 1.5     |
| Collaborative          | 6.2   | 1.1     | 6.1     | 1.1     | 6.3   | 1.2     |
| Cultural differences   | 4.5   | 1.2     | 5.2     | 1.7     | 4.8   | 1.2     |
| Cultural primacy       | 4.4   | 1.0     | 4.9     | 1.8     | 5.0   | 1.5     |
| Belief                 | 4.0   | 1.2     | 4.0     | 1.4     | 4.3   | 1.3     |
| Open-mindedness mode   | Delta |         | Epsilon |         | Zeta  |         |
|                        | Mean  | Std dev | Mean    | Std dev | Mean  | Std dev |
| Cultural and religious | 29.1  | 4.2     | 26.3    | 4.9     | 29.7  | 3.6     |
| Problem-solving        | 12.8  | 1.9     | 11.8    | 2.2     | 12.3  | 1.8     |
| Challenge              | 5.4   | 1.4     | 5.1     | 1.5     | 5.1   | 1.3     |
| Moral                  | 3.6   | 1.3     | 3.9     | 1.2     | 4.4   | 1.2     |
| Collaborative          | 6.4   | 1.1     | 6.1     | 1.1     | 6.5   | 0.9     |
| Cultural differences   | 4.7   | 1.4     | 4.9     | 1.5     | 5.1   | 1.2     |
| Cultural primacy       | 4.6   | 1.3     | 5.2     | 1.5     | 5.1   | 1.5     |
| Belief                 | 3.6   | 1.1     | 4.5     | 1.5     | 4.6   | 1.2     |

Table 2. Open-mindedness mean scores and standard deviations for all schools

While the data points to considerable similarity across schools, several differences between schools are worth highlighting. For example, school Alpha (the non-IB baseline school) has a lower mean score in more instances than any other school, reporting the lowest average score on four of the above indicators (cultural and religious open-mindedness, open-mindedness to challenge, open-mindedness to cultural difference and open-mindedness to cultural primacy). By contrast, school Delta, a state-sector, non-selective MYP school, has the highest mean score for three modes of open-mindedness (open-mindedness with regard to moral issues, open-mindedness about beliefs and open-mindedness to collaboration).

## Results 2: Regression analyses of open-mindedness

This section examines the significance of differences in open-mindedness across schools using ordinary least-squares (OLS) regression analysis. A significant, positive regression coefficient suggests that the effect of attending a particular school generally makes students more critically receptive on a particular mode of open-mindedness than the effect of attending the baseline school (school Alpha), while controlling for factors including gender, age, number of spoken languages, religious beliefs, ethnicity and having been born or lived outside the United Kingdom. A negative significant coefficient suggests that attending a school makes students less open-minded than attending the baseline school.

Overall, analysis of the survey data suggests there are few differences between students at one school compared with another, confirming the impression given in the “Results 1” section. However, there are again some areas that have a significant effect on how critically receptive in different contexts students at the different schools may be.

In particular, there was a clear and significant relationship between attending an MYP school and a greater level of open-mindedness among pupils with regard to awareness of cultural differences. In this regard, students at schools Beta, Delta, Epsilon and Zeta were significantly more open-minded than students at school Alpha or Gamma (see Table 3).

| School          | Coefficient |
|-----------------|-------------|
| Baseline: Alpha |             |
| Beta            | 1.38*       |
| Gamma           | 0.63        |
| Delta           | 0.99*       |
| Epsilon         | 0.47*       |
| Zeta            | 0.86*       |

Note: OLS regression performed in Stata.

\*The coefficient is statistically significant at 95% confidence level. Prob > F = 0.0046; r<sup>2</sup> = 0.0828; ar<sup>2</sup> = 0.048; Obs = 356

**Table 3. Regression output for open-mindedness towards cultural difference**

Further, students attending the non-IB school in this study typically scored 4.5 on a scale of 2–8 measuring how open-minded they are to the possibility of substantial differences between cultures (they typically scored right in the middle of the range), while students attending any IB World School typically scored above that middle point, ranging anywhere between 4.7 and 5.2.

In several instances, attendance at a particular MYP school led to greater average levels of certain types of open-mindedness. For example, students at school Gamma, and to a lesser extent school Zeta, were found to be significantly more open-minded towards the values and practices of other cultures and religions. Interestingly, when the effects of the control variables are considered across all participating schools, female students were more culturally and religiously open-minded, whereas age and being male were found to be negatively related to this form of open-mindedness, suggesting that younger boys were the least open-minded in the sample.

