STUDIA Z TEORII
WYCHOWANIA
TOM XVI: 2025 NR 2(51)

Marek Piotrowski
Christian Theological Academy in Warsaw
ORCID 0000-0003-3360-3169

Patterns of International Baccalaureate to help Improve the education system in Poland

Wzorce matury międzynarodowej pomocne w poprawie systemu edukacji w Polsce

Abstract: The author presents the development of the International Baccalaureate system and, on the basis of the two pedagogical foundations adopted by its creators, discusses the possibilities of reforming Polish education. He draws readers' attention to previous attempts to change educational practices made by teachers according to the pedagogical concept adopted in the creation of the International Baccalaureate. In conclusion, he indicates several changes that can be introduced in Poland in the nearest future by reforming the education of teenage students. According to the author, the article is a preliminary reflection for a number of further works (including monographs) dedicated to the same issue. Like most of the author's publications, the article is in line with the canon of critical pedagogy.

Keywords: International Baccalaureate Middle Years Programme, pedagogical foundations of education, Polish education reform, teachers, ministry of national education.

Introduction

There are three inspirations for this article and for the monograph (which will be published in 2025). The first inspiration is the origin and success of the International Baccalaureate (IB) programme.

Its author was a secondary school teacher of The International Baccalaureate Diploma Programme in physics, and the pre-IB programme in science (the latter does not exist anymore). As he noted, he has found the experiences he gained at the IB school useful in working in other settings with young people from different backgrounds and with different prior involvement in learning. Other teachers and academics also came to similar conclusions, noting that the ideas and effective practical solutions forming the pedagogical foundation of the IB programme are similar to those introduced into the Polish education system by non-governmental organizations.

Thus, the second inspiration for this article is an attempt to describe changes in the way teenage students in Poland learn and are taught in the context of the pedagogical foundations of the International Baccalaureate. Some of the teachers' reflections and practical solutions were organised and reinforced by The Centre for Citizenship Education (CCE) in a number of programmes, including, among others, the projects "School with class" (Czetwertyńska et al, 2001) and "Poland - Students Academy" (Wiśniewski, 2013). Examples taken from these two projects are mentioned in the article and will be presented in detail in the following publications due to their possible use in reforming Polish education.

The third inspiration for the article is the author's dispute with the clerical violence of the Ministry of National Education (MNE) which he has been observing and discussing for more than 20 years. Such violence destroys many efforts of teachers, parents, youth and children on a scale that is difficult to imagine. It also contributes to the development of only critical approaches in Polish pedagogy. This is a situation in which it is impossible to create anything lasting and valuable in education, which was presented by the author in the form of a metaphor borrowed from the last work of de Saint-Exupéry, "Twierdza" (2009): "If you resort to gendarmes and commission them to build a world, however perfect, this world will not come into being at all, because it is not within the role or capacity of a gendarme to give life to your religion". We are now facing another attempt by the MNE to reform the education system in a long history of failure spanning more than 30 years. The changes are to affect teaching in older primary grades. The author, hearing about the next "building", warns the MNE to abandon its role as a gendarme. For, although the changes are necessary, if they are badly

implemented, they will lead to another disaster harming, above all, children with weaker family capital, an action that is shameful as such.

In this publication, the dialogue with the MNE takes the form of a warning. On the one hand, the hypothesis of the possibility of developing the Polish education system based on the models of the International Baccalaureate is very promising. On the other hand, however, it must not be fulfilled through clerical violence.

Due to the author's educational background and school experience, references to teaching science with particular emphasis on physics are frequent in the article. The author deliberately omits the IB educational model, primarily trying to focus on the structure of schools and classes in particular subjects. The form of these classes in Polish schools, according to the author, is the reason for the demoralisation of young people and the frustration of the teaching staff.

Success of International Baccalaureate

The first task of the authors of the International Baccalaureate was to create, in the late 1960s, a system of education and secondary schools for young people moving around the world with their families, including young people from families connected with diplomacy, business, international organisations, etc. The schools were to operate based on the same principles regardless of the country, its state structure and cultural (including religious) conditions. Young people aged 16-19 were to be taught and acquire competences independently in the same way. Also, they were to use the same or very similar learning materials. Their achievements (including final examinations) were to be assessed based on the same criteria. And the verification of assessment was also to be carried out by teachers from other schools and countries. The unification of the principles was to be achieved through international training. The programme thus established in 1968 was called The International Baccalaureate Diploma Programme (IB DP) (International Baccalaureate, 2023). Today, there are around 3 800 schools with the IB DP programme and their number is increasing.

