Education 2030 in Malaysia

5-Year National Progress Report on SDG 4

MINISTRY OF EDUCATION

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for every child

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Section 1: Introduction

At the heart of the 2030 Agenda for Sustainable Development (Agenda 2030) adopted by all UN Member States in 2015 are the 17 Sustainable Development Goals (SDGs).

It is a universal set of goals, targets, and indicators to frame the agenda and policies of UN Member states from 2016 to 2030. The SDGs transcend the Millennium Development Goals (MDGs) to include wider economic, social and environmental objectives, and have a sharper focus on peace, participation and inclusiveness.

The aim of SDG 4, the education-related goal of Agenda 2030, is "ensuring inclusive and equitable quality education and promote lifelong learning opportunities for all" by 2030.

Targets for SDG 4 are linked to other goals, whereby education is directly mentioned in other SDG targets or is an important medium to achieve those goals. For example, SDG 4's target of providing technical and vocational skills is crucial to achieve SDG 8's target of growth and employment (Figure 1.1).

SDG 4 targets are linked to other goals

Figure 1.1: Links between SDG 4 and other SDGs

Source: Adapted from Vladmirova and Le Blanc, UNDESA (2015)

Rationale for the 5-NPR

The 5-year National Progress Report (5-NPR) on SDG 4 provides an overall assessment of SDG 4 implementation in Malaysia, focusing on the qualitative narratives of policy alignment, reforms or innovations for the review period of 2016 to 2020. The review is part of Malaysia's SDG 4 Action Plan and the SDG Roadmap for Malaysia. It will also assess the impact of the COVID-19 pandemic on education, and how the 5-NPR reflects the changes needed to achieve SDG 4 by 2030. The 5-NPR was developed through four main approaches, as seen in Figure 1.2.

Four approaches were used to develop this report[1]

Figure 1.2: Approach to the 5-NPR report

A comprehensive review of reports and policy documents.

Regular working sessions with the Ministry of Education (MoE).

A compilation of secondary statistical data and indicators on education from the MoE, the Department of Statistics Malaysia (DOSM) and other relevant agencies.

Extensive stakeholder engagement with government agencies, the private sector and NGOs.

1 Five online FGDs, attended by 136 participants representing 41 ministries, agencies, NGOs and industries, were held between 6 July and 6 August 2021.

Section 2

The Malaysian Development Context:

Environment for Education

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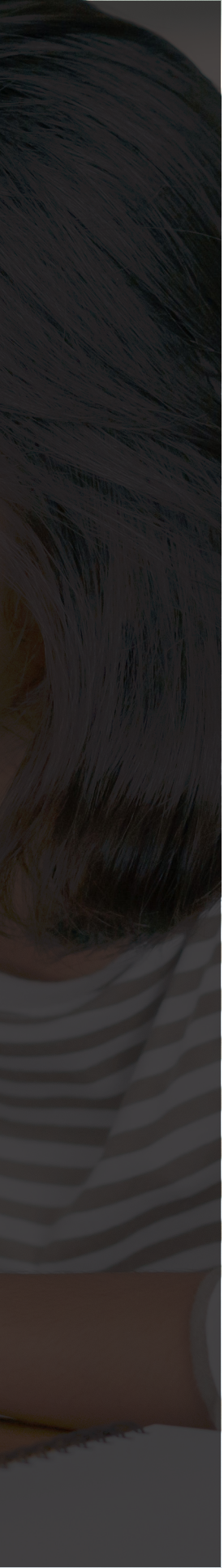


Governance

Education remains a high priority as part of economic development agenda in Malaysia. The Ministry of Education (MoE) consistently has the largest budget compared to other ministries, where at least 20% of the federal budget are allocated for education since 2016.2

Two key ministries, the MoE and the Ministry of Higher Education (MOHE), provide education services for Malaysians, permanent residents and other residents with legal documents. The MoE provides basic formal education for children between the age of 4+ and 18+. The MOHE organises (formal and informal) post-secondary education; they also regulate educational institutions under other government agencies, the private sector and other not-for-profit organisations.

Currently, the main policy documents guiding the strategies, plans and programmes for the education sector are the Malaysia Education Blueprint (Preschool to Post-Secondary Education) 2013-2025 and Malaysia Education Blueprint (Higher Education) 2015-2025.

Demographics and demand for education

The demand for education is largely demographically determined. Malaysia has a relatively young population where 23.3% are below 15 years of age. Yet the population is ageing rapidly since fertility rates have fallen below replacement levels. Between 2020 and 2030, the proportion of those aged 65 years and over is projected to rise from 7% to 10.7% while the proportion of those below 15 years is expected to fall to 21.3%. The declining share of young population may have severe implications for education, the future supply of the labour force, and the health and welfare of the elderly population.

Malaysia is rapidly urbanised, and the country's rate of urbanisation – the share of the population living in urban areas – rose from 62% to 76.6% from 2000 to 2020, an increase of 7.5 million urban inhabitants. Rural- urban migration resulted in lower demand for rural schools but a higher demand for urban schools. Given the dynamic movement of people in the country, education planning and policymakers face the challenge of inadequate teachers and educational facilities in new urban and semi-urban townships, and still unreached rural areas.

2 Ministry of Education (MOE), Malaysian Educational Statistics, Quick Facts, 2018.

Economic development

Malaysia is an upper-middle-income country.[3] In 2019, the Gross National Income (GNI) was approximately US$350 million or about RM1.47 trillion in current prices; its GNI per capita was US$10,267. Malaysia is one of the most open economies in the world, with trade to Gross Domestic Product (GDP) averaging about 130% in the past one decade. The economy is driven by services and manufacturing sectors, which contributed nearly 58% and 22% respectively to the Malaysian economy.

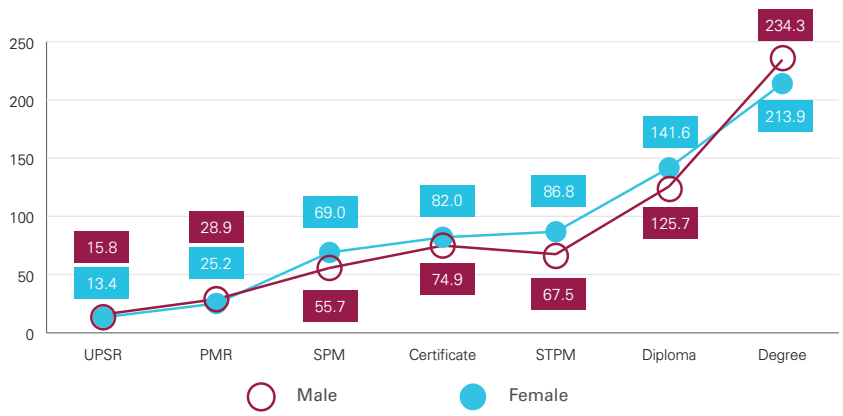
The poverty incidence stood at 5.6% (405.4 thousand households) in 2019, lower than 2016 level at 7.6% at the start of SDG implementation in 2016.[4] Although median household income increased from RM5,228 to RM5,873, income distribution has become more unequal: the GINI coefficient has increased from 0.393 in 2016 to 0.411 in 2020. Income share for the Bottom 40% (B40) also reduced from 16.4% in 2016 to 16.0% in 2019, while the share of the economy accrued to the Top 20% (T20) increased from 46.2% to 46.8% during the same period.[5]

As Malaysia is moving closer towards high-income nation status, the country requires more productive and innovative skills and talent. Education provides the means to raise skill levels in the labour force, and the share of skilled workforce currently stood at 29.6%, an increase from 11.0% in 2000. In 2020, the labour force participation rate was 68.4% of an estimated labour force (aged 15-64 years) of 15.9 million. The unemployment rate rose from 3.3% in 2019 to 4.8% in 2020 due to the COVID-19 pandemic. Youth unemployment is significantly higher, at about three times the national average. It has increased from 10.5% in 2016 to 12% in 2020.

The Malaysian job market highly rewards investment in education and skills. A study conducted by ILMIA in 2010 on the wage structure of the economy shows a significant wage premium for higher levels of qualification and better skills (Figure 2.1).[6]

The Malaysian job market highly rewards investment in education and skills

Figure 2.1: Rates of return to education by qualification, by sex, 2010 (%)



Source: Institute of Labour Market Information and Analysis (ILMIA)

3 The World Bank defines upper-middle-income country to have GNI of between US$4,046 and US$12,535. See https://www.worldbank.org/en/country/mic/overview

4 The PLI in Malaysia is set at RM2,208.

5 Mean monthly household income data disaggregated by urban and rural households is only available up to 2019. In 2019, urban households reported a mean monthly household income of RM8,365, up from RM7,671 in 2016. For rural households, mean monthly incomes increased from RM4,359 in 2016 to RM5,004 in 2019. Household size has also reduced between 2016 and 2019: from 4.1 to 3.9.

6 ILMIA, Study on wages structure in the Major Economic Sector particularly in NKEA's industries and its impact towards labour productivity and capital intensity.

Educational system and development

Formal education starts with childcare and preschool, followed by primary, lower secondary, upper secondary, post-secondary, and finally, tertiary education. The MoE provides free primary and secondary education to all Malaysians, while post-secondary and tertiary education in the public institutions are heavily subsidised.

Preschool education in Malaysia is provided by both the government and the private sector. MoE preschools account for only one-quarter of all preschools and preschool enrolment.

At the primary and secondary levels, MoE is the largest provider of formal education. The Compulsory Education Act implemented in 2003 makes it compulsory for all children to be enrolled in 6 years of primary education. Secondary education is yet to be made compulsory.

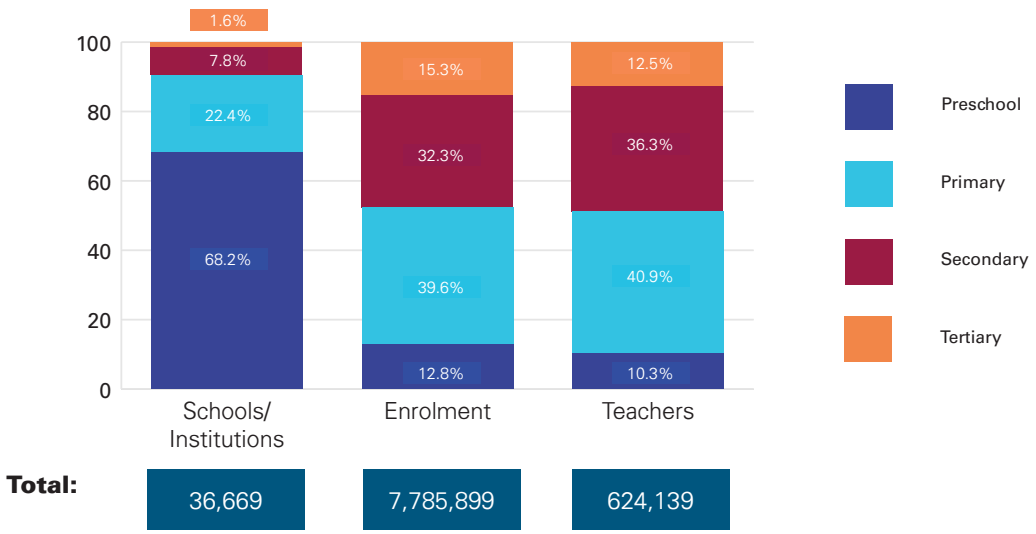
As the education system is based on automatic promotion, there are no repeaters and few over-aged pupils.

Figure 2.2 shows the profile of the Malaysian Education System across all education levels in 2020. Close to 7.3 million students were enrolled in formal education, where 1 in 6 (17%) is in tertiary education.

Majority of the enrolments are in MoE schools, where only 3% and 12% of total primary and secondary enrolments represents students from private or government agencies schools. Schools offer various academic, technical, vocational or integrated pathways.

Close to 7.3 million students are enrolled in formal education

Figure 2.2: Profile of Malaysian education system (preschool, primary, secondary, and tertiary), 2020



Note: * Teachers (Preschool): Includes Teaching Assistants
** Teachers (Tertiary): Refers to Academic Staff only
** Schools/Institutions (Tertiary): Includes only institutions registered with MoE and MOHE
Source: UNESCO Institute of Statistics (includes data from Ministry of Education, private and religious bodies)

Section 3

Progress Assessment of SDG 4 Targets

(2016-2020)

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Targets and indicators

Among the 10 SDG 4 targets, seven are expected outcomes and three are means of implementation. This SDG 4 report will review nine targets (except 4.b) and 28 indicators.[7]

Based on current assessment, 34 out of 43 indicators are deemed to be 'feasible' for data collection and reporting. Steps are being taken to meet these gaps for SDG 4 monitoring purposes.

This SDG report will review 9 targets and 28 indicators

Figure 3.1: Targets and indicators under SDG 4

Target 4.1
Primary and secondary education
7 indicators (6 available)

Target 4.2
Early childhood and pre-primary education
5 indicators (3 available)

Target 4.3
Technical, vocational, tertiary and adult education
3 indicators (2 available, 1 partially)

Target 4.4
Skills for work
3 indicators (2 available)

Target 4.5
Equity and inclusion
5 indicators (1 available, 2 partially)

Target 4.6
Youth and adult literacy and numeracy
3 indicators (2 available)

Target 4.7
Sustainable development and global citizenship
6 indicators (2 available)

Target 4.a
Education facilities and learning environments
3 indicators (1 available)

Target 4.b
Scholarships
1 indicator (1 partially)

Target 4.c
Qualified teachers
7 indicators (5 available)

7 Target 4.b is not included because it is more relevant under Goal 17 (International Partnership) and 15 indicators were deemed not relevant, not available or not feasible in terms of data collection.

Target 4.1
Primary and Secondary Education

Target 4.1: By 2030, ensure that all girls and boys complete free, equitable and quality primary and secondary education leading to relevant and effective learning outcomes.

Summary of indicators

Table 3.1: Summary of indicators for Target 4.1

SDG Target / Indicator	Description	Achievement	
		2016	2020
4.1.1	Proportion of children and young people in grade 2/3 achieving minimum proficiency in reading	98.6%	98.0% (2018)[8]
	Proportion of children and young people in the end of primary achieving minimum proficiency in reading	93.3%	95.0% (2019)
	Proportion of children and young people in the end of lower secondary achieving minimum proficiency in reading	79.5%	82.2% (2019)
	Proportion of children and young people in grade 2/3 achieving minimum proficiency in mathematics	99.0%	98.6% (2018)
	Proportion of children and young people in the end of primary achieving minimum proficiency in mathematics	78.3%	83.1% (2019)
	Proportion of children and young people in the end of lower secondary achieving minimum proficiency in mathematics	47.1%	56.4% (2019)
4.1.2	Completion rate for primary education	98.4%	98.4%
	Completion rate for secondary education	85.1%	86.6%
4.1.3	Gross intake ratio (GIR) to the last grade for primary education (Year 6)	95.6%	97.2%
	Gross intake ratio (GIR) to the last grade for lower secondary education	90.0%	93.3%
4.1.4	Out-of-school rate in primary education	2.8%	1.8%
	Out-of-school rate in secondary education	10.0%	7.6%

8 Note: The LINUS assessment for grade 2/3 was discontinued in 2019.

Progress assessment

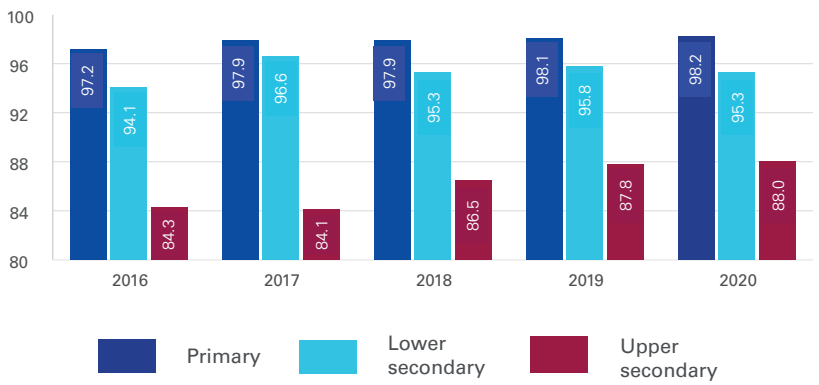
Access through school enrolment

Malaysia had achieved near universal access (Gross Enrollment Rate (GER) for primary and lower secondary education in 2020, with GERs of 98.2% and 95.3% respectively in 2020 (Figure 3.2). At the upper secondary level, the GER was at 88.0% in 2020, up from 84.3% in 2016. Near-universal access to upper secondary education is expected to be achieved by 2030. The high GERs are also an indicator of Malaysia's commitment and capacity to provide universal access to education.

Primary education in Malaysia is compulsory, and the Government provides free primary and secondary education in public schools. At the tertiary level, fees are heavily subsidised at almost 90%.

Malaysia has achieved near-universal access for primary and lower secondary

Figure 3.2: Gross Enrolment Rates (GER) by level of education, 2016-2020 (%)

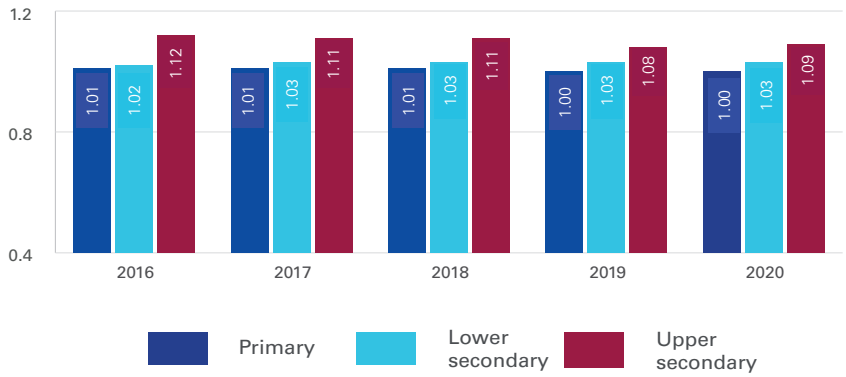


Source: Ministry of Education Malaysia, Quick Facts, various years

There is a widening gender gap against boys for out-of-school rates (OOSR) in 2020 (Figure 3.3). The gender parity index (GPI) remained at 1.00 for primary school enrolment in 2020, indicating equal enrolment for boys and girls.[9] However, the GPI for lower secondary enrolment is at 1.03 while upper secondary stood higher at 1.09.

There is a widening gender gap against boys for OOSR

Figure 3.3: Gender Parity Index (GPI) for GER by level of education, 2016-2020 (%)



Source: Ministry of Education Malaysia, Quick Facts, various years

9 The GPI is a ratio of female to male values of a given indicator. A GPI between 0.97 and 1.03 indicates insignificant disparity between the genders. A GPI below 0.97 indicates a disparity against females. A GPI above 1.03 indicates a disparity against males.

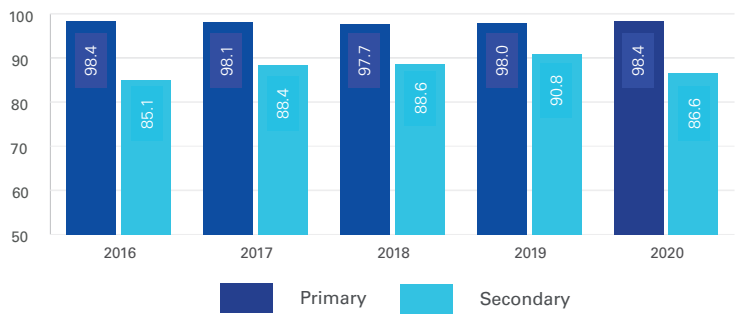
Completing education

Indicator 4.1.2 *Completion rate for primary, lower-secondary, and upper-secondary education*

Malaysia is on track to achieve near-universal completion of secondary education by 2030. The primary school completion rate has reached a high of 98.4% in 2020 (Figure 3.4). The secondary school completion rate was 90.8% in 2019, up from 85.1% in 2016. However, the COVID-19 pandemic reduced the secondary school completion rate to 90.0% in 2020.

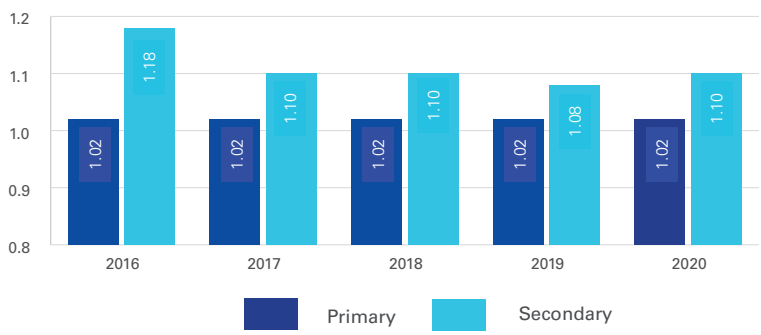
There is higher prevalence of out-of-school rates (OOSR) among boys. The GPI for national completion rate is higher among girls compared to boys (Figure 3.5).