### Qualitative case study findings

Interviews with teachers and school leaders at the four case study schools indicated that, generally, the learner profile was perceived to be “embedded” within the culture of each school. Moreover, the complexity of open-mindedness as a concept meant that teachers were opposed to trying to measure the attribute in a formal way. Interviews suggested that study participants believed the value of the learner profile lies in its flexibility and potential for creative interpretation. It was expressed that learner profile attributes, including open-mindedness, should be “felt” rather than “delivered” and that they would be diminished if a more instrumental approach to teaching and learning was adopted. However, the researchers noted that this approach generates a paradox within the IB curriculum—although the learner profile is an important element of the curriculum, it is generally discussed infrequently by teachers and school leaders. There is, therefore, not always a clear sense of how effectively a school is developing the attribute, where good practice is happening and how the practice can be developed.

At the same time, the findings suggest that IB teachers and students often have a well-developed understanding of open-mindedness, although this can be quite personal and sometimes limited in range. For students, the notion of being receptive to the ideas and views of others was frequently cited, as the following quote illustrates:

*“I think that being open-minded is about taking into account, and trying to understand, other people’s opinions which is like not judging other people’s opinions or perspectives ... You try to see the good and the bad in everything and like not just all that is bad. It’s always trying to see both sides, or like however many sides or opinions that someone has about something—you kind of try and take that all in.” (MYP year 4 student)*

Several teachers, however, identified tensions that existed when trying to develop open-mindedness and the extent to which open-mindedness requires “pushing boundaries”

especially within the context of culturally diverse environments. One teacher recounted an incident in which he responded to a request from students to explore issues related to teenage pregnancy by developing a reading comprehension on the topic. The teacher recalled, "If the kids are interested let them learn something and go with it. Develop it and support them." The incident, however, resulted in the teacher being reprimanded for discussing inappropriate issues.

Such examples highlight the need for teachers to develop the confidence to engage in controversial issues, and the need for schools to find ways to support what the researchers call "courageous teaching". Students also argued that open-mindedness requires a level of risk taking; for students this involved being willing to venture opinions that might be considered unorthodox.

## Good practices in developing open-mindedness

### *The open-minded school*

Within the study, the authors proffer the notion of the "open-minded school". In the open-minded school the development of open-mindedness as an attribute emerges through a complex relationship between the student, the learner profile and a number of organizational factors, including teaching and leadership, all of which reinforce one another. At the centre of this model is the learner. Within the wider context of the school, the researchers identify five dimensions of institutional open-mindedness.

- **Open-minded curriculum:** An open-minded curriculum is one that is based on freedom and flexibility, and therefore eschews prescription and rigidity. An open-minded curriculum also emphasizes inquiry as the basis for learning.
- **Open-minded pedagogies:** This concept relates to the willingness of teachers to explore alternative and innovative approaches, take risks and create learning opportunities that are intentionally challenging to students.
- **Open-minded leadership:** A key aspect of the open-minded school is the role of leadership that reflects, and models, open-mindedness both as an attribute and as a value.
- **Active open-mindedness:** One feature of an open-minded culture is making open-mindedness "active" in the sense that attitudes are transformed into actions. Open-mindedness can thus be seen as a form of active citizenship.
- **Inclusive open-mindedness:** This concept involves valuing individuals for who they are and resisting a school culture of compliance and conformity.

## Recommendations

Open-mindedness emerged in this study as a complex concept encompassing several different elements. Within the IB curriculum, open-mindedness has a dual dimension in that it combines a commitment to international-mindedness and the pursuit of open-mindedness as an intellectual virtue. The researchers suggest it may be helpful to consider a more multi-dimensional, or multi-modal, approach to open-mindedness within schools. Developing a nuanced understanding of open-mindedness could, they argue, also help teachers to better identify and use opportunities for fostering open-mindedness among students through the curriculum.

Although the learner profile is central to the IB philosophy, there is not always a clear sense of whether a school is developing the attributes or how practice could be improved. The study findings indicate that it is necessary to ensure that the learner profile is systematically built into the professional dialogues that take place in IB World Schools, such as daily "teacher talk", whether it be part of formal meetings or informal professional conversations. As such, professional dialogues about the learner profile must be encouraged. These discussions are much more likely to occur when the learner profile is embedded intentionally within the culture of the school.

Regarding the learner profile as a whole, the researchers offer the following concluding advice: "It is important to ensure that teachers are talking more explicitly about the 'big issues' that underpin the curriculum rather than on what can appear as an exclusive focus on what one teacher described as 'the logistics of delivery' ... If the learner profile represents the heart of the IB it needs to be looked after. Teachers need to talk about its well-being, and how to nurture it. Such conversations should not be left to chance."

This summary was developed by the IB Research Department. A copy of the full report is available at [www.ibo.org/research](http://www.ibo.org/research). For more information on this study or other IB research, please email [research@ibo.org](mailto:research@ibo.org).

To cite the full report, please use the following:

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