The initial focus on the secondary school programme was not accidental. At the end of the 1960s, there was a strong interest among 16-19 year olds in effective preparation for study at the renowned universities of Europe and America. They were interested in the continuation of the secondary school education in elite universities already accustomed to international students. This idea was fulfilled, as can be seen in the websites of IB schools tracking

lives of their graduates and in studies using quantitative data (Saxton and Hill, 2014).

In the post-war period, schools implementing the curriculum of foreign countries (on a franchise basis) were established for a similar reason. For example, British schools in several European countries, including Poland (Lagunita Education, 2024) were established in this manner. However, at present, the International Baccalaureate curriculum seems to be winning out over imported national curricula, including the British one. This advantage is highlighted by studies of universities, including English universities (Pearson Edexcel, 2023). And some schools exported to other countries (including to the UK) are adopting the International Baccalaureate curriculum.

Alongside the development of the secondary school programme in the IB, the following programmes were successively and systematically developed: the Middle Years Programme (IB MYP) for junior high school students aged 11 to 16, made available in 1994 (International Baccalaureate, 2024a), and for primary school and kindergarten children aged 3 to 11: Primary Years Programme, made available (IB PYP) in 1997 (International Baccalaureate, 2024b). The latest programme: career development for 16-19 year olds, i. e. the Career-related Programme (IB CP) was launched in 2020 (International Baccalaureate, 2024c). Table 1 shows the share of the programmes in IB schools, counted in May 2024.

Table 1. Shares of particular programmes in IB schools.

IB Program	Percentage of program
Diploma Programme	44%
Middle Years Programme	23%
Primary Years Programme	28%
Career-related Programme	5%
Total	100%

The author's own calculations based on "Find an IB World School" (International Baccalaureate, 2024d).

Since the 1970s, the number of schools with International Baccalaureate programmes has steadily increased in many countries, although their popularity varies depending on the society. i. e. on the wealth of families and the funds allocated to education by state and local authorities. The fees for participating in the programme are high, including teacher training, visits from specialists verifying the implementation of the programmes, access to licensed resources for teachers and supervisors (coordinators), laboratories

(especially chemistry and biology), the purchase of textbooks for students and teachers from reputable publishing houses, etc. The variation in popularity of the programmes is shown in Table 2 which illustrates the number of schools with IB programmes per 1 million of people.

Table 2. The number of schools with IB programmes per 1 million of people.

no.	Country	Number of schools per million inhabitants
1	Canada	9,8
2	Norway	8,6
3	Australia	8,0
4	Switzerland	7,5
5	Singapore	7,3
6	US	5,8
	…	
15	Poland	1,8

The author's own calculations based on "Find an IB World School" (International Baccalaureate, 2024d).

After the start of the school year, the values in Table 2 may change slightly. However, the group of countries where the IB programme is a popular system has been the same for a long time. This can be seen by comparing the table above with similar results published fourteen years ago (Putkiewicz and Piotrowska, 2010). The top five countries appearing in the 2024 table: Norway, Australia, Singapore, Canada and Switzerland, also occupied the top spot in 2010 (albeit in a different order). The exceptions are schools in the USA which have become more popular due to the activity of local organisations, including state ones, e.g.: in California (California Association of IB Schools, 2023), and due to state subsidies which support, among other things, teacher training. Currently, the first place in the popularity ranking is held by Norway with nearly 9 schools per million inhabitants. The popularity of IB schools in Norway can be clearly seen when considering not only the number of schools, but all programmes (PYP, MYP, DP and CP). In Norway, the total number of them strives for a value of 15 per million inhabitants. IB schools in Poland have also become more popular. Fourteen years ago they were ranked 23rd, and in 2024 – 15th. In this case, the increase in popularity can be linked not only to the spread of information about the success of the IB school concept, but also to the rising living standards of Poles. Notwithstanding the variation shown in the table above, the growth in the number of schools in many countries is similar. After the first establishments have been

set up, usually for young people from foreign families, the number of schools slowly increases. After a few years, when information about the effectiveness of IB programmes reaches many local communities, new establishments are created much faster. These changes are shown below in the two graphs: Fig. 1 and Fig. 2 which illustrate the growth in the number of schools in: Poland and Norway (over the same period 1988-2024).