Malaysia is on track to achieve near-universal completion of secondary level by 2030
Figure 3.4: Completion rate by level of education, 2016-2020 (%)



Source: Ministry of Education Malaysia

More girls are completing school compared to boys
Figure 3.5: GPI by level of education, 2016-2020



Source: Ministry of Education Malaysia

Indicator 4.1.3 *Gross intake ratio (GIR) to the last grade (primary education, lower secondary education)*

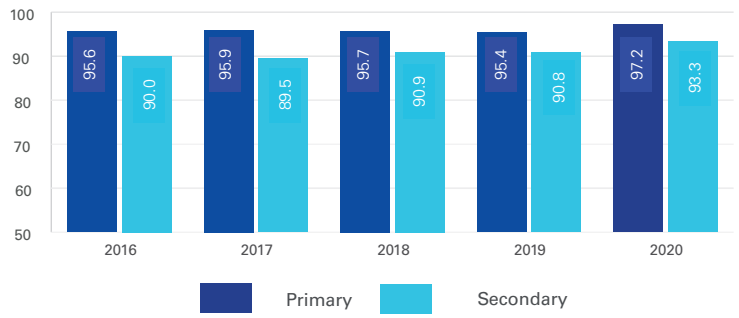
Near-universal access to completing primary education has been achieved in 2020. The GIR for the last grade of primary education exceeded 95% for the review period (Figure 3.6).

Near-universal access to completing secondary education will likely be achieved by 2030. The GIR for the end of secondary level topped 93% in 2020, up from 90% in 2016.

There is gender bias against boys relative to girls in school enrolment (Figure 3.7). The GPI for primary education is about 1.02, while it is slightly higher for secondary education at between 1.05 and 1.07. This gender bias is also consistent with GPI for out- of-school rates (OOSR).

Near-universal completion of primary school has been achieved, while near-universal completion of secondary school will likely be achieved by 2030

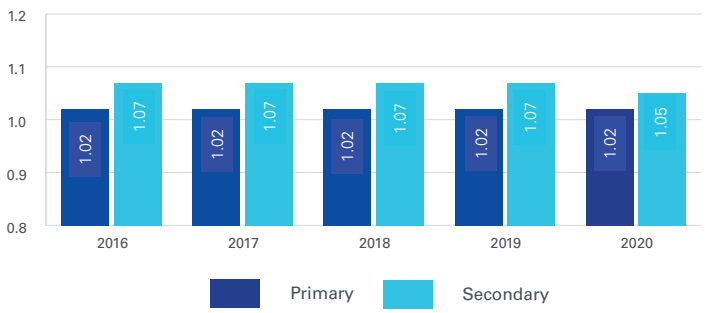
Figure 3.6: Gross Intake Ratio (GIR) to the last grade (primary and secondary education), 2016-2020 (%)



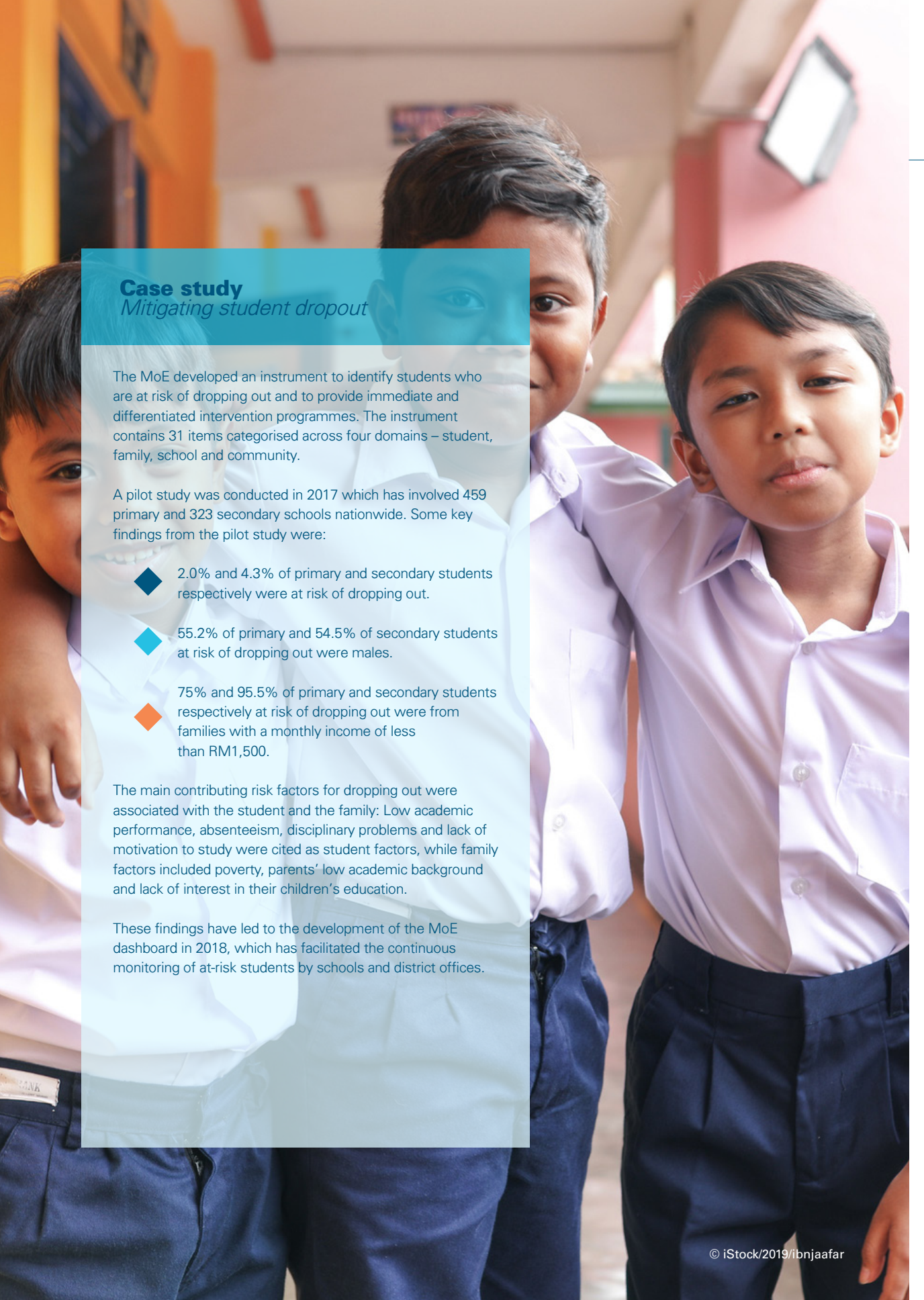
Source: Ministry of Education Malaysia

More girls are being enrolled compared to boys

Figure 3.7: GPI by level of education, 2016-2020



Source: Ministry of Education Malaysia, Quick Facts, various years



Case study
Mitigating student dropout

The MoE developed an instrument to identify students who are at risk of dropping out and to provide immediate and differentiated intervention programmes. The instrument contains 31 items categorised across four domains – student, family, school and community.

A pilot study was conducted in 2017 which has involved 459 primary and 323 secondary schools nationwide. Some key findings from the pilot study were:

- 2.0% and 4.3% of primary and secondary students respectively were at risk of dropping out.
- 55.2% of primary and 54.5% of secondary students at risk of dropping out were males.
- 75% and 95.5% of primary and secondary students respectively at risk of dropping out were from families with a monthly income of less than RM1,500.

The main contributing risk factors for dropping out were associated with the student and the family: Low academic performance, absenteeism, disciplinary problems and lack of motivation to study were cited as student factors, while family factors included poverty, parents' low academic background and lack of interest in their children's education.

These findings have led to the development of the MoE dashboard in 2018, which has facilitated the continuous monitoring of at-risk students by schools and district offices.

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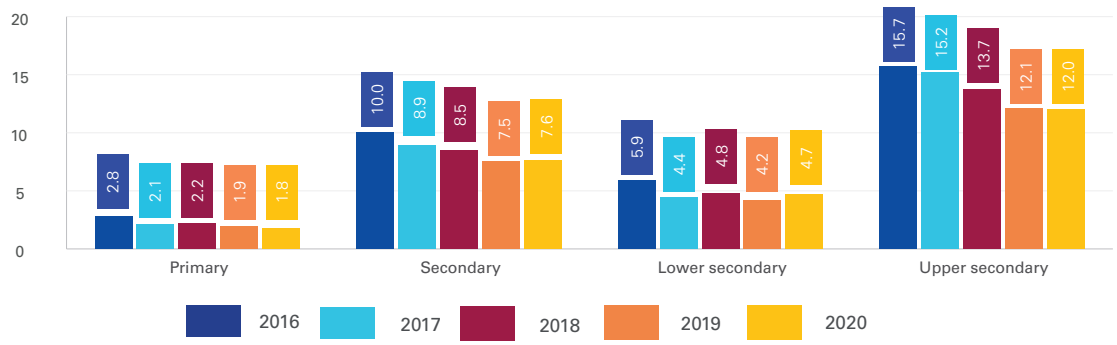
Out of school children (OOSC)

Indicator 4.1.4	*Out-of-school rate (1 year before primary, primary education, lower secondary education, upper secondary education)*

In Malaysia, OOSC are found at every level of education, with the highest rate at upper secondary level. The national out-of-school rate (OOSR) is low but higher at post-primary education level. In 2020, the OOSR was 1.8% at the primary level, and higher at 4.7% at the lower secondary level, and continue to increase at 12% at the upper secondary level (Figure 3.8). There are more OOSC boys than girls (Figure 3.9).

More OOSC are found in post-primary education

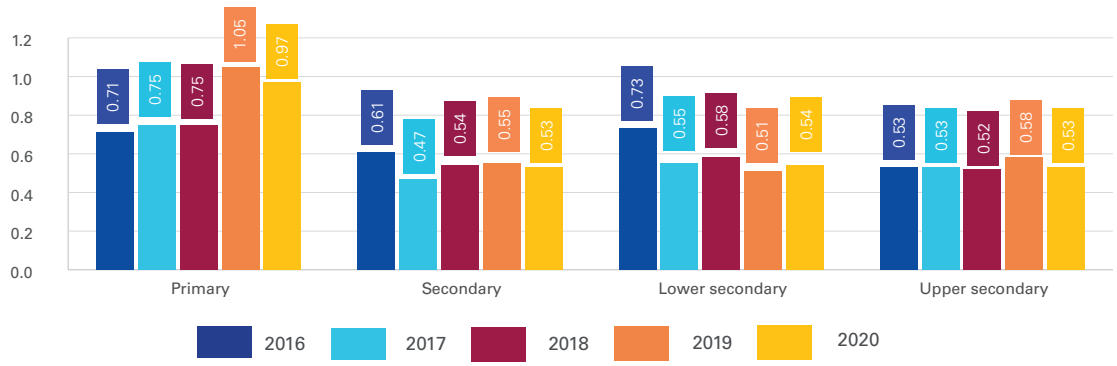
Figure 3.8: Out-of-School Rates (OOSR) by level of education, 2016-2020 (%)



Source: Ministry of Education Malaysia

More boys are out of school compared to girls

Figure 3.9: OOSR GPI by level of education, 2016-2020 (%)



Source: Ministry of Education Malaysia

Minimum proficiency in reading and mathematics

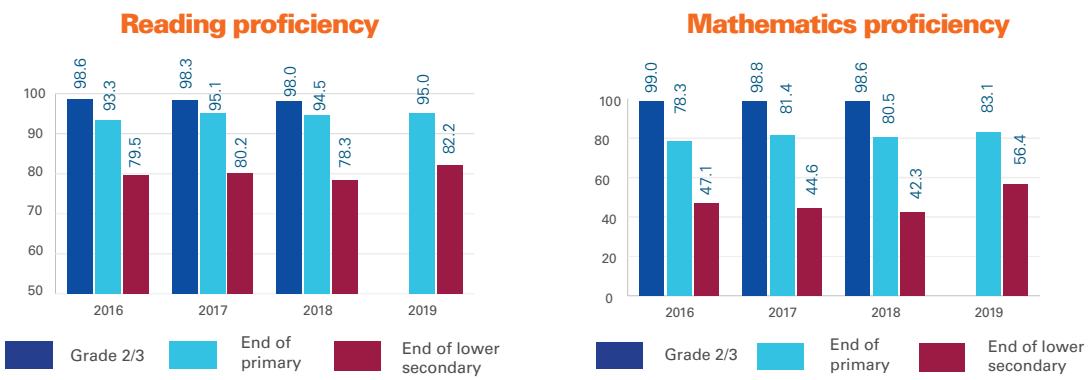
Indicator 4.1.1	*Proportion of children and young people (a) in grades 2/3; (b) at the end of primary; and (c) at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics, by sex*
Indicator 4.1.6	*Administration of a nationally representative learning assessment (a) in grade 2 or 3; (b) at the end of primary education; and (c) at the end of lower secondary education*

The achievement of minimum proficiency levels for both reading and mathematics remained high at least 98% for grades 2/3 (Figure 3.10). From 2016 to 2020, the achievement levels showed a trend of improvement at the end of primary and the end of lower secondary.

However, the proficiency levels in reading and mathematics are lower as student progress to higher levels of schooling. For example, while 78.3% of students achieved the minimum proficiency level in mathematics at the end of primary in 2016, only 56.4% of the same cohort achieved minimum proficiency at the end of lower secondary in 2019.

This decline suggests that many students are still not adequately prepared with the foundational skills needed before they are promoted to higher levels of schooling.

Minimum proficiency levels in reading and mathematics decline in later grades
Figure 3.10: Minimum proficiency in reading and mathematics, 2016-2019 (%)

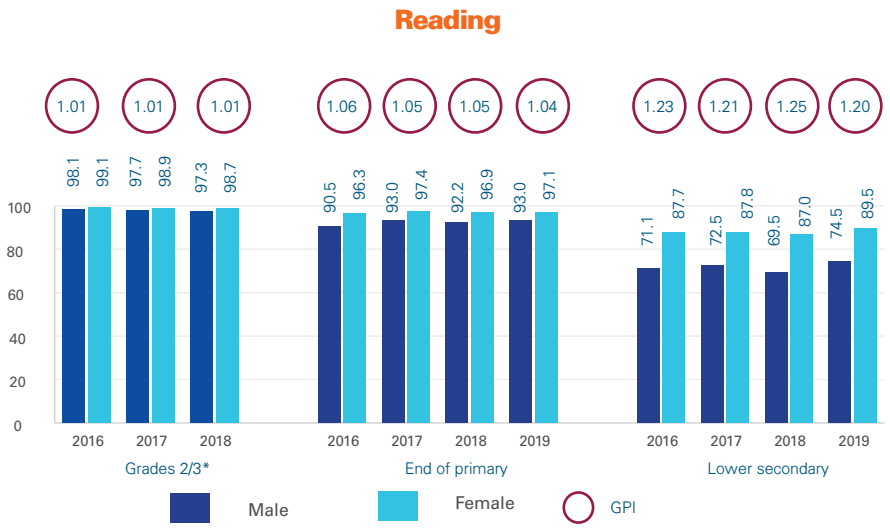


Source: Ministry of Education Malaysia

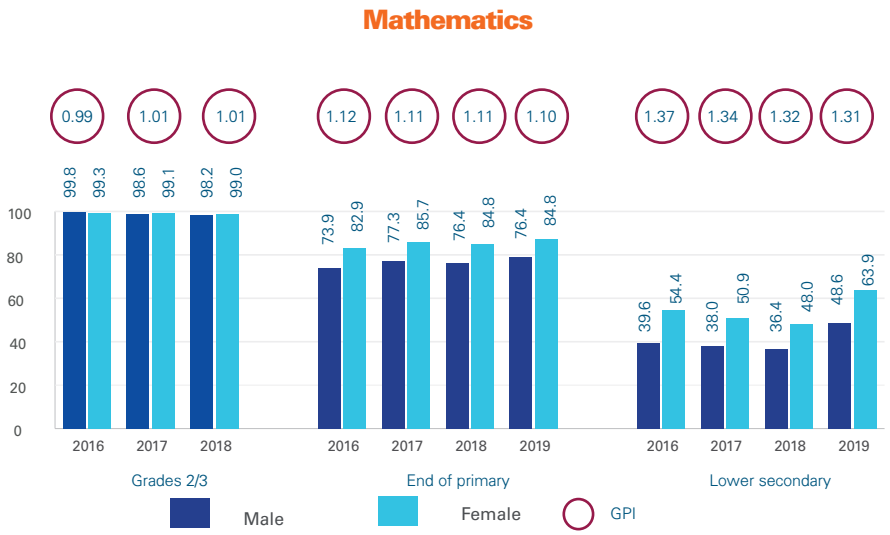
Boys generally under-performed compared to girls. Girls outperformed boys in reading and mathematics at the end of primary and at the lower secondary level (Figure 3.11).

Boys tend to fall behind girls in reading and mathematics proficiency

Figure 3.11: Minimum proficiency in reading and mathematics (%) by GPI



Note: There are no 2019 statistics available for Grades 2/3.



Note: There are no 2019 statistics available for Grades 2/3.

Source: Ministry of Education Malaysia

Target 4.1: Key highlights and challenges

Highlights

Primary to lower secondary education has achieved near-universal access. Upper secondary education enrolment is expected to reach near-universal access by 2030. By gender, the enrolment at primary level was at parity. However, more girls enrolled in secondary education compared to boys. Similarly, the out-of-school rates (OOSR) are higher among boys compared to girls at the secondary levels.

More girls completed their education than boys at both primary and secondary education levels.

There is adequate capacity to support the completion of schooling for most students, with a gender parity index of more than 1 in favour of girls.

More children are not in school (Out-of-school rates (OOSR)) at higher levels of schooling, in part due to socio-economic conditions.

Many students do not have minimum proficiency levels in reading and mathematics before they progress towards higher education level. The percentage of students achieving minimum proficiency levels in reading and mathematics is fairly high at grades 2/3. However, the percentage is lower at the end of primary level and declining further at the end of lower secondary.

Challenges

Students' test scores in both reading and mathematics show a general decline as they move to higher education levels. By gender, the level of proficiency in reading and mathematics indicates that the boys performed worse than girls. There is a need to focus on improving student test results and to determine the causes of the poor results to improve quality learning outcomes.

Target 4.2
Early childhood and pre-primary education

Target 4.2: By 2030, ensure that all girls and boys have access to quality early childhood development, care and pre-primary education so that they are ready for primary education.

Summary of indicators

Target 4.2 emphasises the importance of early childhood education in meeting children's cognitive, social, emotional and physical needs to build them a solid and broad foundation for primary education and beyond.

Table 3.2: Summary of indicators for Target 4.2

SDG Target / Indicator	Description	Achievement	
		2016	2020
4.2.2	Participation rate in organised learning (one year before the official primary entry age)	87.7%	87.5%
4.2.4	Gross early childhood education enrolment ratio in (a) pre-primary education and (b) early childhood educational development	93.7%	94.6%
4.2.5	Number of years of (a) free and (b) compulsory pre-primary education guaranteed in legal frameworks	Preschools under MoE are free, while others are not. Preschool education is not compulsory.	

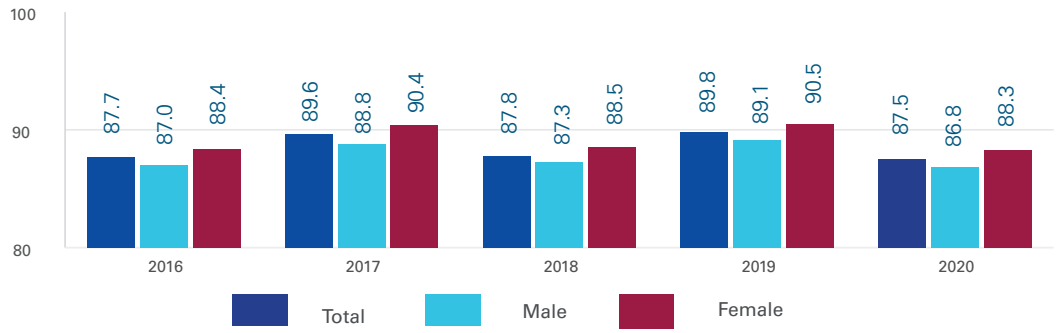
Participation and access

Indicator 4.2.2 *Participation rate in organised learning (one year before the official primary entry age), by sex*

The participation rate of preschoolers reached 90% during 2016-2019 period (Figure 3.12). However, the rate fell to 87.5% in 2020, probably due to the closure of preschools during the COVID-19 pandemic. The participation rate may likely remain at the current level while measures are taken to keep the preschool environment safe for children

Participation in preschools reached 90% before falling due to COVID-19

Figure 3.12: Preschool participation rate of children 5+ by sex, Malaysia, 2016-2020 (%)



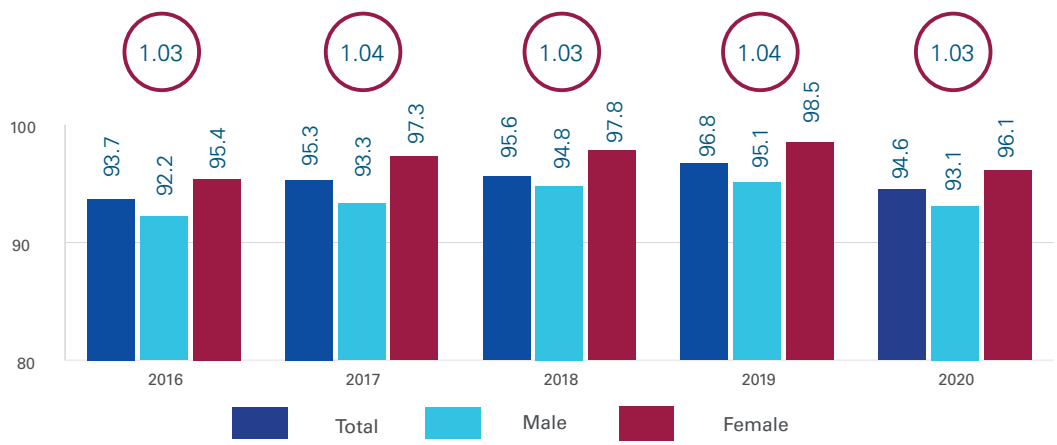
Source: Ministry of Education Malaysia

Indicator 4.2.4 *Participation rate in organised learning (one year before the official primary entry age), by sex*

The preschool gross enrolment rate (GER) was 96.8% in 2019 and 94.6% in 2020. In 2020, due to the COVID-19 pandemic, private preschools had to close down and job losses contributed to the low enrolment rate in preschool.Similar with earlier findings, gender enrolment gaps in pre-primary education remains particularly among the boys.

The preschool GER dropped slightly due to the pandemic

Figure 3.13: GER (%) and GPI for preschools, Malaysia, 2016-2020 (%)



Source: Ministry of Education Malaysia

Quality of preschool education

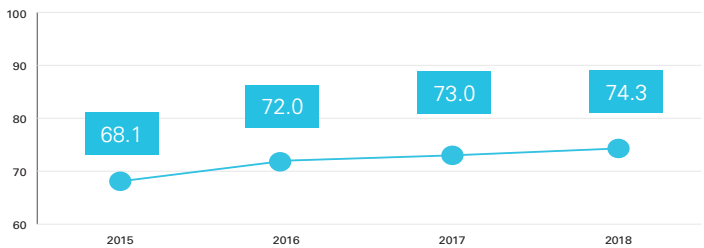
Overall, preschool teacher quality is rising, as the average National Preschool Quality Standard Self Raing (PK-SKPK) score improved from 68.1% in 2015 to 74.3% in 2018 (Figure 3.14).

Quality of teachers in preschool need improvement as it remains the lowest compared to other dimensions during the same period (Figure 3.15).

There have been continuous efforts to upskill preschool teachers and equip them with necessary ECCE qualifications. The percentage of qualified preschool teachers (having at least a diploma qualification in ECCE) in MoE preschools has increased from 71.5% in 2016 to 91.4% in 2020 for male teachers and from 57.5% to 89.3% for female teachers (see Table 3.3).

Preschool quality has been rising

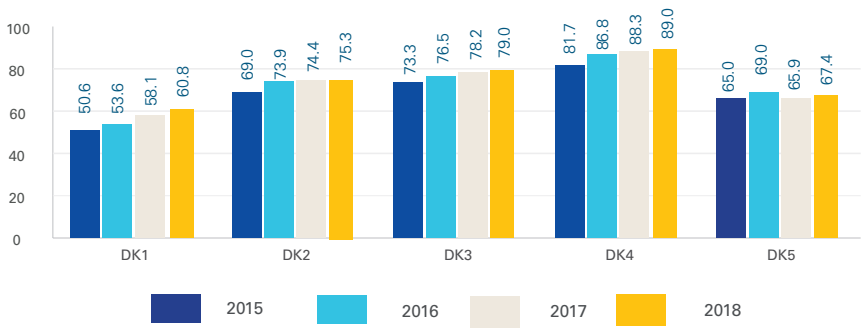
Figure 3.14: Average percentage of PK-SKPK Score, Malaysia, 2015-2018 (%)



Source: Ministry of Education Malaysia Annual Report 2018

However, quality of teachers need improvement

Figure 3.15: Average percentage of PK-SKPK Score by quality dimension, Malaysia, 2015-2018 (%)



Note: DK1= Quality of Teacher/PG/PPM Dimension
DK2= Quality of Governance Dimension
DK3= Quality of Curriculum Dimension
DK4= Quality of Preschool-Parent Interaction Dimension
DK5= Quality of Health, Nutrition and Safety Dimension

Source: Ministry of Education Malaysia

The percentage of qualified teachers have increased substantially

Table 3.3: Percentage of qualified teachers in MoE preschools, 2016-2020 (%)

Gender	2016	2017	2018	2019	2020
Male	71.5	71.5	85.4	89.0	91.4
Female	57.5	57.5	78.8	85.0	89.3

Source: Ministry of Education Malaysia

Target 4.2: Key highlights and challenges

Highlights

The participation rate in pre-primary education stood at 90% in 2019 but dropped slightly in 2020 due to the COVID-19 pandemic.

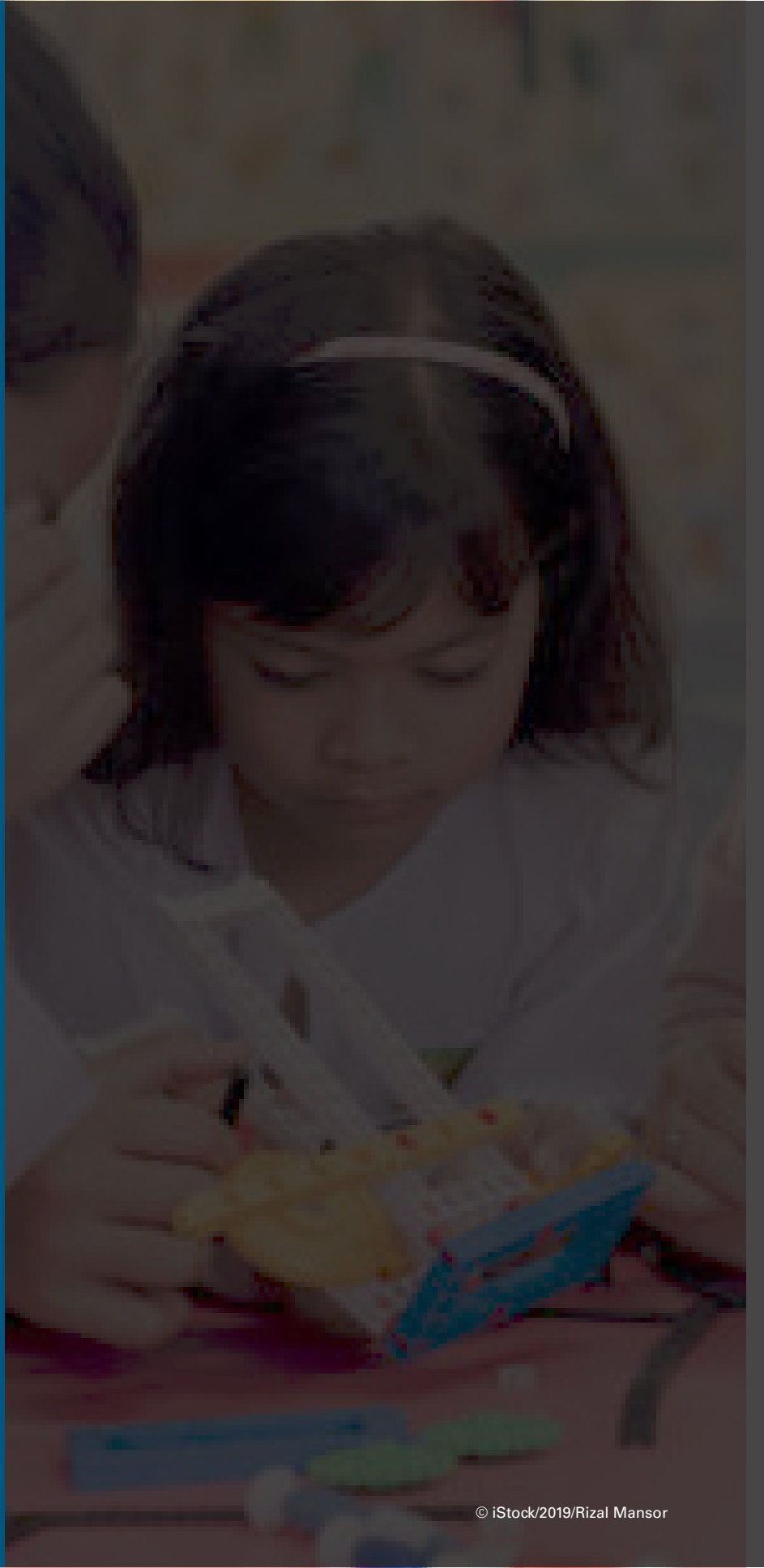
Similarly, the enrolment in pre-primary education rose during 2016-2019 period (from 93.7% to 96.7%), but dropped to 94.5% in 2020.

There has been an improvement in the quality of learning, experiences and services provided by preschools during the 2015 - 2018 period.

Challenges

To collect data from unregistered private preschools, such as tahfiz centres (Islamic religious schools) and childcare centres offering preschool education. Some parents send their children to unregistered preschools or home-school their children. This information is important for educational planning.

Advocacy on the importance and value of early childhood care and education to parents. Early intervention is helpful to build children's intellectual and emotional development especially those aged 4+.



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Target 4.3
Technical, vocational, tertiary, and adult education

Target 4.3: By 2030, ensure equal access for all women and men to affordable and quality technical, vocational and tertiary education, including university.

Summary of indicators

Target 4.3 covers three areas of education: (i) Technical and Vocational (TVET) education; (ii) Tertiary education; and (iii) Adult education, which includes formal, informal and non-formal education for work and non-work purposes. Barriers to access needs to be measured by affordability, quality and gender, among others.

The assessment covers mainly formal education offered by all providers. Progress in non-formal education is ongoing and will be reported in future reviews. Informal education is not assessed here due to the lack of reliable data. The target covers all persons, aged 15 years and above.

Table 3.4: Summary of indicators for Target 4.3

SDG Target / Indicator	Description	Achievement	
		2016	2020
4.3.1	Participation rate of youth and adults (combined) in formal and non-formal education and training in the previous 12 months	12.3%	10.5%
4.3.2	Gross enrolment ratio for tertiary education	46.8%	42.6%
4.3.3	Participation rate in technical-vocational programmes (15-24 year olds)	9.0%	6.4%

Participation and access

Indicator 4.3.1 *Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months, by sex*

Participation rates for youth and adults have been declining, and the current rate of 10.5% is the lowest ever recorded (see Figure 3.16).

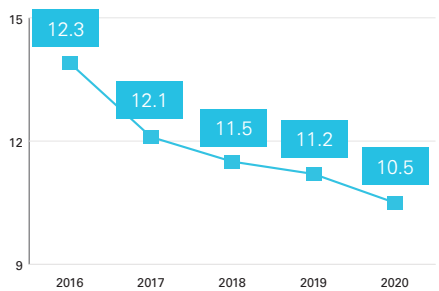
Youth participates more in formal education compared to adults, mainly because the youth are still in secondary or tertiary education. In 2016, the youth participation rate is 13.9 times the adult rate (Figure 3.17). By 2020, the youth rate was 23.6 times the adult rate.

In 2020, the youth participation rates were 37.9% while adult participation rates stood at 1.6%. The decline in youth participation is due to the decline in the youth population during 2016-2020 period (-0.5% per annum).

Regardless of gender, participation rate has declined, with male performing worse than female. Participation among male experienced larger decline compared to female participation rate (Figure 3.18).

Participation rates for youth and adults are in decline

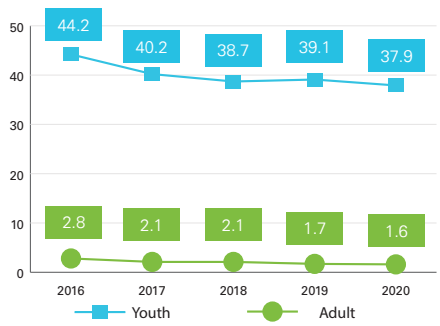
Figure 3.16: Participation rate of youth and adults (combined) in formal education and training in the previous 12 months, Malaysia, 2016-2020 (%)



Source: Ministry of Education Malaysia

Youth are more likely in education compared to adults

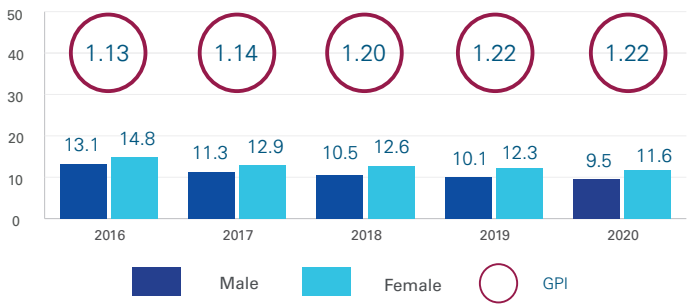
Figure 3.17: Participation rate of youth and adults in formal education and training in the previous 12 months, Malaysia, 2016-2020 (%)



Source: Ministry of Education Malaysia

Participation rate has declined for both males and females

Figure 3.18: Participation rate of youth and adults in formal education and training in the previous 12 months by sex, Malaysia, 2016-2020 (%)



Source: Ministry of Education Malaysia

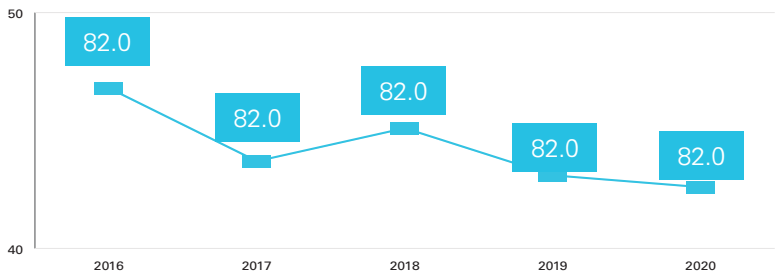
Indicator 4.3.2 *Gross enrolment ratio for tertiary education by sex*

The Malaysian education system is on the right track to provide greater access to tertiary education. The GER for tertiary education in Malaysia exceeded the world average of 39%, and 34% for South-East Asian countries in 2019. However, it has been on a declining trend from 46.8% in 2016 to 42.6% in 2020 (see Figure 3.19).

By gender, more females enrolled into tertiary education compared to males. Not only GER for male was low, but it has also declined faster than females: male GER fell from 43.2% in 2016 to 37.0% in 2020 (6.2 percentage points) the female GER fell from 50.6% in 2016 to 48.4% (2.2 percentage points) (Figure 3.20).

Malaysia's GER for tertiary education has exceeded the world and regional average

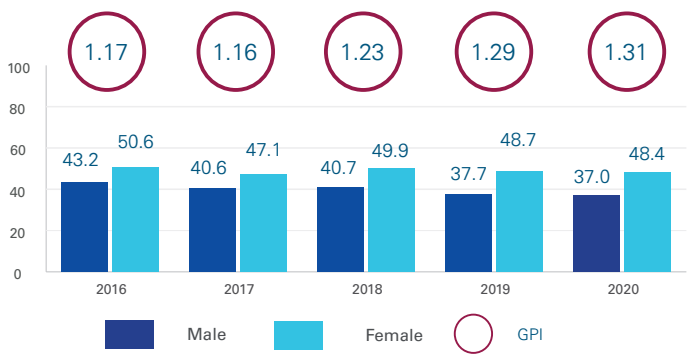
Figure 3.19: GER for tertiary education, Malaysia, 2016-2020 (%)



Source: Ministry of Education Malaysia

More females enrolled in tertiary education compared to males

Figure 3.20: GER for tertiary education by sex, Malaysia, 2016-2020 (%)



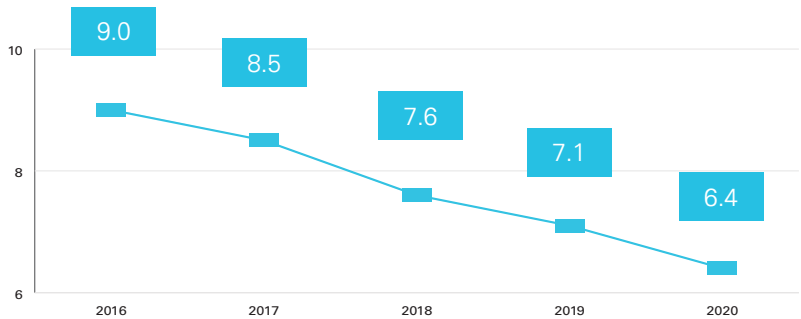
Source: Ministry of Education Malaysia

Indicator 4.3.3 *Participation rate in technical-vocational programmes (15- to 24-year-olds) by sex*

The participation rate in technical vocational programmes for youths aged 15-24 years has declined from 9% in 2016 to 6.4% in 2020.

Participation rates in technical vocational programmes have been in decline

Figure 3.21: Participation rate in technical–vocational programmes (15- to 24- years old), Malaysia, 2016-2020 (%)

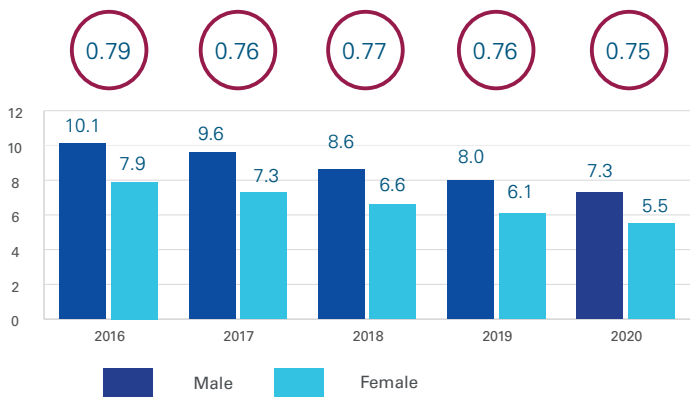


Source: Ministry of Education Malaysia, including various ministries and agencies

TVET education attracts more males than females, and the gender disparity continues to widen (Figure 3.22). This pattern is not surprising as many of the technical and vocational programmes offered are associated with male-dominated trades such as engineering, manufacturing and construction.

TVET education attracts more males than females

Figure 3.22: Participation rate in technical-vocational programmes (15- to 24-year-olds) by sex, Malaysia, 2016-2020 (%)



Source: Ministry of Education Malaysia, including various ministries and agencies

Target 4.3: Key highlights and challenges

Highlights

Participation rates for youth and adults have been declining over the years with 2020 recording the lowest rate at 10.5%.

Male participation in HEI has declined over the 5-year review period and a widening gender gap is emerging.

Enrolments in TVET programmes have declined over the past years. By gender, the enrolments have been dominated by males.

Challenges

Technical skills in industry are rapidly surpassing the institutional capacity to deliver skill training services. It is vital to ensure that the curriculum meets the industries' need and prepare students for the 4IR and future of work.

Target 4.4
Skills for work

Target 4.4: By 2030, substantially increase the number of youth and adults who have relevant skills, including technical and vocational skills, for employment, decent work and entrepreneurship.

Summary of indicators

Target 4.4 aims to equip youth and adults with essential skills for employment, entrepreneurship and decent jobs, by building on literacy and numeracy skills acquired in school. Youth are required to acquire transversal skills, such as information and communication technology (ICT) skills, that can be applied to many professions.

Table 3.5: Summary of indicators for Target 4.4

SDG Target / Indicator	Description	Achievement	
		2017	2020
4.4.1*	Proportion of youth or adult with ICT skills, by type of skill: A: Copying or moving a file or folder	Youth: 86.3%	83.0%
		Adult: 79.5%	86.4%
	B: Using copy and paste tools to duplicate or move information within a document	Youth: 86.4%	94.7%
		Adult: 79.1%	87.7%
	C: Sending an e-mail with attached files	Youth: 57.3%	71.2%
		Adult: 61.7%	69.0%
	D: Using basic arithmetic formulas in spreadsheet	Youth: 35.8%	40.2%
		Adult: 35.5%	39.3%
	E: Connecting and installing new device	Youth: 67.8%	75.4%
		Adult: 69.3%	72.0%
	F: Searching, downloading, installing and configuring software	Youth: 56.7%	54.2%
		Adult: 48.2%	57.8%
	G: Creating electronic presentations using computer software	Youth: 32.8%	45.1%
		Adult: 28.9%	38.8%
	H: Transferring files between a computer and other devices	Youth: 64.8%	83.4%
		Adult: 60.8%	68.3%
	I: Writing a computer program using a specialised programming language	Youth: 10.2%	17.6%
		Adult: 10.7%	13.9%
4.4.3	Youth educational attainment rates: Tertiary education	26.0%	27.6%
	Adult educational attainment rates: Tertiary education	23.7%	27.0%

Youth and adult skills

Indicator 4.4.1 *Proportion of youth/adults with information and communications technology (ICT) skills, by type of skill*

Internet access is high in Malaysia. In 2020, 91.7% of households had access to the internet (fixed and mobile), an increase from 85.7% in 2017 (Table 3.7).