None of the graphs in Fig. 1 and Fig. 2 show the effect of saturating the education market with IB schools. It is to be expected that their number will continue to increase. What is not apparent in many of the statistics, however, is the problem associated with the financial conditions for the establishment of IB schools. Among all IB schools in the world (currently there are about 5.900 IB schools), only nearly half (46%) have the status of a public school. In Poland the proportion is 48%. The situation is fundamentally different in Norway where public schools account for the majority (over 70%) of all IB schools.

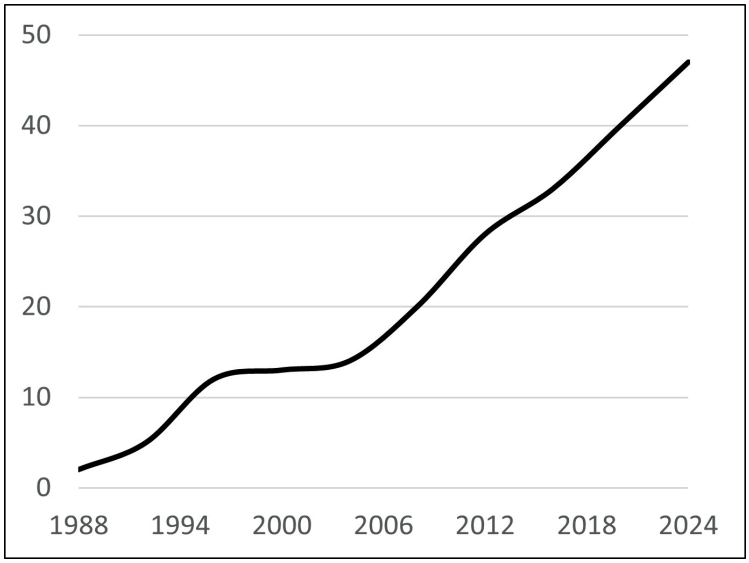

Figure 1. Growth in the number of IB schools in Poland in 1988-2024. The author's own calculations based on "Find an IB World School" (International Baccalaureate, 2024d).

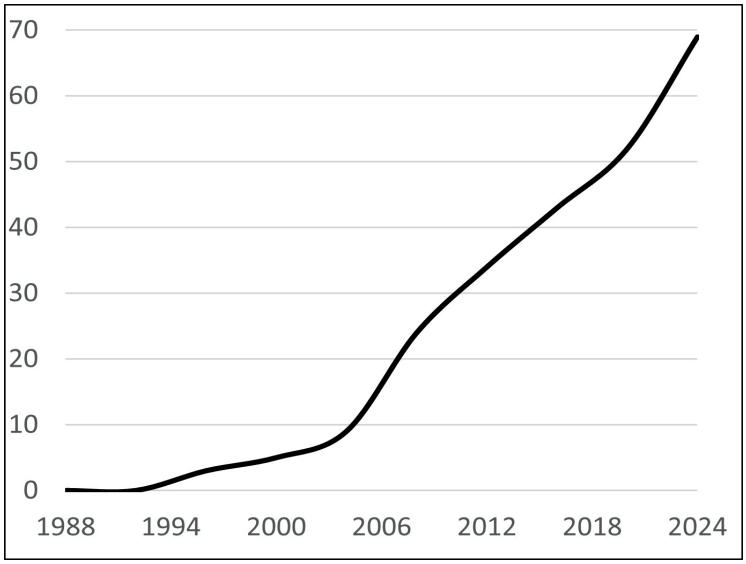

Figure 2. Growth in the number of IB schools in Norway in 1988-2024. The author's own calculations based on "Find an IB World School" (International Baccalaureate, 2024d).