9 in 10 households had access to the internet

Table 3.6: Percentage of households and individuals having access and using the internet, Malaysia 2017-2020 (%)

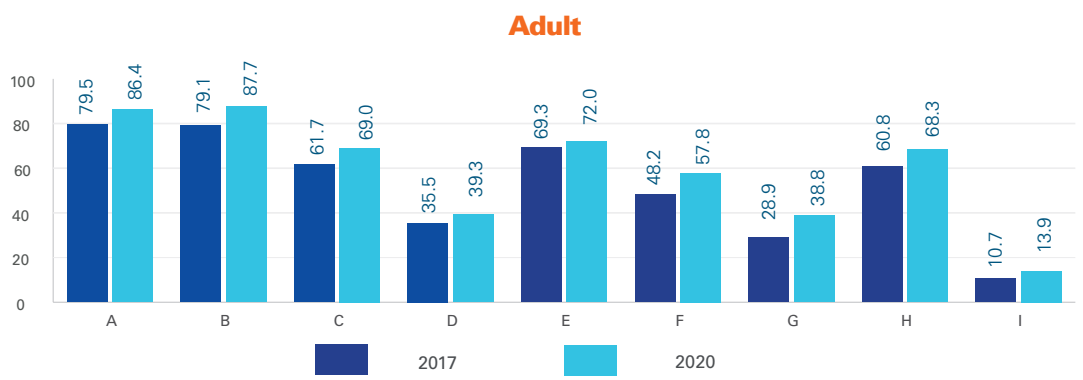
Year	Households with access to the internet	Individuals using the internet (%)
2017	85.7	80.1
2018	87.0	81.2
2019	90.1	84.2
2020	91.7	89.6

Source: ICT Use and Access by Individuals and Households Survey, Department of Statistics Malaysia

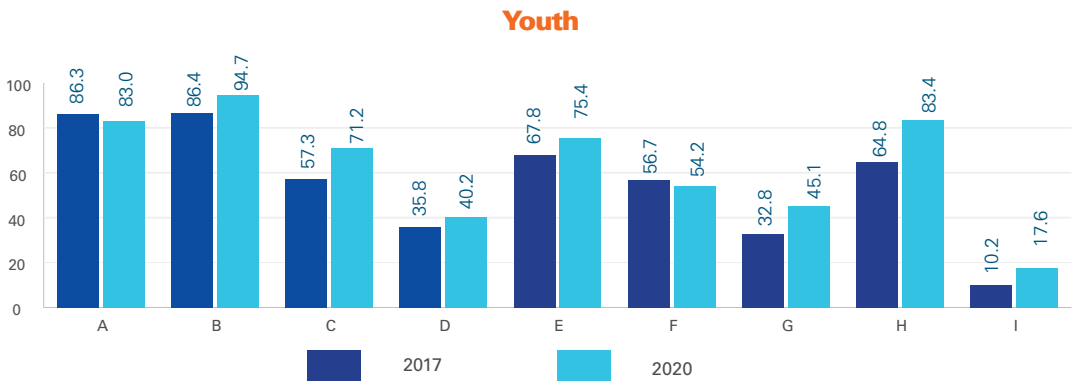
Despite high level of access to ICT, ICT skills for youth and adults remain elementary. Between 2017 and 2020, ICT skills for youth and adults show steady improvement with youth being more advanced than adults. (Figure 3.23). However, the type of usage remains low for basic arithmetic formulas in spreadsheet, creating electronic presentations using computer software, and writing a computer program using a specialised programming language

Despite high levels of access to ICT, ICT skills remain at a basic level

Figure 3.23: Proportion of youth/adults with ICT skills, by type of skill, 2017 and 2020 (%)



Notes:
A refers to copying or moving a file or folder
B refers to using copy and paste tools to duplicate or move information within a document
C refers to sending an e-mail with attached files
D refers to using basic arithmetic formulas in spreadsheet
E refers to connecting and installing new device
F refers to searching, downloading, installing and configuring software
G refers to creating electronic presentations using computer software
H refers to transferring files between a computer and other devices
I refers to writing a computer program using a specialised programming language



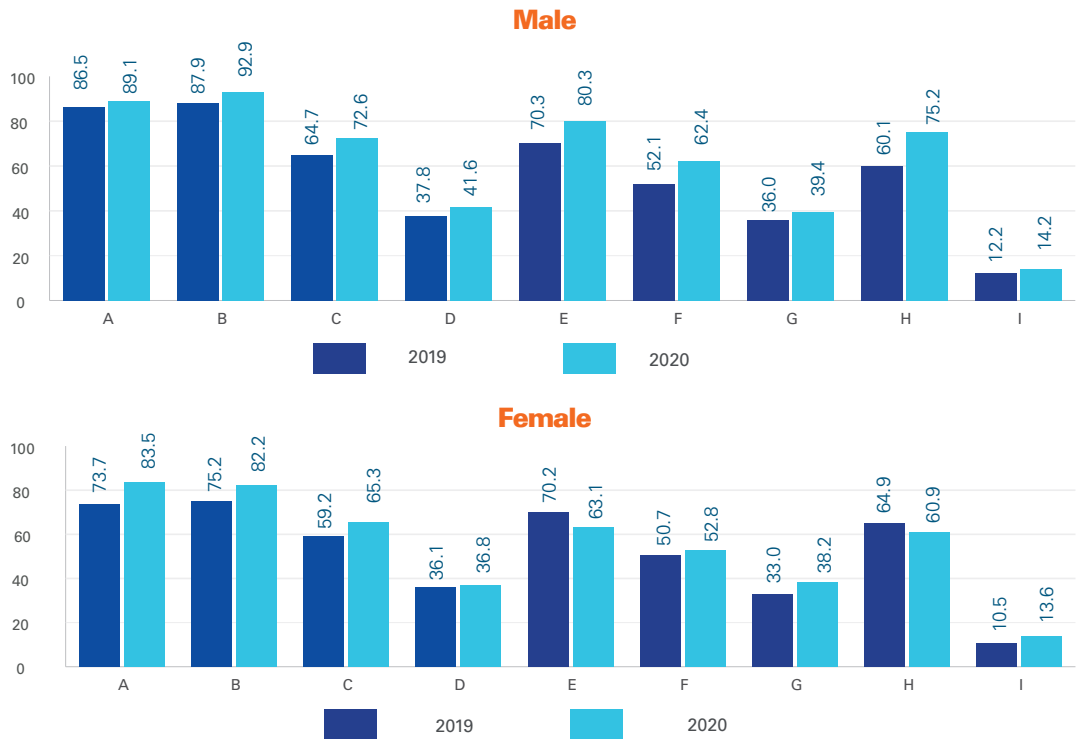
Source: ICT Use and Access by Individuals and Households Survey, Department of Statistics Malaysia

While improvements were observed for both genders, males and females had different types of skills (see Figure 3.24). Males show significant improvements in "Transferring files between a computer and other devices", "Searching, downloading, installing and configuring software" and "Connecting and installing new devices".

Females, though, were noted for improvement in simpler and lower order skills, namely, "Copying or moving a file or folder", "Using copy and paste tools to duplicate or move information within a document" and "Sending an e-mail with attached files".

Males and females showed improvement in different ICT skills

Figure 3.24: Proportion of youth/adults with ICT skills, by type of skills and sex, 2019 and 2020 (%)



Source: ICT Use and Access by Individuals and Households Survey, Department of Statistics Malaysia

Digital literacy

Indicator 4.4.2 *Percentage of youth/adults who have achieved at least a minimum level of proficiency in digital literacy skills*

There are limited measures of digital literacy skills. One indicator is the percentage of youth and adults who achieve a minimum level of proficiency in digital literacy skills.

Since digital literacy relies on ICT skills for meaningful use, transformation, creation and sharing of digital information, other metrics could measure the level of digital literacy skills as highlighted by Indicator 4.4.1.

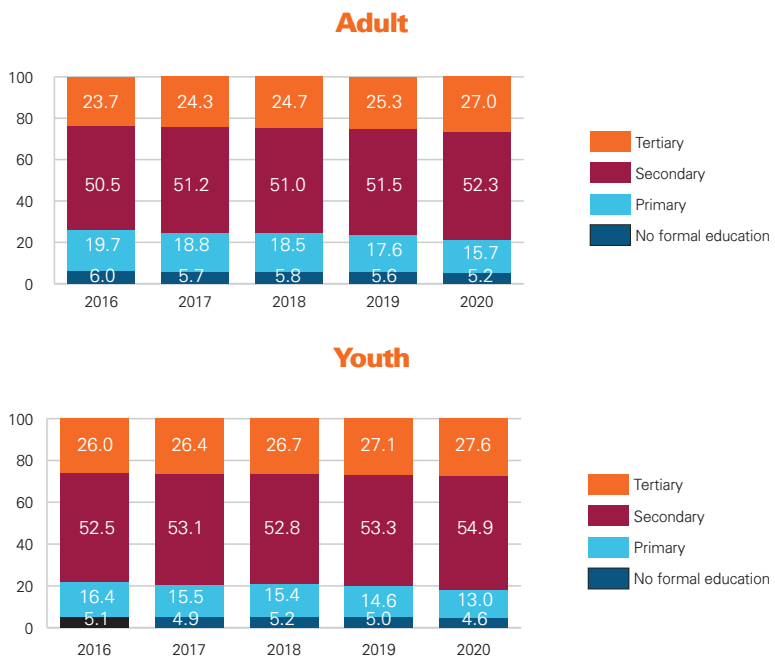
Indicator 4.4.1 suggests that males and females only show competency levels at the basic level. Only a small percentage of adults and youth are proficient in advanced digital skill such as writing a computer program using a specialised programming language.

Indicator 4.4.3 *Youth/adult educational attainment rates by age group, economic activity status and programme orientation*

The share of youth with primary education has been declining, as more youth and adults obtained higher education attainment (Figure 3.24). Tertiary education among youths and adults increased steadily between 2016 and 2020 – from 26% to 27.6% for youths and from 23.7% to 27% for adults.

More adults and youth are attaining higher education

Figure 3.25: Education attainment by level of education, 2016-2020, Malaysia



Source: Ministry of Education Malaysia

Case Study:
Pustaka Negeri Sarawak - PANDei Programme

The People Accessible Network for Digital Empowerment and Inclusivity (PANDei) by the Sarawak State Library (Pustaka) is a programme aimed to enhance the competency and readiness of all the communities to further advance their participation in the digital economy. The goal is to develop a state-wide digital-ready community irrespective of gender, locality and social background to ensure they are able to communicate effectively via email or messaging applications; find information online; perform online transactions or electronic payments, and use government-initiated digital services such as the Sarawak Pay and Sarawak Gov mobile applications.

In 2019, PANDei benefitted approximately 21,000 participants - 60% adults and 40% children or students. 50% of the participants were from urban areas, 20% sub-urban and 30% rural areas. PANDei courses are available online to ensure sustainability and to support Pustaka's lifelong learning vision, and to encourage the community to embrace technology for industrial and economic applications and to improve their quality of life.

Target 4.4: Key highlights and challenges

Highlights

While the penetration rates of digital services and devices and internet usage are high, the competency proficiency and skills of the population remain elementary.

Since 2016, the MoE has introduced the integrated Computational Thinking/Computer Science syllabus in the primary and secondary education, supported in partnership with MDEC.

Since 2012, the MOE TVET has introduced ICT-related vocational certificate and diploma programmes at vocational colleges accredited by relevant agencies.

Females lag behind males in most ICT skills.

Challenges

Ensuring that youths are equipped with the right ICT skills to meet the evolving and dynamic digital economy.

Nurturing ICT skills among students at a young age is a crucial goal for MoE and this requires support from digitally proficient teachers for effective classroom delivery.

It remains a challenge for all schools and ICT teachers to keep pace with the fast-changing technology and know-how in an era of dynamic changes in the digital economy.

It also remains a challenge to involve agencies in contributing towards the acquisition of technology and equipment through CSR.

Target 4.5
Equity and inclusion

Target 4.5: By 2030, eliminate gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable, including persons with disabilities, indigenous peoples and children in vulnerable situations

Summary of indicators

Target 4.5 emphasises the need to identify, monitor, and address disparities between various sub-groups, and to allocate sufficient funding to tackle inequity in education.

Table 3.7: Summary of indicators for Target 4.5

SDG Target / Indicator	Description	Achievement	
		2016	2020
4.5.1	Parity indices for all education indicators on this list that can be disaggregated	Data is available by gender only.	
4.5.3	The Poor Students' Trust Fund (KWAMP) (Number of recipients)	1,010,854	809,227
	Supplementary Food Programme (Number of recipients)	734,150	481,248
	School Milk Programme (Number of recipients)	822,435	481,248
4.5.4	Education expenditure per student: Preschool	RM 3,484.70	RM 4,426.90 (2019)
	Primary	RM 6,532.60	RM 7,010.50 (2019)
	Secondary	RM 7,545.30	RM 9,401.00 (2019)
	Post-secondary	RM 17,472.50	RM 14,065.00 (2019)

Gender equity in education

Indicator 4.5.1	*Parity indices (female/male, rural/urban, bottom/top wealth quintile and others such as disability status, indigenous peoples and conflict-affected, as data become available) for all education indicators on this list that can be disaggregated.*

The data is available by gender only. Other disaggregation such as by location (state and rural/urban), socio-economic factors (poor/non-poor household) and vulnerable groups (by disability status, indigenous peoples and conflict-affected) are not available.

Gender disparity remained low between 2016 and 2020 but as children moved up the educational level, gender disparities against boys widened (Table 3.8). In reading and mathematics for grades 2/3, the GPIs also show a slight advantage to girls. However, boys fall further behind especially in mathematics proficiency as they progress from the end of primary to lower secondary. GPIs have widened to 1.25 for reading and 1.37 for mathematics proficiency.

Gender disparities increased as children moved up the educational level

Table 3.8: Gender parity indices for education, Malaysia, 2016-2020

Indicator		Description	2016	2017	2018	2019	2020
Proportion of children and young people in grades 2/3 achieving at least a minimum proficiency level in (i) reading and (ii) mathematics	4.1.1a	Reading	1.01	1.01	1.02	na	na
		Mathematics	0.99	1.01	1.01	na	na
Proportion of children and young people at the end of primary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics	4.1.1b	Reading	1.06	1.05	1.05	1.04	na
		Mathematics	1.12	1.11	1.11	1.10	na
Proportion of children and young people at the end of lower secondary achieving at least a minimum proficiency level in (i) reading and (ii) mathematics	4.1.1c	Reading	1.23	1.21	1.25	1.20	na
		Mathematics	1.37	1.34	1.32	1.31	na

Indicator		Description	2016	2017	2018	2019	2020
Completion rate (primary education, lower secondary education, upper secondary education)	4.1.2a	Primary	1.02	1.02	1.02	1.02	1.02
	4.1.2b	Secondary	1.18	1.10	1.10	1.08	1.08
Gross intake ratio to the last grade (primary education, lower secondary education)	4.1.3a	Primary	1.01	1.01	1.01	1.01	1.03
	4.1.3b	Secondary	1.03	1.03	1.03	1.03	1.03
Out-of-school rate (1 year before primary, primary education, lower secondary education, upper secondary education)	4.1.4a	Pre-primary	1.02	1.02	1.01	1.02	1.02
	4.1.4b	Primary	1.01	1.01	1.01	1.00	1.00
	4.1.4c	Lower Secondary	1.02	1.03	1.03	1.03	1.03
	4.1.4d	Upper Secondary	1.12	1.11	1.11	1.08	1.09
Participation rate in organised learning (one year before the official primary entry age)	4.2.2	Preschools	1.02	1.02	1.01	1.02	1.02
Gross early childhood education enrolment ratio in (a) pre-primary education and (b) early childhood educational development	4.2.4a	Preschools	1.03	1.04	1.03	1.04	1.03
Participation rate of youth and adults in formal and non-formal education and training in the previous 12 months	4.3.1	Youth & Adults	1.18	1.14	1.20	1.22	1.22
		Youth	1.14	1.17	1.22	1.23	1.23
		Adults	1.33	0.73	0.85	0.93	0.92
Participation rate in technical-vocational programmes, by sex	4.3.3	Aged 15-24 y/o	0.79	0.76	0.77	0.76	0.75
Proportion of population in a given age group achieving at least a fixed level of proficiency in functional literacy skills	4.6.1a	15 y/o and over	0.97	0.97	0.97	0.97	0.98
		Aged 15-24 y/o	1.00	1.00	1.00	1.00	1.00

Note: n/a = not available, as LINUS was not conducted in 2019 and 2020, while UPSR and PT3 were not conducted in 2020
Source: Ministry of Education Malaysia

Equity in education finance

Indicator 4.5.3 *Existence of funding mechanisms to reallocate education resources to disadvantaged populations*

Relevant data for Indicator 4.5.3 is partially available. The degree of reallocating education resources to disadvantaged populations is reported as Indicator 4.5.3a. Malaysia has consistently allocated a substantial part of the federal budget to education, and it was 23% under the 2022 Budget.

The number of recipients of various school aids has declined between 2016 and 2019, with the biggest reduction in number of recipients recorded under the School Milk Programme (Table 3.9).

The number of recipients of aid has fallen over the years

Table 3.9: Number of school aid recipients, Malaysia, 2016-2020

Indicator	2016	2017	2018	2019
The Poor Students' Trust Fund (KWAPM)	1,010,854	910,137	890,559	809,227
Supplementary Food Programme	734,150	709,909	475,854	481,248
School Milk Programme	822,435	757,010	na	481,248

Source: Ministry of Education Malaysia

Indicator 4.5.4 *Education expenditure per student by level of education and source of funding*

Spending remains highest at the post-secondary level, and the lowest at the pre-school level. Between 2016 and 2019, annual public education expenditure per student for preschool, primary and secondary levels have increased between 2.4% to 8.3% but declined for the post-secondary level by 7.0% (Table 3.10).

Public education expenditure per student increased for preschool, primary, and secondary levels, but decreased for post-secondary

Table 3.10: Education expenditure per student by level of education, Malaysia, 2016-2019 (RM)

Education level	2016	2017	2018	2019
Preschool	3,484.70	3,698.70	4,219.00	4,426.90
Primary	6,532.60	6,848.00	7,083.00	7,010.50
Secondary	7,545.30	8,535.00	8,952.80	9,401.00
Post-secondary	17,472.50	17,141.40	17,353.70	14,065.00

Source: Ministry of Education Malaysia

Case study

Young Women's Christian Association (YWCA) – Vocational Training Opportunity Centre (VTOC)

The YWCA Vocational Training Opportunity Centre (VTOC) was established in 1998 to provide vocational skills training for young women and girls from economically disadvantaged communities (in Peninsular and East Malaysia) irrespective of ethnicity, religion, social and cultural differences.

The VTOC offers a range of courses for young women, ranging from courses in early childhood education, sewing and tailoring, culinary arts, bakery, hairdressing and, beauty care. Programmes at VTOC aim to instill strong sense of self-worth, leadership, and to motivate the trainees to perform worthwhile pursuits. The VTOC prepares trainees for more advanced courses, apprenticeship and entrepreneurial training for small scale, income-generating and self-supporting businesses.

VTOC collaborates with established and reputable companies to provide job opportunities and sponsorships for VTOC trainees. From 2016 to 2020, 416 trainees have graduated from their courses and 60% gained employment.

Target 4.5: Key highlights and challenges

Highlights

Gender disparities against boys widen as children move up the educational levels. Girls perform better than boys in school, with the performance gap being widest at the lower secondary level (Indicator 4.1.1). Girls have higher participation rates in tertiary education;

There is a dedicated fund to assist poor and hardcore poor families, a supplementary food and milk programme and other initiatives, but the allocation has been declining.

Public spending on education remains high, and continue to increase. Government spent at least one-fifth of its budget on education.

Challenges

More data needs to be disaggregated by geographical location, socioeconomic status, and vulnerable groups to identify target groups who are in need of education intervention.

Target 4.6
Youth and adult literacy and numeracy

Target 4.6: By 2030, ensure that all youth and the majority of adults, both men and women, have acquired literacy and numeracy skills.