The source of success of the International Baccalaureate programme. Convergence of projects undertaken by teachers and academics in Poland with the objectives of the IB programmes

The intention of the creators of the International Baccalaureate was clearly different from the organisations popularising national curricula abroad. The International Baccalaureate's own curriculum, as emphasised by the IB Foundation today, was to be built based on the selected pedagogical concepts of a few pedagogues. The foundations were adopted arbitrarily, but were not subject to revolution as a result of a change of political power in any of the countries. And, hopefully, they will also not succumb to politicians from international organisations e. g. from the EU. To be precise, it is to be hoped that the increasingly frequent pressure from Euro dignitaries and EU commissioners will not block the development of the International Baccalaureate in Europe, for whatever pretext or reason.

The pedagogical basis of the International Baccalaureate curriculum, as formulated by its creators, was to be in line with selected concepts of J. Dewey, A. S. Neill, J. Piaget and J. Bruner (International Baccalaureate, 2017). Selected concepts of the first two pedagogues are presented below in the context of school problems occurring in Poland. Bruner's ideas about the need to develop problem-solving skills and Piaget's ideas about the need to apply the cognitive cycle will be considered in the next publication due

to the breadth of this issue. The International Baccalaureate curriculum was intended to fulfil John Dewey's requirement: "The importance of tapping into students' natural curiosity". In the practice of science subjects, this challenge is fulfilled, among other things, in the form of a wide selection of diverse student activities. In the curriculum for the subject of physics, at primary level (offered to pupils interested in social subjects), in addition to the main content block in the curriculum, there are four options for additional ranges to choose from, as well as practical activities, individual research papers, and an interdisciplinary science project with a topic chosen by the students. Among the options, young people choose from: theory of relativity, engineering physics, imaging - presentation, and astrophysics. The block pursuing student interests accounts for about one-third of the total programme. Dewey's challenge is often forgotten by contemporary schools (Jirout et all, 2018). In Poland, a similar phenomenon has been called mindlessness codes, i. e. a teaching strategy in which curricula are arranged to suit an exam key and ignore students' interests (Piotrowski, 2013).

Despite this general trend (enforced by the MNE), some teachers and academics, who resist the domination of learning according to tests, developed and implemented their own teaching programmes. These difficult endeavours were often supported by non-governmental institutions, including the Centre for Citizenship Education (CCE). In the CCE-led project: "School with Class", which was carried out between 2001 and 2003 (Piotrowski, 2007), students from more than 5.000 institutions organised and participated in science festivals, debates and experiments in their areas of interest in the third task entitled "School teaches to get to know and understand the world". The first part of the "Students' Academy" project, run by CCE from 2008 to 2014, consisted of student experiments to develop interests in sciences and mathematics. Around 40.000 students learned about the problem of measurement accuracy. For the first time they encountered the concept of hypothesis not found in the core curriculum, and they learnt about the verification of hypotheses by means of experiments. They were surprised by the vast area of our ignorance. The experiments were recorded according to the procedure of scientific research, which led to many discussions about the process of finding the truth and verifying opinions. The process was really interesting for teenage students (Wisniewski, 2013). Sometimes they planned and performed their own experiments that did not lead to any knowledge thanks to which they could appreciate the importance of critical thinking. Thus, the requirement formulated by J. Dewey about the necessity of appealing to the interests of children and young people, which is the basis

of the International Baccalaureate, could be fulfilled in Poland, but only on the margins of school life subordinated almost entirely to the requirements defined in examination tests by government institutions.

Combining the MNE's announcements about reforming science and mathematics education in the older primary grades with John Dewey's postulate, it should be noted that this is a very difficult undertaking. In the current core curriculum, which is impossible to implement, the selection and sequence of teaching content is similar to the arrangement that existed in former secondary schools. Textbooks are created in a similar way. In addition, the lack of leveling (i. e. teaching all young people the same thing and at one level) for obvious reasons makes learning boring, incomprehensible, and, above all, uninteresting for most. Once John Dewey's postulate about the need to make students interested in school science is accepted, it will be easier to avoid past mistakes and to evaluate the progress of change. The need for differentiation and leveling will naturally arise. Young people have different interests and there is a large group of girls and boys who want to learn a lot more, but there are also those who do not associate their future with school science and are planning further education in vocational schools. For them, too, there should be interesting tasks so that they have their place in primary school.

When creating the curriculum for the International Baccalaureate, A. S. Neill's challenge: Personal freedom for children - students developing in an environment free of constraints, was taken as its second basis. Here, however, a major contradiction is apparent. IB secondary schools were supposed to prepare young people for studies at elite universities which require a high level of competence confirmed by good results in the baccalaureate examinations. Freedom, in this case was, and still is today, limited only to the choice of subjects taught (three of them on an extended – higher level). With the development of the IB, the number of subjects on offer is steadily increasing, allowing greater freedom of choice. There are currently 7 subjects in the *Science* group and 1 in the *Individuals and societies* group (International Baccalaureate, 2024e). However, this rich choice has financial limitations. If a school wants to introduce many subjects to choose from, i. e. small student groups, the cost of education rises sharply. This is possible in expensive non-public schools. In public institutions there is less choice of subjects due to the limited funding of secondary schools. Therefore, the freedom of young people is also limited when it comes to the choice of subjects. Especially as the level of requirements is high.

Young people with interests in the humanities at standard level must choose physics, chemistry or biology. During the course of the classes (4 clock hours per week), they learn about the chosen subject within the scope that is smaller than in the Polish system. However, they explore the selected problems in great depth. They are to understand the conditions in which given scientific models can be applied and those situations in which the application of the same models is a mistake. They observe the development of human thought and learn to understand the hypothetical nature of knowledge, etc. However, can such a compulsory programme for humanists be regarded as the fulfilment of A. S. Neill's postulate? For young people in the IB DP programme, especially in Poland, a manifestation of freedom can be the Art subject, which is uncommon in the practice of final examinations in secondary schools. Art that is compulsory for all reduces the number of hours of students' intensive work, while, at the same time, making IB schooling even more interesting and varied.

The high requirements of the IB programme can hardly be compared with those of the Polish baccalaureate in which young people, in order to succeed, can only pass three subjects at basic level and take one at extended level, without having to achieve any result (Centralna Komisja Egzaminacyjna, 2024). This situation has continued since 2015 when examinations in subjects chosen by young people at the basic level were abolished. Thus, the Polish baccalaureate, due to its low requirements, may be the fulfillment of A. S. Neill's postulate allowing young people in secondary schools the freedom to choose many extracurricular activities. However, does such a system of schooling make sense?

A different situation from secondary schools is found in IB junior high schools where the MYP programme can, in principle, be combined with the national system. In addition, the five-year MYP programme is divided into two periods.

In Poland, the first part of the IB MYP programme (years 1-3) corresponds to the older grades of primary school, and the second part (years 4-5) to the first grades of secondary school. The biggest differences between the MYP and the Polish system are in the first stage for young people aged 12 to 14. What Polish adolescents learn was created in two stages of imprudent actions by the Ministry of Education officials. The first stage was a few months in 1999, when, while creating the core curriculum, a huge number of issues were transferred to junior high schools from former secondary schools. Neither the creators of the core curriculum, nor the authors of textbooks or teachers had enough time to pay attention to the diversity of interests and

level of knowledge of teenagers. Junior high schools were to teach everyone everything at only one level, and then the results of such education were to be evaluated during one standardised final exam. In 2017, the crisis worsened when the Ministry of Education, by liquidating junior high schools (Ministerstwo Edukacji Narodowej, 2018) shifted issues and learning content from junior high school to grades 6-8 in primary school. At the beginning of the changes, it was suggested that each student would be able to take an exam in a subject of his/her choice at the end of primary school. Officials of MNE did not take into account independent educational projects and/or research activities. Unfortunately, this solution, taking into account young people's freedom of choice to a very limited extent, was never implemented.

The current core curriculum for the older grades of primary school has been highly criticised even by one of its creators who pointed out that it is impossible to fulfil its requirements as the scope of knowledge in the curriculum is more than twice as big as it should be (Greczyło, 2018). One does not need to be a psychologist to see that a primary school implementing the current core curriculum does not create even a semblance of freedom for students and teachers. In young people it is a source of disorders, including depression, frustration and violence. At the same time, frustration and neurotic disorders arise among teachers.

Teachers and parents of young people in the older grades in primary schools have many more complaints and comments, hence MEN officials have announced a new reform to be introduced in 2026. Perhaps A. S. Neill's postulate about the need for a sense of freedom will be in the foundation of the new curriculum, as in the IB. However, will just one year be enough for such a big change?