Summary of indicators

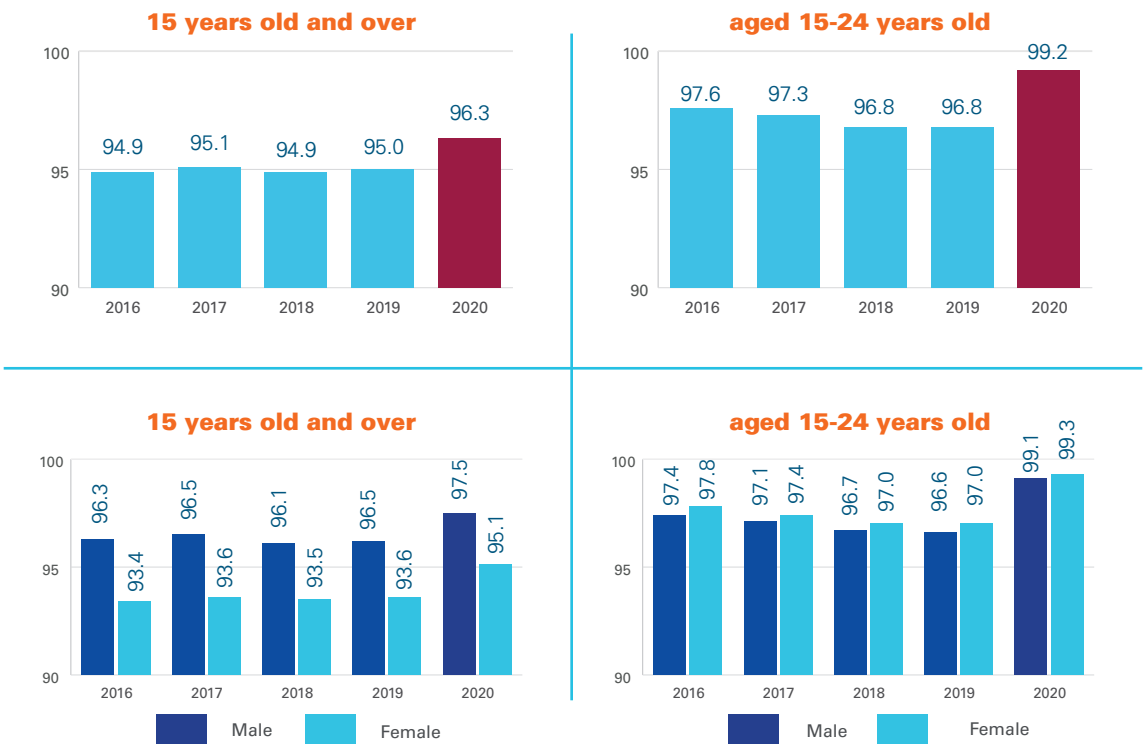
Table 3.11: Summary of indicators for Target 4.6

SDG Target / Indicator	Description	Achievement	
		2016	2020
4.6.1	Proportion of population in a given age group achieving at least a fixed level of proficiency in functional literacy (15 years old and over)	94.9%	96.3%
	Proportion of population in a given age group achieving at least a fixed level of proficiency in functional literacy (15- to 24 years old)	97.6%	99.2%

Malaysia's achievements in functional literacy and numeracy rates are high (Figure 3.26). Between 2016 and 2020, literacy rate among Malaysians increased, with marginal gender and age differences.

Literacy rates among youth and adults in Malaysia are high

Figure 3.26: Proportion of population (15 years old and over & aged 15-24 years old) achieving proficiency in literacy skill and by sex, Malaysia, 2016-2020 (%)



Source: Ministry of Education Malaysia

Case Study: MySkills Foundation - Holistic Transformation Skills Training

MySkills Foundation was established in 2010. It provides second chance opportunities for at-risk youth and school dropouts to enable them to integrate into mainstream society. A tracer study of the 2013/14 cohort of graduates showed that 63% had secured employment whereas 8% pursued further education. In total MySkills produced 700 graduates between 2011 and 2018. The core of MySkills' success is their focus on alternative education and training pathways that include life management skills, emotional skills, social skills and vocational skills through mentoring, coaching, job placements and continuous monitoring.

MySkills' success can also be attributed to its year-long intake policy and its fully residential programmes, supplemented with facilities that enable up to 60% of its students to undergo on-the-job training in construction, wiring and plumbing and in-house training in sustainable farming. Strong partnerships with ministries and agencies contribute to giving at-risk youths a second chance to discover their potential and develop sustainable skills and values.

In Malaysia, government agencies that offer post-school literacy programmes include:

- Department of Community College Education (JPPKK), Ministry of Higher Education
- Department of Skills Development (JPK), Ministry of Human Resources
- Department of Community Development (KEMAS), Ministry of Rural Development
- Department of Orang Asli Development (JAKOA), Ministry of Rural Development (data not available since 2015)

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Target 4.6: Key highlights and challenges

Highlights

More than 90% of males and females aged 15 years old and over are literate with males have slightly higher literacy rate compared to females.

Literacy rates for 15 years old and over reached 96.3% in 2020.

Various government agencies have offered programmes on literacy, numeracy, and lifelong learning skills.

Challenges

Designing a proper system to monitor and assess literacy and numeracy programmes across related agencies.

Expanding the scope of literacy and numeracy skills to include UNESCO's definition and considering the option of measuring such skills more effectively;

Developing a comprehensive approach to collect data on literacy and numeracy programmes and outcomes.

Effectively providing education for children from disadvantaged communities, in rural and remote areas, and second-chance education for dropouts.

Ensuring that children unable to attend proper schools receive a chance to obtain literacy and numeracy skills to improve their future socioeconomic prospects.

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Target 4.7
Sustainable development and global citizenship

Target 4.7: By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and nonviolence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.

Summary of indicators

Table 3.12: Summary of indicators for Target 4.7

SDG Target / Indicator	Description	Achievement	
		2016	2020
4.7.1	Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies, (b) curriculums, (c) teacher education and (d) student assessment	Some elements have been incorporated into mainstream education, though not as subjects.	
4.7.2	Percentage of schools that provide life skills-based HIV and sexuality education	99.3%	92.0%

Global citizenship education

Indicator 4.7.1

Extent to which (i) global citizenship education and (ii) education for sustainable development are mainstreamed in (a) national education policies, (b) curriculums, (c) teacher education and (d) student assessment

Elements of GCED and ESD have been incorporated into mainstream education, though not as specific subjects in schools. The National School Curriculum from preschool to secondary school covers such topics as environmental protection, climate change, disaster risk reduction and sustainable consumption and production.

MoE collaborates with several NGOs and government agencies to introduce GCED and ESD topics to schools through various programmes and projects. Such partnerships perform an essential service by utilising expertise, innovative methods and resources outside the MoE to fill in gaps in the formal education system ranging from environmental protection to cultural sustainability as highlighted in Table 3.13.

MoE collaborates with several NGOs and government agencies

Table 3.13: Collaboration between MoE, government ministries and NGOs to embed GCED and ESD in schools

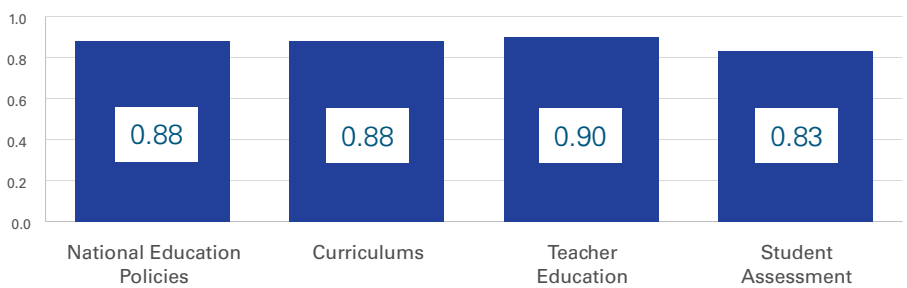
NGOs/Government Agencies	Programmes and Involvement (Not extensive)
Department of Environment	· Sustainable School – Environmental Award (Sekolah Lestari Anugerah Alam Sekitar) · Environmental Debate Competition (Pertandingan Debat Alam Sekitar) · 3-minute Environmental Thesis Programme (Program Tesis 3 Minit Alam Sekitar –T3MAS)
WWF Malaysia	· FEE EcoCampus Programme · Eco-Schools Programme · SEMBANG@WWF · Eco Champions Award · Building Bridges for Sustainable Consumption & Production (BB4SCP) Youth Conference
UNESCO and MoE	· The UNESCO Associated Schools Network (ASPnet), linking schools in Malaysia to a global network of educational institutions to support ESD and GCED

Source: Department of Environment; WWF Malaysia; Arts-ED; Ministry of Education Malaysia

The progress of mainstreaming GCED and ESD in national education policies, curriculums, teacher education and student assessment are reported under Indicator 4.7.1. Malaysia's scores in each component indicates strong progress, with the highest progress recorded in teacher education at 0.90 (out of 1) (Figure 3.27).

Malaysia's scores indicate strong progress

Figure 3.27: Extent to which (i) Global Citizen Education and (ii) Education for Sustainable Development are mainstreamed, Malaysia (Score)



Source: Department of Environment; WWF Malaysia; Arts-ED; Ministry of Education Malaysia

PISA 2018 assessment shows that 15-year-old Malaysian students demonstrated lower abilities than the OECD average through almost all aspects, except their interest in learning about other cultures. Malaysian students scored significantly lower in awareness of global issues, respect for people of other cultures, cognitive adaptability and self-efficacy regarding global issues and perspective- taking.[10]

While efforts to embed GCED and ESD into Malaysian education are already present, monitoring and implementation must be reviewed to address the student's relatively low ability to connect real-world issues to their learning and act upon them.

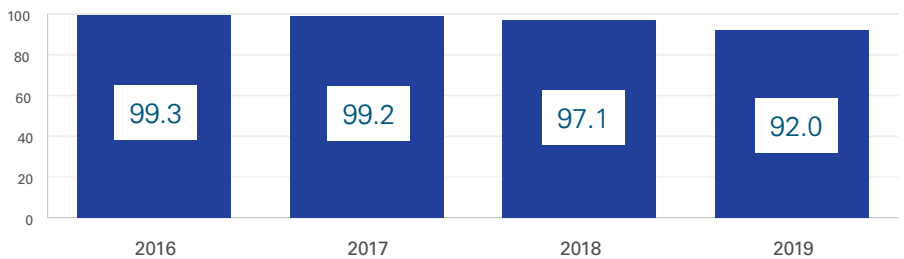
Teachers require adequate knowledge, skills, attitudes and values to incorporate GCED and ESD into their teaching.

Indicator 4.7.2 *Percentage of schools that provide life skills-based HIV and sexuality education*

More than 90% of schools have life skills-based HIV and sexuality education (Figure 3.28). The Reproductive and Social Health Education (Pendidikan Kesihatan Reproduktif dan Sosial – 'PEERS') is a compulsory component of the Health Education curriculum. In 2016, almost all schools (99.3%) provided PEERS education. However, the figure declined slightly from 97.1% in 2018 to 92% in 2019.

More than 90% of schools have life skills-basd HIV and sexuality education

Figure 3.28: Percentage of schools that provide life skills-based HIV and sexuality education, Malaysia, 2016-2019 (%)



Source: Ministry of Education Malaysia, JAKIM, Private sector and other government agencies

10 OECD, Results from PISA 2018, Country Note – Malaysia, 2019.

Case Study: GCED through Project-based Learning GCED Projects on DELIMa

The GCED Projects embed elements of GCED in teaching and learning. MoE, in collaboration with UNICEF Malaysia and its partner ARUS Education, went through a series of discussions and processes to integrate GCED elements by carefully mapping out the content of each project with the Standards-Based Curriculum for Secondary Schools (KSSM), GCED Learning Topics and Learning Objectives and Education for Sustainable Development Goals Learning Objectives in four subjects – Mathematics, Science, History and Geography. This is to ensure meaningful teaching and learning processes without disrupting the classroom learning environment.

Students find their own space to work collaboratively, reflect on issues and venture within the confines of their classroom. Information on the projects is available at https://sites.google.com/moe-dl.edu.my or https://bit.ly/PBL4GCED.

Case Study: Voices of the COVID Generation (VOCG)

The Voices of the COVID Generation (VOCG) programme is an extension of the GCED projects which adopted the project-based learning approach in four subjects: History, Geography, Science and Mathematics. VOCG encouraged children to find connections between those subjects and express their emotions, ideas and reflections with regards to their COVID-19 experiences.

VOCG was designed to help students understand the effects of COVID-19 and look beyond its health risks – especially its social impact on the most vulnerable groups, in particular the psychosocial well-being of children and youth affected by long-term school closure. VOCG served as a platform for them to express their emotions and for adults to grasp and address the harsh impact of the pandemic on children and youth.

Target 4.7: Key highlights and challenges

Highlights

Much progress has been made to infuse elements of Global Citizenship Education (GCED) and Education for Sustainable Development (ESD) in mainstream education, through projects and collaboration with NGOs and government agencies.

Life skills-based HIV and sexuality education are provided in more than 90% of schools.

Challenges

15-year-old Malaysian students recorded relatively low Global Competence in PISA 2018 and scoring lower than the OECD average in almost all aspects.

All ministries, agencies and NGOs offering ESD programmes need to strengthen their coordination and monitoring mechanisms.

Instruments to assess students' knowledge and skills for sustainable development within mainstream education are lacking.

Teachers need to be continuously empowered to incorporate GCED and ESD in their teaching.

Target 4.a
Education facilities and learning environment

Target 4.a: Build and upgrade education facilities that are child, disability and gender sensitive and provide safe, non-violent, inclusive and effective learning environments for all.

Summary of indicators

Table 3.14: Summary of indicators for Target 4.a

SDG Target / Indicator	Description	Achievement	
		2016	2020
4.a.1	Proportion of schools offering basic services: Electricity	99.9	100.0
	Internet for pedagogical purposes	100.0	100.0
	Computers for pedagogical purposes	81.8	89.8
	Adapted infrastructure and materials	15.6	17.8
	Basic drinking water	97.9	98.2
	Single-sex basic sanitation facilities	100.0	100.0
	Basic handwashing facilities	100.0	100.0

Progress assessment

Indicator 4.a.1 *Proportion of schools offering basic services, by type of service.*

Under the MoE's Dilapidated Schools Initiative, 532 projects costing RM3 billion were carried out between 2016 and 2020 to rebuild and upgrade dilapidated schools in Sabah and Sarawak alone. Infrastructure that is in need of repairs will be given immediate maintenance, and facilities and equipment across all schools will be upgraded to support the learning requirements of students over time.

All schools are equipped with necessary infrastructure such as electricity, basic drinking water, single-sex basic sanitation facilities, handwashing facilities, internet services, and computers.

The proportion of adapted infrastructure and materials is rising to serve an increasing number of students with disabilities (Table 3.20).

All schools are equipped with basic amenities and internet services

Table 3.15: Proportion of schools providing basic services, by type of service, Malaysia, 2016-2020 (%)

Type of service	2016	2017	2018	2019	2020
Electricity	99.9	100.0	100.0	100.0	100.0
Internet for pedagogical purposes	100.0	100.0	100.0	100.0	100.0
Computers for pedagogical purposes	81.8	81.7	88.3	88.8	89.8
Adapted infrastructure and materials	15.6	16.9	15.5	16.9	17.8
Basic drinking water	97.9	97.4	97.3	97.6	98.2
Single-sex basic sanitation facilities	100.0	100.0	100.0	100.0	100.0
Basic handwashing facilities	100.0	100.0	100.0	100.0	100.0

Source: Department of Environment; WWF Malaysia; Arts-ED; Ministry of Education Malaysia

Special needs education still requires significant investment to reach out to children who are not in school to ensure that no one is left behind. New schools have been constructed with an improved infrastructure to meet the requirements of students with disabilities as stipulated in the Guidelines and Regulations for Building Planning (2015). However, infrastructure provision and upgrades remain challenging for older schools.

It is equally important to ensure a safe and non-violent environment for students. Many challenges fall under this category, such as criminal activity, national disasters and calamities, racism, gender-related incidents and pandemics. Bullying in schools is also a cause for concern. The MoE monitors such cases through the Students' Discipline System (Sistem Sahsiah Diri Murid or SSDM) platform. There is a standard reporting procedure (e-Sistem Pengurusan Aduan Awam – e-SisPa) for such cases so that the school management dan relevant divisions are informed to ensure appropriate mitigation and prevention plans are deployed.

The COVID-19 pandemic has led to mental health problems among children through due to isolation and disruption to teaching and learning, and the absence of physical socialising with teachers. In response, the MoE, together with the Ministry of Health Malaysia (MOH), introduced initiatives to provide social support to these school children as part of the National Strategic Plan for Mental Health 2020-2025.

Target 4.a: Key highlights and challenges

Highlights

Most schools are equipped with basic infrastructure and services as per Indicator 4.a.1.

The MoE is closely monitoring bullying incidents and cooperates with various agencies to promote better mental health and well-being in schools.

Challenges

It remains more challenging to supply international standard infrastructure and facilities (such as WHO drinking water standard).

Existing gap in disabled-friendly infrastructure supportive of learning among those who need it most.

For schools to have the next generation of skills useful to work and quality of life, i.e., ICT, there must be significant investment in physical infrastructure, computers and internet connections, raising the capacity of teachers to teach, and enhancing learning environment within a packed school day.

Issues such as bullying and poor mental health must be continuously addressed to foster a safe and secure environment in schools.

Target 4.b Scholarships

Target 4.b: By 2020, substantially expand globally the number of scholarships available to developing countries, in particular least developed countries, small island developing States and African countries, for enrolment in higher education, including vocational training and information and communications technology, technical, engineering and scientific programmes, in developed countries and other developing countries.

Progress assessment

Since 1980, Malaysian Technical Cooperation Programme (MTCP) had trained more than 32,000 personnel in various courses. In 2013, Malaysia expanded the training via Third Country Training Programmes (TCTP), in cooperation with the Japan International Cooperation Agency (JICA). Malaysia provided the technical expertise while JICA supplied the financing. The TCTP is still active, although not as vibrant as when it was under the main MTCP.

Through Malaysia-UNESCO Cooperation Programme, 36 projects have been supported to advance South-South Cooperation in UNESCO's major mandates such as education, natural sciences, social and human sciences, culture, and communication and information.

However, this indicator is more appropriately be reported under Goal 17 (Global Partnerships).

Target 4.c Teachers

Target 4.c: By 2030, substantially increase the supply of qualified teachers, including through international cooperation for teacher training in developing countries, especially least developed countries and small island developing States.

In the education sector, despite having a workforce that is majority female (70%), a higher percentage of male teachers are enrolled in the National Professional Qualification for Educational Leaders (NPQEL) (Table 3.16).

Despite having a workforce that is majority female, there are more male teachers enrolled in the NPQEL, hence no chance for female teachers to become school headmasters and principals.

Table 3.16: Percentage of teachers enrolled in National Professional Qualification for Educational Leaders (NPQEL) by sex, 2016-2020 (%)

Group	2016		2017		2018		2019		2020	
	P	S	P	S	P	S	P	S	P	S
Male	1.01	0.38	1.03	0.32	0.77	0.40	0.72	0.30	0.64	0.28
Female	0.34	0.11	0.34	0.08	0.28	0.13	0.21	0.08	0.18	0.08
Total	0.54	0.19	0.55	0.15	0.42	0.21	0.36	0.15	0.31	0.14

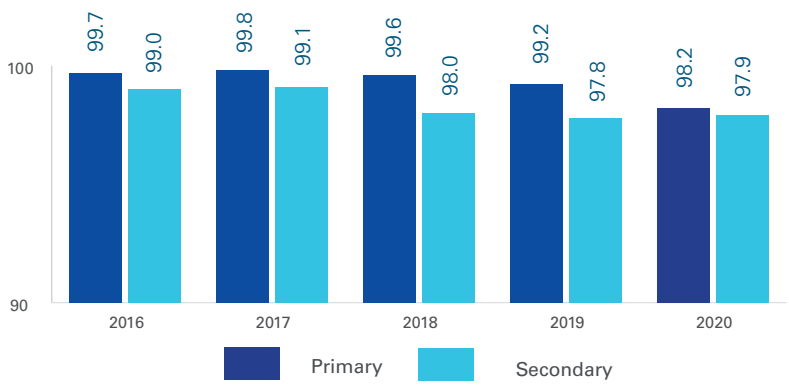
Notes: P = Primary; S = Secondary
The National Professional Qualification for Educational Leaders (NPQEL) qualification is needed to become headmasters and principals.
Source: Ministry of Education Malaysia

Indicator 4.c.1 *Proportion of teachers with the minimum required qualifications, by education level*

Almost all teachers obtained minimum required qualification with nearly 99% of primary school teachers and 98-99% of secondary school teachers have the minimum qualifications. Despite a slight decline in the proportion of qualified teachers in 2020, students are being taught by teachers who are pedagogically trained to teach their subjects.