The IB MYP programme has been set up for many years as an introductory to secondary school IB DP. Primary school graduates, on the other hand, can continue their education in secondary schools, technical schools and vocational schools. Therefore, teachers and young people must have the freedom to choose the content and forms of teaching in the older primary grades and the educational materials prepared for this. Modern textbook creation techniques allow this. We have known this since the launch of the E-textbooks platform (Ośrodek Rozwoju Edukacji, 2015). E-textbooks were created as an aid to classes taught in accordance with the core curriculum in force until 2017, including junior high schools. Fortunately, the sudden and ill-considered reform liquidating junior high schools did not annihilate the efforts of IT specialists, junior high school staff, academics, etc., and the resources were maintained. After 2017, e-textbooks form the Integrated

Educational Platform (IEP). Publishers using the IEP experience can publish textbooks in two versions: paper and online, similar to the textbooks for the IB MYP published by Oxford University Press.

The effectiveness of this can be understood by studying, for example, sciences textbooks for the first three years of MYP Physical and Earth Sciences (Heathcote, 2019) or MYP Life Sciences (Allott and Mindorff, 2019) to which a number of problems are introduced in an interesting way, incorporating involving, yet simple, activities for young people. There is much more content in the online resources accompanying the textbook, including some that will be of interest to young people determined to devote much more time to learning. In the basic part, in the MYP Physical and Earth Sciences paper textbook, young people will find information about the phase transitions between the three states of matter according to everyday observations. They will learn about the popular model of atomic structure in which electrons, like balls, circulate in circular orbits around the nucleus. When they show more interest, they can search for information about the state of matter of fire and stars. They may make electronic orbitals out of plasticine in an attempt to understand their nature, or use recommended websites, including those created by passionate teachers. They can photograph and film their work, publishing it on school resources (including online) to create school's culture.

Teaching materials and training sessions for teachers should be carefully prepared because they have the most difficult role: making young people aware of their freedom. By learning one way or another, they choose a particular path to follow in the future. They are free, but... Nowadays, publishers are creating textbooks and test materials unfeasible to work through and adjusted to the core curriculum that is impossible to implement. Students find these model tests on the Internet or from colleagues, and often use the solution keys during the tests. This situation is reminiscent of the baccalaureate examinations in, e. g., mathematics taken in schools many years ago. The acceptance of dishonesty in school environments at that time is consistent with the current one. Its source is the clerical violence of the Ministry of Education accepting the quality of the core curricula that are impossible to work through.

Conclusion

If we are to implement the postulates of J. Dewey and A. S. Neill in the reform of education in Poland in the older grades of primary school in the field of science and mathematics, the content should be at least halved and it should be combined with experiments performed by students. Particular topics should be presented at least at two levels of difficulty. This levelling of the curriculum should lead to the publication of paper textbooks with the basic level, as well as online resources with the extended level.

Students in the final years of primary school should be required to carry out independent educational projects and experimental work, and take examinations in their chosen subjects. In technical and vocational secondary schools, there should be no need to take examinations in additional subjects. In general secondary schools, in turn, there should be a return to compulsory examinations in subjects of the students' choice and at levels specified by them.

Such a large-scale change can only be introduced during a multi-year process. In the IB, the launch dates were understood as the release of the first versions of the programmes amended in subsequent years.

References:

Allott, A., Mindorff, D. (2019). *MYP Life Sciences. Years 1-3*. Oxford: Oxford University Press.

California Association of IB Schools (2023). *Our History*. Retrieved from: https://www.cawsib.org/apps/pages/index.jsp?uREC_ID=390111&type=d&pREC_ID=883645.

Centralna Komisja Egzaminacyjna (2024). *Jakie warunki należy spełnić, aby zdać egzamin maturalny i otrzymać świadectwo?* Retrieved from: https://cke.gov.pl/egzamin-maturalny/egzamin-maturalny-w-formule-2015/o-egzaminie/#.

Czetwertyńska, G., Pacewicz, A., Pacewicz, P., Strzemieczny J. (2001). *Szkoła z klasą. Przewodnik po „szkole z klasą"*. Warszawa: Centrum Edukacji Obywatelskiej.