Almost all teachers have obtained minimum required qualification

Figure 3.29: Proportion of teachers with the minimum required qualifications, by education level, Malaysia, 2016-2020 (%)



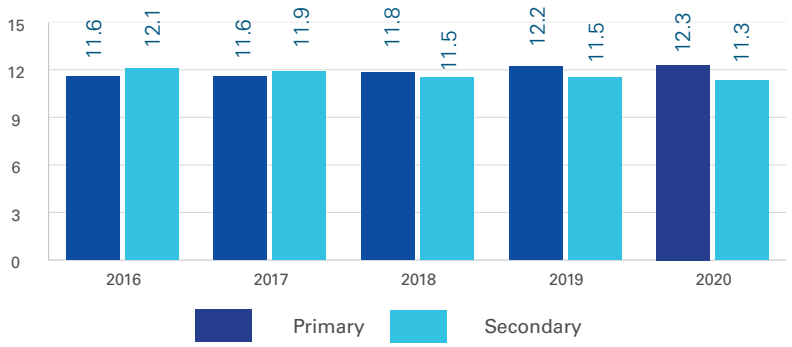
Note: MoE schools only
Source: Ministry of Education Malaysia

Indicator 4.c.2 *Pupil-trained teacher ratio by education level*

Lower number of school teachers and more teaching workloads at the primary level could lead to lower quality of learning. The pupil-trained teacher's ratios have increased at the primary level but declined at the secondary level (Figure 3.30). This suggests a rise in teaching workload, which may reduce the quality of learning outcomes at primary level. There could also be fewer primary school teachers to cope with higher student enrolments. Between 2016 and 2020, the number of primary school teachers fell by 1.8% while enrolments increased by 2%. At the secondary level, the number of teachers in MoE schools declined by 1%, while the enrolments of students dropped by 7%.

Malaysia has a lower number of school teachers and more teaching workloads

Figure 3.30: Pupil-trained teacher ratio by education level, Malaysia, 2016-2020



Source: Department of Environment; WWF Malaysia; Arts-ED; Ministry of Education Malaysia

Indicator 4.c.3 *Percentage of teachers qualified according to national standards by education level and type of institution*

At both primary and secondary levels, all teachers are fully qualified, i.e., trained, attained proficiency or have educational qualifications appropriate for teaching at the respective levels.

At both primary and secondary levels, teachers are fully qualified

Table 3.17: Percentage of teachers qualified according to national standards by education level and type of institution, Malaysia, 2016-2020 (%)

Education level	2016	2017	2018	2019	2020
Primary	100	100	100	100	100
Secondary	100	100	100	100	100

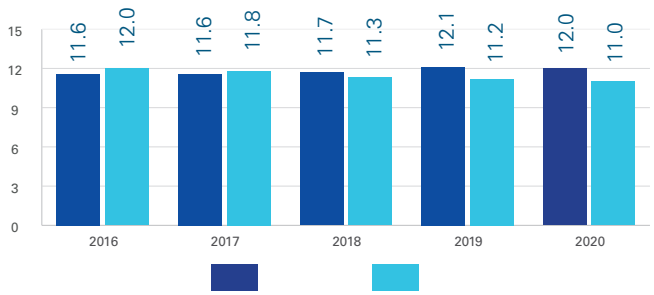
Source: Department of Environment; WWF Malaysia; Arts-ED; Ministry of Education Malaysia

Indicator 4.c.4 *Pupil-qualified teacher ratio by education level*

The pupil-qualified teacher ratio is about 11-12 students were qualified teacher, which is better than upper-middle income countries that average at about 18 to 20 students per qualified teacher.[11] The students per qualified teacher slightly increased at the primary level and decreased at the secondary level. However, this is mainly due to the uneven distribution of teachers: teachers in urban schools are overburdened with many students, and too many teachers in rural areas with lesser number of students. In 2020, almost 3 in 4 (73%) of total 3,006 primary schools classified as small schools are located in rural areas.[12]

The pupil-qualified teacher ratio is low at the national level

Figure 3.31: Pupil-qualified teacher ratio by education level, Malaysia, 2016-2020



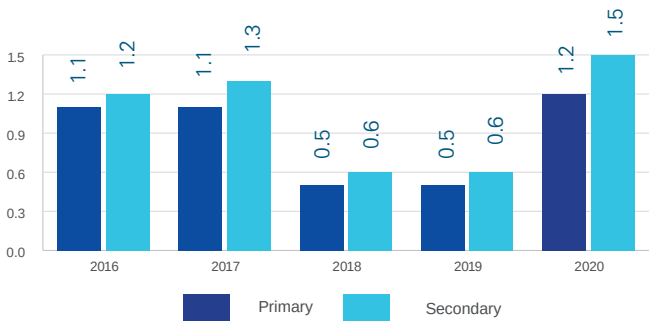
Note: MoE schools only
Source: Ministry of Education Malaysia

Indicator 4.c.6 *Teacher attrition rate by education level*

Over the years, attrition rates have been fairly low for primary and secondary levels, between 1% and 2%. The attrition rates are below the average labour market rates of 5% to 10%.

Teacher attrition rates have been fairly low in recent years

Figure 3.32: Teacher attrition rate by education level, Malaysia, 2016-2020 (%)



Note: MoE schools only
Source: Ministry of Education Malaysia

11 UNESCO Institute for Statistics. Sustainable Development Goals: 4.c.4 Pupil-qualified teacher ratio by education level. Available here - http://data.uis.unesco.org/

12 No secondary schools have been classified as small schools by the MOE.

Target 4.c: Key highlights and challenges

Highlights

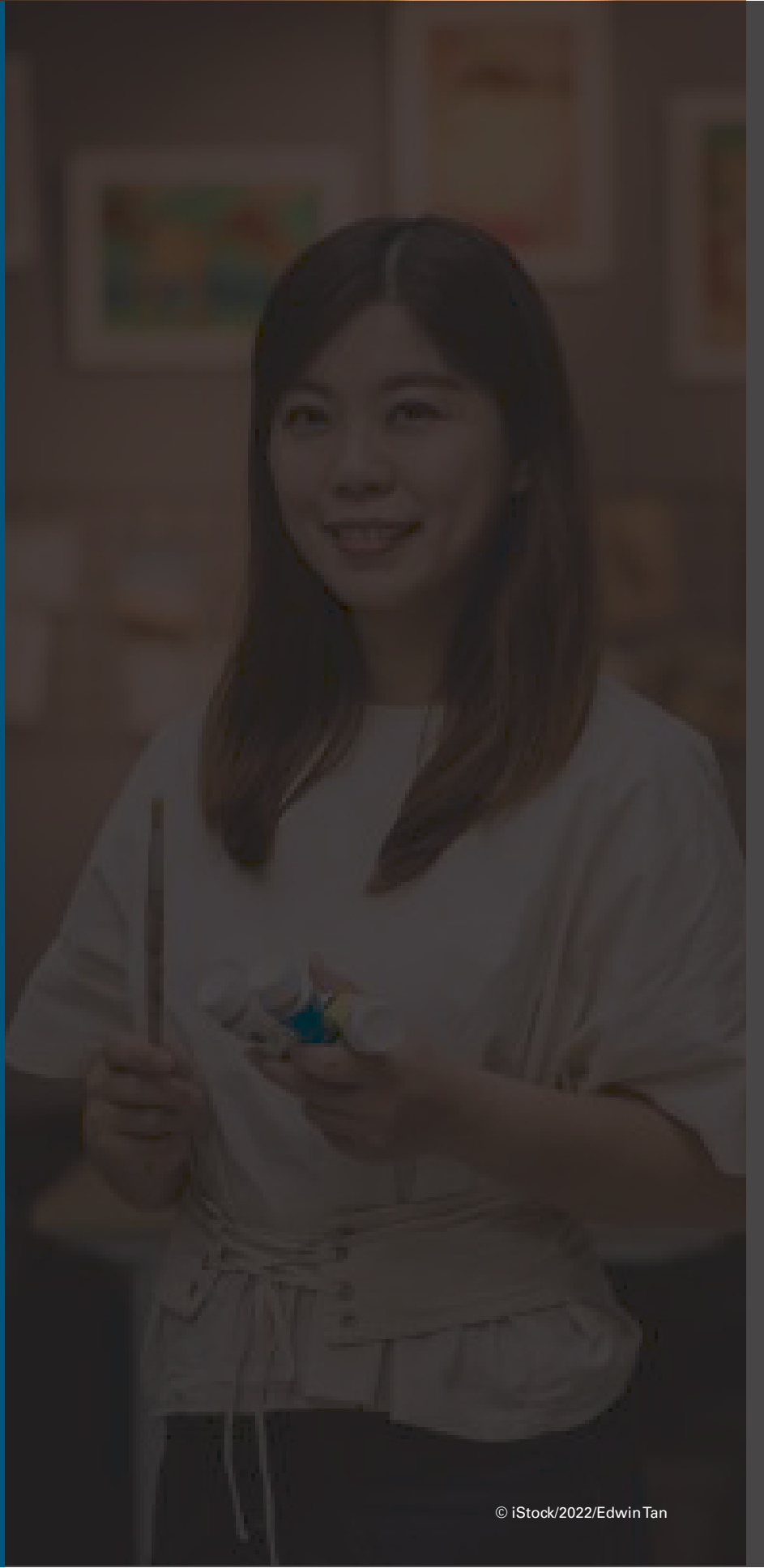
More than 97% of teachers in government schools are pedagogically trained, and almost all are academically qualified.

Number of students per qualified teacher is better than the average in upper middle-income countries. However, there are increasing teaching workloads at primary level compared to secondary level hence risking lower quality education outcome at primary level.

Challenges

It is challenging to upgrade the teaching profession continually and strengthen the link between performance and competencies. The MEB has sought to create a peer-led culture of professional excellence.

It is an ongoing task to develop leadership at all levels of the educational system and undertake measures to produce an ecosystem that sustains high-quality education.



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Section 4

Thematic Analysis

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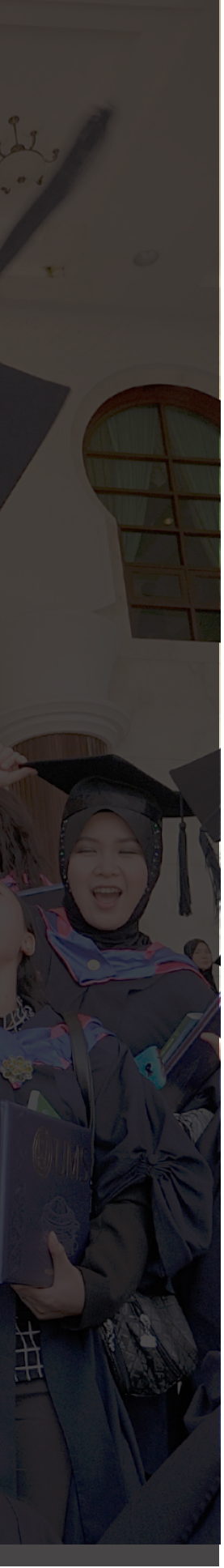


The thematic analysis of the 5-NPR draws on SDG-4 main themes: inclusion, equity, quality education and lifelong learning. The impacts of COVID-19 on inclusion, equity and the quality of education are also discussed.

Vulnerable and excluded groups

While significant efforts and progress have been made to achieve universal access to schooling, barriers remain, which includes the lack of inclusive laws and policies, curriculums, schools and communities; issues surrounding data, limited funding and governance and the readiness of teachers to support inclusive learning.

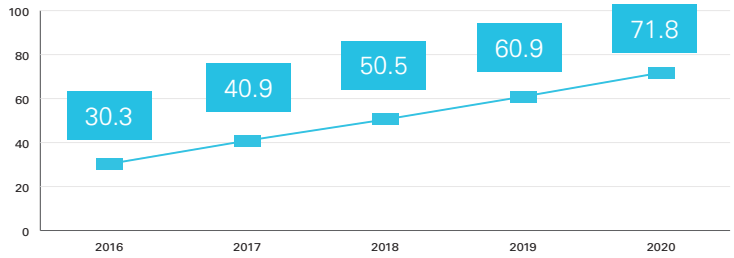
Persons with disabilities

The national special needs education system offers three schooling options for children with disabilities, namely: 1) Inclusive Education Programme; 2) Special Education Integration Programme; and 3) Special Education Schools.

The enrolment rate of students with special educational needs (SEN) is rapidly increasing. The MEB aims to enroll 75% of students with SEN in inclusive education programmes by 2025.[13] In 2020, 71.8% of student with SEN were enrolled, which is more than two times higher than the enrolment rate in 2016 which was at 30.3% (Figure 4.1). The Zero Reject Policy implemented since 2019 is one of many initiatives supporting this aim, ensuring that SEN students are not excluded from education. More than 10,000 children with disabilities have been enrolled under this policy.

The enrolment rate of students with special needs is increasing

Figure 4.1: Percentage of students with Special Educational Needs (SEN) in inclusive education programme, 2016-2019 (%)



Source: Ministry of Education Malaysia

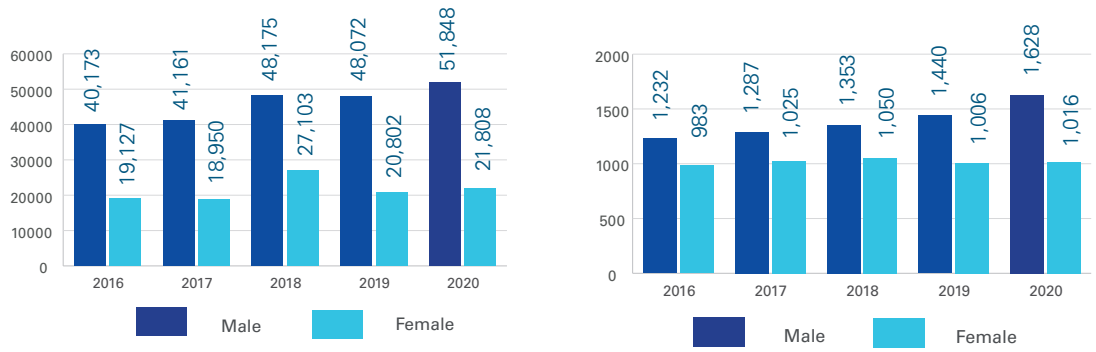
13 Ministry of Education (MOE), Malaysia Education Blueprint (Preschool to Post-Secondary Education) 2013- 2025.

More students enrolled in the Special Education Integrated Programme (SEIP) and Special Education Schools (Figure 4.2). The number of students enrolled in SEIP and Special Education Schools increased by 24% and 19% respectively during the 2016-2020 period.

However, there are higher social barriers for female SEN students. Male enrolment in the SEIP rose by 29%, while female enrolment only increased 14% during the same period. Number of male students in the SEIP was 2.4 times higher than females in 2020.

Enrolment in SEIP and SES has increased

Figure 4.2: Enrolment in special education integration programme and special education schools by sex, 2016-2020



Source: Ministry of Education Malaysia

Gaps remain for PWDs to gain equitable access for education. The Children Out of School study reported that more than half of all registered children with disabilities in Sabah are not enrolled in mainstream education or special education schools.[14]

Rural children with disabilities lack access, as schools with facilities for physical and learning disabilities tend to be in urban areas. Only 17.8% of schools consist of PWDs-friendly infrastructure and materials in 2020 (Indicator 4.a.1). Much more needs to be done to ensure all SEN students regardless of geography able to attend school that has a conducive physical environment for their learning.

Teachers must be well-trained to support learning and assistive technologies should be provided when required.[15]

Public education and awareness levels of disabilities are also lacking. Attitudinal barriers at the family and community levels, such as deep-rooted taboos stemming from religious or cultural beliefs, have made parents of children with disabilities hesitate or refuse to officially register their children.[16]

14 UNICEF Malaysia, Children Out of School, Malaysia: the Sabah context, 2019.
15 Ibid.
16 UNICEF Malaysia, Children with Disabilities in Malaysia.

Persons with disabilities
Key highlights and challenges

Malaysia is on track to enroll 75% of SEN students in inclusive education programmes by 2025, as targeted in the Malaysia Education Blueprint (MEB) 2013–2025.

While enrolment is increasing, it is primarily driven by male enrolment and there are still high social barriers to access education for female SEN students.

The number of SEN students is likely to be underestimated, as the percentage of registered PWDs in the national population remains below global estimates due to restrictive criteria.

More can still be done to ensure all SEN students can learn in a conducive physical environment since a large percentage of schools lack adapted infrastructure and materials.

In addition to physical infrastructure for learning, suitable measures must also be taken, such as having well-trained teachers, assistive technologies, and public education to eliminate the marginalisation of SEN students.

Orang asli of Peninsular Malaysia

The Orang Asli ("Aboriginal Peoples") is the indigenous group in Peninsular Malaysia. They are numbered at 198,015 equivalent to 0.8% of the population in Peninsular Malaysia. A minority of the Orang Asli live in the interior and adhere to their traditional ways of life, and are burdened by a very high incidence of poverty (34% in 2014). Orang Asli development initiatives are overseen by the Department of Orang Asli Development (Jabatan Kemajuan Orang Asli - JAKOA), an agency under the Ministry of Rural Development.

Orang Asli children face severe barriers to quality education, namely socio-economic (poverty, parental apathy towards education and lack of proper documentation); geographical (long distances to schools, insufficient infrastructure and utilities); linguistic and cultural; and misalignment of indigenous culture and mainstream schooling (curriculums, pedagogy, learning requirements, social interactions and the lack of teacher training).[17] Such barriers resulted in high dropouts rates, poor participation, unsatisfactory learning outcomes, and missed lifelong opportunities.

Enrolment among Orang Asli children is low at all levels of education (Table 4.1). However, the enrolment of Orang Asli children in primary school increased five-fold since primary schooling was made compulsory and with various initiatives by the government to support their schooling.

Enrolment among Orang Asli children is low at all levels of education

Table 4.1: Enrolment of Orang Asli students by education level, 2016 and 2018

Type of service	2016	Enrolment distribution (%)	2018	Enrolment distribution (%)
Preschool	4,873		5,510	
ECCE (Taska)	190	10.3	170	11.9
Preschool (Tabika)	4,683		5,340	
Primary	27,603	58.3	26,588	57.4
Secondary	14,195	30.0	13,536	29.2
Post-Secondary and Tertiary	680		667	
Certificate	38		24	
Matriculation	10		0	
Foundation	4	1.4	55	1.5
Pre-Diploma	49		0	
Diploma	454		228	
Degree	125		229	
Total	47,351	100.0	46,301	100.0

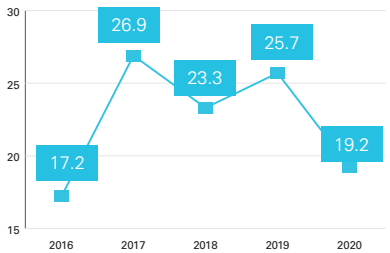
Note: Data for 2017, 2019 and 2020 unavailable; public learning institutions only
Source: JAKOA

17 Adapted from "Education Policies in Overcoming Barriers Faced by Orang Asli Children: Education for all" (IDEAS); "Situation Analysis of Women & Children in Malaysia 2020", (UNICEF Malaysia).

Dropout rates for Orang Asli students increased as they moved towards higher education. In transition from primary to secondary school, dropout rates increased from 17.2% in 2016 to 25.7% in 2019, before falling to 19.2% in 2020 (Figure 4.3). The situation become worse as they progress towards higher level, with only half of those who were at primary level made it to secondary level and only 1.5% made it to post-secondary and tertiary level.

Drop-out rates have increased

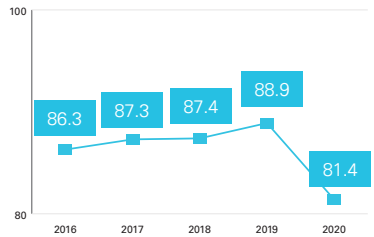
Figure 4.3: Dropout rate of Orang Asli students from Year 6 to Form 1, 2016-2020 (%)



Source: Ministry of Education Malaysia

Attendance rates have increased

Figure 4.4: Attendance rate of Orang Asli in schools, 2016-2020 (%)



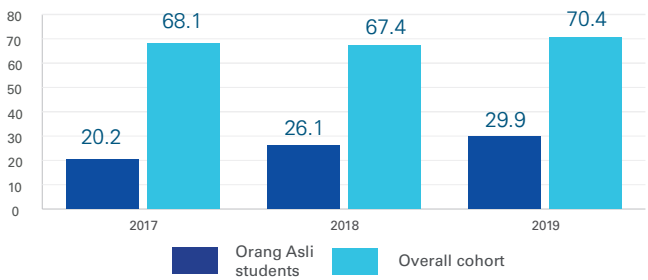
Source: Malaysia Education Blueprint Annual Report 2016-2020, Ministry of Education Malaysia

Orang Asli children attends school regularly, recorded an improved attendance rate, which has led to a better performance in UPSR. The attendance rate increased from 86.3% in 2016 to 88.9% in 2019 (Figure 4.4).[18] However, their academic results remain low. Almost 30% of Orang Asli students achieved at least grade D in all assessed subjects, the minimum passing level for UPSR in 2019, compared to 20.2% in 2017 (Figure 4.5). However, this rate is still far below the national average of 70.4% for the 2019 cohort. School closures during the pandemic have reduced the attendance rate in 2020 to 81.4%, with many Orang Asli students lacking the internet access and digital devices needed to attend online classes.

Many Orang Asli students drop out at the end of primary school to enter the workforce or help out their parents. In addition, many still live in rural areas and are unable or willing to leave their communities for secondary education since their identity and way of life are closely tied to their native customary land.

More Orang Asli students are achieving minimum UPSR levels, but remain far below the national average

Figure 4.5: Percentage of Orang Asli students achieving the minimum level of UPSR, compared to overall cohort, 2017-2019 (%)



Note: Minimum level refers to achieving at least grade D in all subjects

Source: Malaysia Education Blueprint Annual Report 2018-2019, Ministry of Education Malaysia

18 The attendance rate is calculated using data from the MOE's E-attendance system (E-kehadiran). It is expressed as a percentage of cumulative student attendance over 10 months (January to October).

Orang Asli of Peninsular Malaysia Key highlights and challenges

Policies and programmes have been implemented to raise the literacy rate, retention rate in schools, performance in assessments and develop inclusive education for Orang Asli students.

However, socio-economic, geographical, linguistic and cultural barriers, and misalignment of indigenous culture with mainstream schooling are still the main barriers to low participation rates, learning outcomes and missed lifelong opportunities.

In recent years, Orang Asli children have attained slightly better UPSR examination results but their performance is far below the national average. Many pupils drop out to work at the end of primary education or are unwilling to leave their communities for secondary education.

Refugee, stateless and undocumented children

Public schools in Malaysia do not enroll refugees, stateless or undocumented children.

From 2016 to 2020, the number of refugees, asylum-seeking and stateless children almost doubled (Table 4.4). Majority of them originating in conflict-affected areas such as Myanmar, Pakistan and Somalia. These 'undocumented' children without proper papers or legal status face enormous difficulty receiving formal education.

However, as the number of refugees keeps increasing, the Government has welcomed initiatives by the private sector, NGOs and individuals to provide education for stateless children. Organizations like UNICEF and HALUAN (the Organization of Graduates of Educational Institutions Malaysia) organise education for children who could not otherwise be admitted to formal education. To support NGO efforts, the MoE created guidelines for alternative learning centres (ALCs) and community learning centres (CLCs).

The UNHCR estimates that only 30% of the 23,823 asylum and refugee school-age children receiving some form of education, mainly through informal learning managed by NGOs, charity or faith-based groups.[19] The UNHCR works with six implementing partners to operate 128 community learning centres in the country.[20]

19 UNHCR, Education in Malaysia. https://www.unhcr.org/en-my/education-in-malaysia.html.
20 Ibid.

From 2016 to 2020, refugees, asylum-seeking and stateless children have doubled

Table 4.2: Number of refugee*, asylum-seeking, and stateless children aged 5-17 in Malaysia, by sex, 2016-2020

	Male		Female		Total		
Age (years)	5-11	12-17	5-11	12-17	5-11	12-17	5-17
2016	5,044	3,864	4,682	2,658	9,726	6,522	16,248
2017	6,016	4,500	5,739	3,212	11,755	7,712	19,467
2018	6,737	4,590	6,455	3,572	13,192	8,162	21,354
2019	7,856	5,104	7,482	3,938	15,338	9,042	24,380
2020	9,204	5,137	8,876	4,090	18,080	9,227	27,307

Note: *Under UNHCR's mandate

Source: UNHCR

Refugee, stateless, and undocumented children Key highlights and challenges

Refugee, stateless and undocumented children have limited access to formal education. Only 30% of them are in alternative learning centres (ALCs) and community learning centres (CLCs). As the number of children with educational needs increases each year, the Government has welcomed educational initiatives by the private sector, NGOs and individuals. The MoE supports their efforts by developing guidelines for ALCs and CLCs

More resources must be mobilised to support the educational needs of vulnerable children. Incentives should be expanded, and dismantled barriers to encourage and promote such charitable causes. The first step would be to re-examine the prerequisites and legal obstacles to registration.

Quality education

Quality education is vital to prepare children to strive for upward socioeconomic mobility, break the cycle of poverty, and gain skills and knowledge to contribute to national objectives and sustainable development.

The first aspect of quality education is linked to the provision of education for all children irrespective of race, socio-economic status or citizenship. In this respect, Malaysia has reached near-universal access (Target 4.1).

The second aspect is related to learning outcomes, or the state of knowledge and skills learned at the end of a period of education.

This review evaluates students' performance and learning outcomes in two national assessments at the end of primary and secondary school (UPSR and SPM) and three international assessments (TIMSS, PISA and SEA-PLM).

National assessments

Overall, there has been an improvement in UPSR results (year 6 national examination): The percentage of candidates achieving all grade 'A's in 2019 (2.19%) is almost double compared to 2016 (1.11%). Similarly, the percentage of candidates failed in all subjects (obtaining all grade 'E's) in 2019 (1.17%) reduced by half as compared to 2016 (2.16%).

However, the results also show that a significant percentage of candidates are still not prepared to proceed to secondary education. Almost 30% of candidates do not achieve the minimum competency level required, where the students are not able to understand, retain and apply what is being taught in school.

Although there has been improvement, many are not ready for secondary education

Table 4.3: Achievement of UPSR candidates, 2016-2019, Malaysia

Description	2016	2017	2018	2019
Number of Candidates with Minimum Competency Level*	292,689	293,514	288,005	303,892
% Candidates with Minimum Competency Level	66.50	68.13	67.40	70.35
Number of Candidates with all 'A's	4,895	8,958	8,993	9,445
% Candidates with all 'A's	1.11	2.08	2.10	2.19
Number of Candidates with all 'E's	9,510	6,663	5,833	5,039
% Candidates with all 'E's	2.16	1.55	1.37	1.17

Note: * Refers to candidates obtaining grades A, B, C or D in all subjects taken
Source: Malaysian Examinations Syndicate

More students failed all subjects in SPM examination (at the end of secondary school). While the percentage of candidates achieving all grade 'A's has increased slightly during 2016-2020 period, the percentage of candidates failing all taken subjects (achieving all grade 'G's) has also increased. However, more candidates achieved passes for all subjects during the same period.

More students failed all subjects in SPM

Table 4.4: Achievement of SPM candidates, 2016-2019, Malaysia

Description	2016	2017	2018	2019	2020
Number of Passes*	313,667	318,885	303,343	301,510	302,477
% Passes	84.79	85.21	86.35	86.65	88.43
Number of Candidates with all 'A's	7,165	7,318	6,871	7,413	7,588
% Candidates with all 'A's	1.94	1.96	1.96	2.13	2.22
Number of Candidates with all 'G's	3,755	4,043	4,115	3,986	4,210
% Candidates with all 'G's	1.02	1.08	1.17	1.15	1.23

Note: * Refers to candidates obtaining grades A, B, C or D in all subjects taken
Source: Malaysian Examinations Syndicate

International assessments

In the past 20 years, Malaysia's average score for both Mathematics and Science has been decreased. By gender, girls outperformed boys in TIMSS with a GPI of 1.02 for mathematics and 1.01 for science

Malaysia's average score for mathematics and science has been decreasing

Table 4.5: TIMSS scores for mathematics and science, 1999-2019, by sex and GPI, Malaysia

Year of TIMSS	Mathematics				Science			
	Average	Female	Male	GPI	Average	Female	Male	GPI
2019	461	465	456	1.02	460	463	458	1.01
2015	465	470	461	1.02	471	476	466	1.02
2011	440	449	430	1.04	426	434	419	1.04
2007	474	479	468	1.02	471	475	466	1.02
2003	508	512	505	1.01	510	505	515	0.98
1999	519	521	517	1.01	492	488	498	0.98

Source: Ministry of Education Malaysia

Programme for International Student Assessment (PISA)

While PISA scores for all subjects in Malaysia improved, it is still below the OECD's average (Table 4.6). By gender, there is no significant gender gap with a GPI of 1.06 in PISA 2018.

While PISA scores improved, it is still below the OECD average

Table 4.6: PISA mean scores, ranking and GPI, 2012 and 2018, Malaysia

Description	Malaysia 2012		Malaysia 2018		OECD 2018
	Score	GPI	Score	GPI	Score
Reading	398	1.11	415	1.06	497
Mathematics	421	1.02	440	1.01	494
Science	420	1.03	438	1.02	501

Source: OECD

Southeast Asia Primary Learning Metrics (SEA-PLM)

The majority of grade 5 children had achieved the reading skills expected at the end of primary school. However, only 58% of the (grade 5) children have met the minimum reading proficiency expected at the end of primary as defined by the SDGs.

Quality education
Key highlights and challenges

Although Malaysia has achieved universal access to primary and lower secondary education, there are still groups of children who are not in schools, especially at the upper secondary level and above.

An analysis of student performance at both national and international assessments show a need for improvement to realise the 'Quality' aspiration as outlined under the MEB. At the national level, 30% of UPSR candidates have not achieved the minimum competency. Malaysian students still perform below the OECD average in the TIMSS and PISA assessments.

It is important to carefully compare the requirements of national and international assessments to assess student performance in literacy and numeracy.

Lifelong learning

To design good LLL programmes, a holistic assessment of literacy and numeracy must be established. Professionally designed methodologies of assessment such as the OECD's Programme for International Assessment of Adult Competencies (PIAAC) can be an instructive basis for Malaysia to design its own instrument for evaluating functional literacy and numeracy.

As with the formal education system, LLL programmes cater to Malaysians in general but are not designed for at-risk and vulnerable populations, those with special needs or rural people with poor or no digital connection.

Lifelong learning Key highlights and challenges

Highlights

Lifelong learning is an enabling and enriching tool. Effective LLL programmes for targeted groups could be based on current level of reading and mathematics proficiency.

LLL programmes are available to Malaysians only and are not designed to cater for at-risk and vulnerable populations, those with special needs or the rural population.

Impact of COVID-19

The school closures during COVID-19 pandemic affected almost 8 million students nationwide, with adverse implications for inclusion, quality and equity in education and consequently the attainment of SDG 4 targets.[21]

Inclusion

The closure of schools forced students to switch from face-to-face learning to online learning, a change that made internet access and digital devices necessities rather than options. However, not all students had internet access.[22] In addition, some found online learning to be hampered by poor connectivity.[23]

Only 15% of students had personal computers, 5.8% had a tablet computer, with 36.9% students did not have any digital device.[24] To equip students with laptops, the Ministry of Finance and the Ministry of Education distributed 150,000 laptops to B40 households under the Cerdik Initiative.[25]

While Malaysia's mobile broadband penetration rate is high at 118.7%, the penetration rate for fixed broadband is only 34.5%.[26] Students with limited or no access to online learning are falling behind in their education. It is estimated that learning losses could range between 5.4 months to 11.4 months.[27]

Apart from issues of access to the internet and digital devices, a survey of low-income households in Kuala Lumpur's low-cost public housing estates found that sending children back to school during the pandemic is also problematic due to additional school-related expenses, lack of motivation to study, and inconsistent and costly SOPs.[28]

School closures is estimated to cause economic losses of RM240 billion over the next three years.[29] Disruptions in physical schooling are expected to cause a yearly loss of between RM464 and RM1,121 per worker per worker or as much as RM2,054 for those p with a degree.[30]

Quality

Some parents may not have the capacity or knowledge to facilitate home learning. About 43% of parents from lower-income households face difficulties in supervising their children.[31]

Online learning does not suit all students, levels or subjects.[32] A study by UNICEF suggested that 49% of students found that home-based learning is not conducive hence causes them to lose concentration, interest or motivation.[33]

21 UNESCO, Education: From disruption to recovery, 2021. https://en.unesco.org/covid19/educationresponse.
22 Department of Statistics Malaysia (DOSM), ICT Use and Access By Individuals and Households Survey Report, Malaysia, 2020
23 Hazlin Hassan. 2021. Malaysia's digital divide makes some students trek up hills and sleep on trees for Internet access. https://www.straitstimes.com/asia/se-asia/malaysias-digital-divide-makes-some-students-trek-up-hills- and-sleep-on-trees-for.
24 Justin Ong. 2020. Education Ministry: Over one in three students couldn't access online learning during MCO. https://www.malaymail.com/news/malaysia/2020/07/16/education-ministry-over-one-in-three-students-couldnt- access-online-learnin/1885005.
25 Cerdik, 2021. https://www.cerdik.org/en/
26 Malaysian Communications and Multimedia Commission (MCMC), 4Q 2020 Facts and Figures – Communications and Multimedia, 2021.
27 Ferlito et al. 2021. The Economic Impact of School Closures in Malaysia.
28 UNICEF Malaysia, Families on the Edge Issue 4: Two-steps forward, one step back: The new normal for Malaysia's urban poor?, 2021.
29 Ferlito et al. 2021. The Economic Impact of School Closures in Malaysia.
30 Ibid.
31 UNICEF Malaysia, Families on the Edge Issue 4: Two-steps forward, one step back: The new normal for Malaysia's urban poor?, 2021.
32 Srivastava, P (2021), The Impact on Education
33 UNICEF Malaysia, Families on the Edge Issue 4: Two-steps forward, one step back: The new normal for Malaysia's urban poor?, 2021.

Weaker and disadvantaged students are left further behind when the quality of teaching and learning affected or interupted. With schools closed for most of 2020 and 2021, teachers could not provide in-person or one-on- one guidance. With online learning, teachers could not get direct feedback from in-person sessions or observe the student's ability to follow the material taught.

An assessment of the "lost" years are vital to determine the scale of the learning gap that has emerged.[34]

Equity

The pandemic is highly likely to contribute to lower enrolment and participation rates among students from a lower socioeconomic status. Poor households that have lost jobs and incomes are unable to afford the additional cost of online learning. The long term impact on the children from these households could be costly in terms of upward mobility.

Impact of COVID-19 Key highlights and challenges

The COVID-19 pandemic has had huge and adverse impacts on inclusion, quality and equity in education and consequently the progress towards SDG 4 targets.

The transition from face-to-face learning caused students with limited or no access to online learning suffer learning loss and fall further behind in education. Limited in-person teaching and supervision, non-conducive home-learning environments, and declining motivation affected learning, engagement, and interaction.

Urgent assessment on the learning loss and its potential long-term consequences is needed to facilitate the design and implementation of catch-up programmes to quickly reverse the damage and close the gap.

The pandemic motivated teachers to adopt digital skills for online teaching. The MoE introduced a few digital education initiatives to help teachers and students transition from classroom to digital home-based learning.

34 Dorn, E., Hancock, B., Sarakatsannis, J., & Viruleg, E. COVID-19 and education: The lingering effects of unfinished learning. 2021. https://www.mckinsey.com/industries/public-and-social-sector/our-insights/covid-19- and-education-the-lingering-effects-of-unfinished-learning

Section 5

Issues, Challenges, and Recommendations

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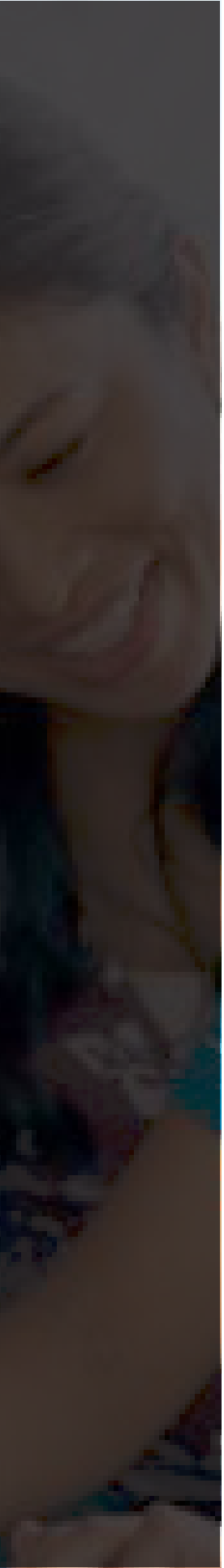

1. Closing data gaps in education

Three broad areas of data gaps commonly encountered in this review are (i) data disaggregation by different socioeconomic groups and other variables, (ii) data coverage to include non-registered educational institutions and (iii) data sharing across government agencies. Closing these data gaps would provide clearer insights into trends and patterns and point to areas for improvements to arrive at an inclusive, equitable, safe, and healthy school environment.

Recommendations

More disaggregation of indicator data by socio-economic status, location (urban/rural), and region, age-groups and vulnerable groups as well as critical skills data is needed to track and better understand current progress and education planning.

Greater use of administrative data and household surveys conducted by DOSM, MOH, ILMIA and other agencies to examine issues of social exclusion in education.

Emulate data sharing practices by international assessment bodies to deepen analyses of national assessment data on key SDG 4 issues and educational challenges without compromising on confidentiality.

A more detailed data gathering exercise through inter-agency coordination i.e., DOSM, MOH, and ILMIA, will assist in multiple deprivation and predictive analyses on student learning loss and early warning systems to guide targeted interventions and mitigate school dropouts as a result of the pandemic.

2. Clear coordination and governance to manage Malaysia's education environment

There are other colleges and skills training institutions that are under the jurisdiction of various ministries other than MOE and MOHE, religious bodies, the private sector and NGOs. Such a broad array of institutions can have the merits of diversity, but issues with quality may arise. Hence, a clear governance structure in the management and planning of preschools, TVET, and Science, Technology, Innovation, & Economy (STIE) are needed to ensure a conducive and sustainable education environment so that the Malaysia's education system is able to provide learning and skills for life, work, and sustainable development.

Recommendations

MoE to scale-up efforts to register all preschools and educational institutions for closer coordination and management.

An in-depth review of the TVET programme to align the different requirements and perspectives and formulate a renewed and coherent TVET strategy.

Strengthen second chance multi-level entry education and providing continuous and proper ecosystem for TVET education through strategic collaboration with industries.

Provide a more flexible TVET programme to include online, part-time and module-based certification programmes in a bid to produce more future-ready talents.

Review and improve the current curriculum and provision of LLL strategies, to include alternative learning pathways such as the potential of blockchain for micro certification and monetizing skills, further promote dignity of work culture and, democratization of learning space in a fact changing world which is inclusive set to benefit the vulnerable group the most.

Recommendations (con't)

A coordinating mechanism is needed for LLL programmes. It is proposed that a registration exercise for all LLL programmes be initiated.

Regular consultations with industry players to ensure TVET programmes are relevant to industry needs.

Raise TVET enrolment by raising the public visibility of successful TVET graduates, their achievements and their status in society.

Collaboration with other key ministries such as Ministry of Agriculture & Food and other relevant industries are also crucial for disabled children and special needs categories to fulfill the local labour market for survival.

3. Closing the gender gap

The Gender Parity Index (GPI) is generally in favour of females except for TVET education. This trend is worrying in the sense that the "lost boys" will join the labour market younger, equipped with lower skills, and earn lower salaries that support a lower standard of living.

There is also negative perception among parents and students of the TVET pathway compared to university education.

Special measures are needed to encourage female teachers to attain the NPQEL to have more female headmasters and principals. In addition, the MoE should also encourage more academically qualified males to join the teaching profession.

Recommendations

Conduct in-depth studies on gender gaps in the academic and vocational pathways to address the following concerns:

- Why boys are not performing as well as girls
- Reducing the dropout rate of boys and how to better engage them in school
- Designing balanced TVET programmes that appeal to boys and girls

Encourage more female teachers to assume school leadership roles, and conduct a study to identify and mitigate the structural or social barriers that prevent them from doing so. A similar study is needed to find ways to encourage more males to join the teaching profession.

4. Improving education quality

Policy recommendations on the quality of education have been based on the improvement of learning outcomes, on school infrastructure and facilities, quality of teachers and leadership, pedagogy and teaching methods, curriculums, examinations and assessments, and school governance and management.

By 2025, the MEB set a target for student outcomes to reach the top one-third of international assessments, PISA and TIMSS.

Educators must be continuously empowered with better digital competency in order to develop a highly skilled generation of educators.

At the same time, the quality of teachers, teaching, and teaching profession has to be improved as teachers play critical role to deliver high-quality education and learning outcomes hence an integral part of SDG4 implementation.

Recommendations

Develop more robust and comprehensive teaching and learning programmes to raise learning proficiency and learning outcomes so that students are motivated and better prepared before moving to higher education levels.

Strengthen existing programmes and collaboration to advocate for ESD and GCED in formal, non-formal and informal education through system-wide interventions, teacher training, curriculums reform and pedagogical support.

Invest in strategies to empower teachers with technology, digital and critical competencies, including higher digital literacy and better use of remote modalities.

Strengthen and enhance ICT infrastructure, infostructure, and internet connection using intra-education-network as well as the provision of reliable efficient digital hardware. This initiative should cover all schools and institutions under the MoE, particularly pre-school and the rural interior communities. This will accelerate virtual learning environment and enable online and computer-based learning thus able to complement classroom learning.

Recommendations (con't)

Assess the educators on digital competencies and skills to upskill and reskill through relevant, updated, and strategic Continuous Professional Development (CPD), nurture ICT and 21st-century skills as well as promote digital literacy by using remote teaching resources to sustain the quality of education.

Attract and retain STEM talent through better remuneration package and continuous career development. Priority should be given for numerical and technical talent development. These initiatives should also be aimed to serve the needs for educators at primary level.

Embark on strategies to enhance teacher quality. This is to ensure that teachers are not only adequately recruited, but also professionally qualified i.e., Diploma as minimum requirement for preschool teachers' qualification, and adequately supported by a well-resourced, effective, and efficient system, with an extra focus on teachers' welfare and mental well-being.