Greczyło, T. (2018, December 7). *Fizyka (i nie tylko) w ostatnich klasach szkoły podstawowej* [Blog post]. Retrieved from: http://warsztatpracynauczycieli.blogspot.com/2018/12/fizyki-i-nie-tylko-w-ostatnich-klasach.html.

Heathcote, W. (2019). *MYP Physical and EARTH Sciences. Years 1 -3.* Oxford: Oxford University Press.

International Baccalaureate (2017). *The history of the IB*. Retrieved from: https://www.ibo.org/globalassets/new-structure/digital-toolkit/pdfs/1711-presentation-history-of-the-ib-en.pdf.

International Baccalaureate (2023). *What is the DP?* Retrieved from: https://www.ibo.org/programmes/diploma-programme/what-is-the-dp/.

International Baccalaureate (2024a). *Middle Years Programme (MYP) is for students aged 11-16*. Retrieved from: https://www.ibo.org/programmes/middle-years-programme/.

International Baccalaureate (2024b). *The IB Primary Years Programme (PYP) for children aged 3 - 12 nurtures, and develops young students as caring, active participants in a lifelong journey of learning*. Retrieved from: https://www.ibo.org/programmes/primary-years-programme/.

International Baccalaureate (2024c). *Career-related Programme, (CP) is designed for students aged 16 -19*. Retrieved from: https://www.ibo.org/programmes/career-related-programme/.

International Baccalaureate (2024d). *Find an IB World School*. Retrieved from: https://www.ibo.org/programmes/find-an-ib-school/.

International Baccalaureate (2024e). *Diploma Programme (DP) curriculum sets out the requirements for studying the DP*. Retrieved from: https://www.ibo.org/programmes/diploma-programme/curriculum/.

Jirout, J., Vitiello, V., Zumbrunn, S. (2018). Curiosity in Schools. In: G. Gordon (ed.), *The New Science of Curiosity* (Chapter 10). New York: Nova Science Publishers, Inc.

Lagunita Education (2024). *Polski ogólniak czy brytyjskie liceum ogólnokształcące? Jakie są brytyjskie szkoły w Polsce i co oferują?* Retrieved from: https://lagunita.education/blog/brytyjskie-szkoly-w-polsce.

Ministerstwo Edukacji Narodowej (2018). *Reforma edukacji*. Retrieved from: https://www.gov.pl/web/edukacja/reforma-edukacji.

Ośrodek Rozwoju Edukacji (2015). *E-podręczniki*. Retrieved from: https://web.archive.org/web/20160602072046/http://www.ore.edu.pl/strona-ore/index.php?option=com_content&view=article&id=2349&Itemid=1732.

Pearson Edexcel (2023). *Are IB DP students more likely than similar A level students to enrol in a top 20 UK higher education institution?* Retrieved from: https://www.pearson.com/content/dam/one-dot-com/one-dot-com/international-schools/images/british-curriculum/Why-a-British-education/IB-Myth-Busters/IB-Myth-Busters-06-Are-IB-DP-students-more-likely-to-enrol-at-a-top-20-UK-uni.pdf.

Piotrowski, M. (2007). *Czy akcja „Szkoła z klasą" była szansą poprawy jakości pracy gimnazjów na wsiach i w małych miejscowościach?* (Unpublished doctoral dissertation). Warszawa: Uniwersytet Warszawski.

Piotrowski, M. (2013). Kody bezmyślności, czyli gdy programy układane są pod klucz egzaminacyjny. In: Dudzikowa M., Knasiecka - Falbierska K. (ed.) *Sprawcy i/lub ofiary działań pozornych w edukacji szkolnej* (pp. 240-254). Kraków: Oficyna Wydawnicza Impuls.

Putkiewicz, E., Piotrowska, K. (2010). *IB or not IB – w 40 urodziny IBO*. Warszawa: Monnet International School.

de Saint-Exupéry, A. (2009). *Twierdza* (Olędzka-Frybesowa A., Trans.). Warszawa: Muza.

Saxton, S., Hill, I, (2014). The International Baccalaureate (IB) programme: An international gateway to higher education and beyond. *Higher Learning Research Communications, 4(3),* 42-52. doi: 10.18870/hlrc.v4i3.123.

Wiśniewski, J. (2013). *Poland – Students' Academy*. *KeyCoNet Case Study*. Brussels: European Schoolnet.