5. Improving teaching and learning outcomes

The analysis of indicators for Target 4.1 highlighted the issue of students not achieving the minimum proficiency levels in reading and mathematics as they progress through higher levels of schooling.

Students struggling in their foundational years may benefit from special assistance through a periodic assessment of the students' proficiency.

In addition, the competency proficiency and skills in ICT remain elementary particularly among females, as they lag behind males in most ICT skills.

Therefore, teaching and learning outcomes need to be improved not only to achieve higher proficiency in reading and mathematics, but also in digital learning to enable an inclusive digital transformation and future skills development especially for marginalized children.

Recommendations

Integrate 4IR to create a sustainable education sector. The focus should be on inclusive digital transformation and future skills development particularly for the marginalized children.

Offers multiple application and services through strategic technological partnerships. This will enable a single experience in teaching and learning online hence accelerate education transformation.

Allow for democratization of learning by providing options to educators and students for digital and lifelong learning. This will not only develop digital competencies but also create critical and creative digital citizens.

Continue to expand Malaysia digital education policy framework to further enhance ICT infrastructure and internet connections at all schools to support online learning and computer-based learning to supplement traditional classroom instruction.

Recommendations (con't)

Develop comprehensive and more robust assessment systems to evaluate student competencies, particularly at grades 2 and 3, and the end of primary and lower secondary education. The areas of assessment should include foundational reading, writing and numeracy and non-cognitive skills. One special task of the assessment system should be to identify average and low-performing students.

Design formative assessments as an integral part of the teaching and learning process at all levels, with direct links to learning outcomes. Introduce in-school tuition classes for weaker students to strengthen their foundational capabilities and close learning gaps.

Develop appropriate instructional materials that comprise activities, assessments, workbooks, and teaching guides for teachers who can adapt them to their classroom contexts and help average and low-performing students.

Develop and implement effective feedback systems to support good teaching and teachers' professional development, ensuring that training has a positive impact on teachers' work.

6. Improving infrastructure and facilities

MoE could increase allocation for more ICT facilities to all schools and equip teachers with the ability to conduct online formal education programmes.

There is a considerable need to expand disabled-friendly infrastructure to serve students with special needs (SEN). Moving forward, the 12th Malaysia Plan has made commitments to equip at least one school in every district with a set of basic facilities for the disabled and to establish preschools for SEN (GENIUS Kurnia centres) in every state to ensure children with autism receive early intervention and education.

Therefore, the outcome-based budgeting for education sector should prioritize investment in teaching equipment, digital devices, connectivity, and school facilities and the welfare of children with disabilities, and other vulnerable and marginalized groups.

Recommendations

Raise the required level of investments to upgrade and replace damaged ICT facilities in all schools and equip teachers with a high level of capacity to conduct formal education programmes online.

Provide substantial portion to implement various initiatives under the related ministries and agencies to strengthen TVET sector. Additional allocation could also be provided for collaboration with industries which include the National Dual Training System (SLDN) and industry certification programmes

Post pandemic, the investment spending should focus on teaching equipment, digital devices, connectivity, and school facilities. The outcome should aim to attend to students with special needs, suffered from learning loss, the vulnerable and marginalized groups

More investment in early learning and early childhood development is also needed to ensure students are more prepared for future crisis i.e., recent pandemic crisis. Among higher commitments needed is more allocation required for food provision in preschool, which in turn will improve the children brain development and Malaysia's existing malnutrition issues.

Recommendations (con't)

In addition, investment in a greater number of preschool classes is needed especially in MoE schools in rural areas. The expansion and enforcement of Sekolah Model Khas Komprehensif (K11) is also crucial to reduce incidence of school dropouts among children, particularly in rural areas, Orang Asli settlements, and other remote areas.

Streamline public and private contributions in a more coordinated way to ensure spending outcome reach common goals for the education sector.

7. Adapting to the impact of the pandemic on education

The teacher training curriculum must be reviewed and adapted to empower teachers to handle and use new modes of teaching.

A careful assessment of the extent and nature of the learning loss must be carried out as soon as possible to identify disparities and formulate solutions to prevent them from becoming worse. With the reopening of schools, students and parents should be adequately supported to close the learning gaps.

Recommendations

Conduct a study on student's learning loss as a consequence of the pandemic. Collaborate with institutions and countries that have undertaken equivalent studies to learn from them and to share data and experience in pursuit of greater equity and inclusion.

Review and adapt the teacher training curriculum to equip teachers with the skills to utilise new modes of teaching that emerged in response to the pandemic.

In addition, strengthen class and school-based assessment method which will produce a more equitable outcome for the students, where full range of skills of each student will be evaluated instead of being fully exam-driven.

Section 6

Conclusion: Moving forward to 2030

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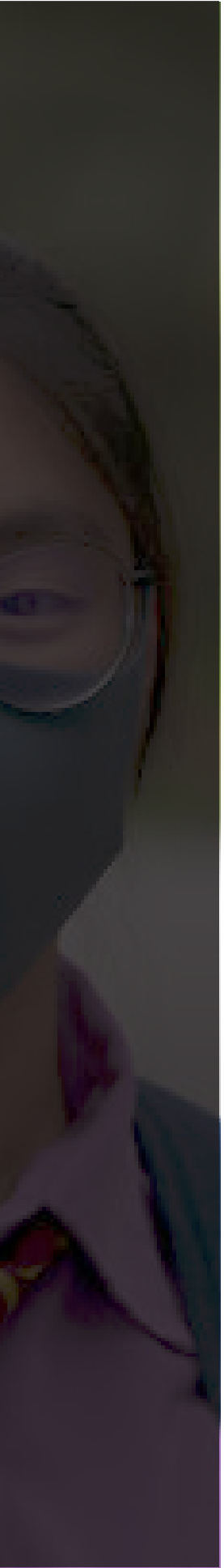

The 5-NPR on SDG 4 has highlighted the progress in achieving the SDG 4 targets as well as the national education aspirations outlined in the Malaysia Education Blueprint. Towards 2030, Malaysia is likely to find that socio-economic trends and global developments will raise the bar of quality learning outcomes.

Educational planning will have to be more forward-looking and cost-effective. Educational planning has lagged behind demographic movements: more schools were being built in rural areas, but with development, more people have moved to urban areas, stretching limited resources.

Existing strategies and efforts must be strengthened to reduce dropouts and increase enrolment to ensure continuous progress in providing universal access to education. The various areas impacted by declining enrolment, taking into account demographic changes and COVID-19 impacts, must be reviewed to identify the extent of these impacts and to prioritise strategies to 2030.

Malaysia must maintain the historically high investments in education to support post-pandemic recovery. Investment in the core components of education must be prioritised to give students who have suffered learning loss the resources to catch up. Moving forward, outcome-based budgeting should be strengthened to achieve more with less expenditure.

The systems should holistically evaluate student competencies and preparedness to learn at higher levels of education. Assessment systems must be continuously developed to be robust, comprehensive and aligned with international assessments. Robust assessment results at all levels can strengthen early warning systems and trigger targeted remedial interventions to prevent at-risk students from dropping out of school.

The skills for work and lifelong learning, especially digital skills, must be made available for all to ensure that no one is left behind on the nation's journey towards becoming a knowledge society and high-income economy. The nature of basic and TVET programmes will change in line with technological developments in industry, e.g., the Fourth Industrial Revolution (4IR), quantum computing, nanotechnology, AI, digitalisation of economic activities and IoT.

There is a need to strengthen institutional arrangement and inter-agency coordination on data, monitoring and implementation to reflect the spirit of the SDGs and provide the best education outcomes for all.

Seven indicators were selected consisting of 17 values targeted for year 2025 and 2030 to help identify data gaps that hamper SDG 4 monitoring. Hence national policy for education must continue to place inclusion, equity, quality education and lifelong learning at the forefront of the national education agenda to ensure Malaysia stays on track to achieve SDG 4 by 2030.

Section 7
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Section 8
Glossary

Term	Definition
Adult Education	Adult education, which may be formal, non-formal or informal, is part of lifelong learning (LLL). The diversity of lifelong learning (LLL) makes monitoring rather difficult. There is some disaggregated and unsystematic information on adult learners, and constructing a full picture of adult education is challenging. In September 2021, DOSM modified the National Household Indicators Survey28 to include a section on formal and non-formal education. The survey results should form a base of more accurate future reporting on adult education.
Classification of ICT Skill Level	The International Telecommunication Union (ITU) aggregated the ICT skills type into three levels, namely basic, standard and advanced skills. **Basic Skills:** Copying or moving a file or folder; Using copy and paste tools to duplicate or move information within a document; Sending an e-mail with attached files; Transferring files between a computer and other devices. **Standard Skills:** Using basic arithmetic formulas in spreadsheet; Connecting and installing new device; Searching, downloading, installing and configuring software; Creating electronic presentations using computer software **Advanced Skills:** Writing a computer program using a specialised programming language.
Early Childhood Care and Education (ECCE)	ECCE in Malaysia is based on the notion of every child's right to quality care and holistic development during the early years of life – physical, emotional, social, intellectual, and health. ECCE comprises childcare centres for children aged 0-4 years and preschools for children aged 4-6 years. In Malaysia, children go to preschool as early as four years old. The growth and development of children aged 0-4 years old come under the purview of the Ministry of Women, Family and Community Development (MWFCD). Through the Department of Social Welfare (Jabatan Kebajikan Masyarakat Malaysia – JKM), MWFCD keeps a register of all childcare centres (also known as taska) in the country. All childcare centres must be registered with JKM. While MWFCD is responsible for approving and establishing childcare centres, JKM serves as the main regulator and coordinator of ECCE programmes. Meanwhile, preschools for children aged 4-6 years comes under the Ministry of Education, the Ministry of Rural and Regional Development and the Department of National Unity under the Prime Minister's Department. The Ministry of Rural Development pioneered setting up preschools in the early 1970s. Other preschool providers include Angkatan Belia Islam Malaysia (ABIM),23 Jabatan Agama Islam Negeri (JAIN) and private bodies.

GER for Tertiary Education	The Gross Enrolment Ratio (GER) shows the level of participation by sex at a given level of education and indicates the capacity of the education system to enrol students of a particular age group. GER for tertiary education refers to total enrolment in tertiary education expressed as a percentage of the population in the 5-year age group immediately following upper secondary education.30 In Malaysia's case, the population age group used is 18-22 years.
Global Citizenship Education (GCED) and Education for Sustainable Development (ESD)	GCED aims to empower learners of all ages to assume active roles, both locally and globally, in building more peaceful, tolerant, inclusive and secure societies. Key learning outcomes, learner attributes, topics and learning objectives in GCED are based on cognitive, socio-emotional and behavioural domains of learning that are interlinked and integrated with the learning process.46 ESD is a key enabler of all other SDGs, preparing learners of all ages to find solutions to the most urgent problems of sustainability today, such as climate change, environmental degradation, loss of biodiversity, poverty and inequality.
Gross Enrolment Rate (GER)	The Gross Enrolment Rate (GER) measures total enrolment in a specific level of education regardless of age, expressed as a percentage of the eligible official school-age population corresponding to the same level of education in a given school year.
Gross Intake Ratio (GIR) to the last grade	Defined as the number of new entrants in the last grade of the given level of education divided by the number of live births minus deaths of the intended entrance age to the last grade of that level of education It measures the percentage of students entering the last grade (of primary or lower secondary or upper secondary) to the intended entrance age. The GIR reflects the impacts of past policies, programmes and interventions on enrolment and completion of education.
Inclusive Education Programme	Special needs students learning with other students in the same classroom in government and government-aided schools.
Literacy and Numeracy Screening (LINUS)	The programme was carried out to ensure that students have acquired basic literacy and numeracy skills. It is particularly aimed at helping those who have fallen behind catch up with mainstream education. LINUS was launched in 2010 to screen primary grade 1 to 3 children in Bahasa Melayu literacy and numeracy skills. In 2013, the LINUS 2.0 was introduced to also include literacy screening in the English language. The LINUS assessment was discontinued in 2019 and will soon be replaced by PLaN (Program Literasi dan Numerasi Sekolah Rendah).

Literacy Rates	Refers to children "ever attended school".
Out-of-school children (OOSC)	Refers to children and young people who should be in school but are not for various reasons. Identifying Out-of-School Children (OOSC) will allow the Government to design appropriate policies and programmes that ensure that this group of children will not only have access to education, but also to be able to complete it.
Participation rate in technical-vocational programmes (15- to 24-year-olds) by sex	Refers by UNESCO as the percentage of young people aged 15-24 years participating in technical or vocational education in formal or non-formal (e.g., work-based or other settings) education, at a given date or period. The indicator is meant to show the level of participation of youth in technical and vocational education and training.
Participation rate of youth and adults in formal and non-formal education and training	Youths are defined as persons aged 15-24 years and adults as those aged 25-64 years. This indicator refers to the people in selected age groups as a percentage of the population of the same age who participated in formal or non-formal education or training in the previous 12 months. Formal education and training are defined as organised education provided by schools, colleges, universities and other formal educational institutions. Non-formal education takes place both within and outside educational institutions and may cover learning that imparts adult literacy, life skills, work skills, and general culture.
Persons with Disabilities (PWD)	The term PWDs is broadly defined as persons with long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers, may hinder their full and effective participation in society. JKM define a PWD as a person displaying at least one of seven types of impairment: learning, psychosocial, physical, visual, hearing, speech or multiple impairments.
Programme for International Student Assessment (PISA)	PISA is a triennial survey of 15-year-old students that assesses the extent to which they have acquired the key knowledge and skills essential for full participation in society. The assessment focuses on proficiency in reading, mathematics and science. Malaysia participated in PISA 2018 together with 78 other countries.
PT3 (Pentaksiran Tingkatan 3)	It is a school-based assessment introduced in 2014 for Form 3 (grade 9) students, replacing the previous lower secondary assessment known as PMR (Penilaian Menengah Rendah).

Pupil-trained teacher ratio	The pupil-trained teacher ratio measures give a broad indication of teaching workloads, human resource allocations, and the average amount of time and individual attention a pupil is likely to receive from trained teachers. Since well-trained teachers59 play a key role in ensuring the quality of education, the pupil-trained teacher ratio is an instructive determinant of learning outcomes and an indicator of the overall quality of an education system.
Refugee, Stateless and Undocumented Children	By international law, a stateless person is a person not recognised as a national by any state under the operation of its laws. Children in Malaysia can be categorised as stateless because: the parents failed to register their birth, they are adopted or abandoned, or they are children of refugees and undocumented migrants. Children whose births are not registered or lack official documents of identity face a similar problem. The official registration of birth is essential to avoid statelessness, ensure the protection of law, and receive the benefits of citizenship. In addition, children born to unmarried Malaysian parents are vulnerable to problems of birth registration and subsequent documentation of citizenship. Since it is not a signatory to the 1951 Refugee Convention, Malaysia does not accord protection and legal status to refugee children. In this respect, the law does not distinguish between asylum seekers, refugees, immigrants, and undocumented or stateless people.
Southeast Asia Primary Learning Metrics (SEA-PLM)	The SEA-PLM is a new regional large-scale student learning assessment programme designed by and for countries in Southeast Asia. The programme monitors learning outcomes across and within countries to understand what factors facilitate or hinder effective learning of children along their school journey. By doing so, each participating country can develop and implement policies and programmes to improve student learning outcomes. Six countries from the region participated in SEA-PLM 2019: Cambodia, Lao PDR, Malaysia, Myanmar, Philippines and Viet Nam. This first round focused on grade 5 students, and three learning domains: reading, writing and mathematics.
Special Education Integration Programme	Special needs students studying in special classes in mainstream schools.
Special Education Schools	Schools that provide special education for students with special education needs.
Teacher attrition rate	It tracks the proportion of teachers leaving the profession for personal or professional reasons, including retirement.

Technical, Vocational, Tertiary and Adult Education in Malaysia	Against the backdrop of rapidly changing industrialisation, TVET can boost economic productivity and nurture opportunities for decent work for all. TVET programmes are found in formal education systems at the secondary, post-secondary non-tertiary and tertiary levels, and in non-formal training in workplace settings. TVET is an integral part of the education system in Malaysia with a current enrolment of over 162,000. As one of the major pillars of education, TVET has been given priority in the 11th and 12th Malaysia Plans. Malaysia targeted the creation of 1.3 million new jobs with TVET skills by 2020 to meet industrial requirements. TVET education is offered by seven main government ministries,24 numerous agencies and private skills training institutes. Improving the TVET ecosystem has been designated a 'Game Changer' in the 12th Malaysia Plan to produce future-ready talent that can better meet industry demand.25 Several pathways to pursue a TVET education are open to youths who intend to acquire particular skills. TVET education is offered in public schools beyond the Lower Secondary (Form 3) level.26 The MoE conducts a 4-year vocational education programme at the Kolej Vokasional (Vocational College) that leads to the award of Diploma Vokasional Malaysia (DVM or Malaysian Vocational Diploma). After Form 5, students can also enrol at the MOHE's Kolej Komuniti (Community College) or polytechnics for vocational education which lead to certificate, diploma and advanced diploma qualifications. TVET is also available to those who have left school, e.g., after Form 3. Students in MoE's Vocational Colleges may participate in apprenticeship programmes conducted in collaboration with industry partners across a range of industries. Such programmes use the Sistem Latihan Dual Nasional (SLDN) model, combining industry exposure and work experience with theoretical knowledge gained in classrooms. Some examples of successful partnerships include: (i) The McDonald's Malaysia Apprenticeship Programme, where students are provided with 18 months of vocational training at McDonald's while they attend classes at a vocational college; (ii) ProjekLINK with Shell, a 10-month industrial welder training programme run by the vocational colleges of Miri, Likas, and Bintulu in Sarawak with technical and financial support from Shell; and (iii) the IBM P- TECH Programme, a learning and facilitation model based on IBM's digital and technology standards and workforce competency requirements jointly owned by the MoE and IBM and strategically supported by the Malaysia Digital Economy Corporation (MDEC). The STPM/Matriculation school leavers and Diploma holders can also pursue bachelor's degrees in universities affiliated with the Malaysia Technical University Network (MTUN) that specialises in higher technical and technology practice-oriented programmes. Finally, students can undergo skills training under the National Skills Qualification Framework which has five levels (SKM Level 1 – 5) leading to Certificate, Diploma and Advanced Diploma qualifications.

Tertiary Education	Tertiary Education The MOHE oversees tertiary education namely the public universities, polytechnics, community colleges and private institutes of higher learning. There are presently 20 public universities and 51 private universities, 39 private university colleges and 10 foreign university branch campuses. 27 Polytechnics and Community Colleges totalled 36 and 103 respectively. In addition, there are 335 private colleges.
The completion rate	Defined as the enrolment in the last grade divided by the enrolment at the entrance age for the last grade of the given level of education. The definition adopted by MoE20 indicates the ability of the formal schooling system to retain and ensure students enrolled at the entrance age complete a given level of education.
The Department of Orang Asli Development (Jabatan Kemajuan Orang Asli - JAKOA)	JAKOA is an agency under the Ministry of Rural Development. JAKOA's objectives are to eradicate poverty among the Orang Asli, improve their health, promote education, and secure their livelihood. Education is one of the main development programmes for the Orang Asli. The responsibility for indigenous education was transferred to the MoE in the mid-1990s. By 2001, all Orang Asli schools permanently came under MoE oversight, and they used a national curriculum modelled after the national public schools. MoE implemented several policies and programmes to increase literacy rate, retention rate in schools, performance in assessments, and to develop inclusive education.
The pupil-qualified teacher ratio	Refers to the ratio of pupils to a qualified teacher – that is, someone with the minimum academic qualification, or deemed to be academically qualified to teach a subject, according to national standards.
Trends in International Mathematics and Science Study (TIMSS)	The overall goal of TIMSS is to assess the students' understanding and learning of mathematics and science. Malaysia has participated in the TIMSS grade 8 assessment since TIMSS 1999 and has also participated in the latest round for 2019. There are four international benchmarks along the TIMSS achievement scale: Advanced International Benchmark (625 points), High International Benchmark (550 points), Intermediate International Benchmark (475 points), and Low International Benchmark (400 points).

UPSR (Ujian Pencapaian Sekolah Rendah)	UPSR (Ujian Pencapaian Sekolah Rendah) Until 2019, UPSR was conducted nationwide in public schools and private schools which follow the national curriculum in September annually for grade 6 students. It was not conducted in 2020 because of the COVID-19 pandemic and was abolished in 2021. However, student achievement will be monitored via school-based assessment.
Youth and Adult Literacy and Numeracy	Youth and Adult Literacy and Numeracy Literacy and numeracy are fundamental human rights and are essential for quality learning, decent work, health, well-being, and participation in society. With these skills, youth and adults can improve their chances of getting a job, perform well at work, earn decent salaries, and lead fulfilling, meaningful and useful lives. A high level of literacy is a precondition for a skilful, knowledgeable and qualified workforce.

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