

Accelerating Human Capital Development for an Advanced Nation

Introduction

Past Performance,
2016-2017

Performance of
Selected Outcomes

Performance of Focus
Area and Game
Changer

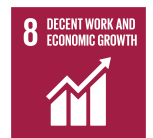
Issues and Challenges

Conclusion

4

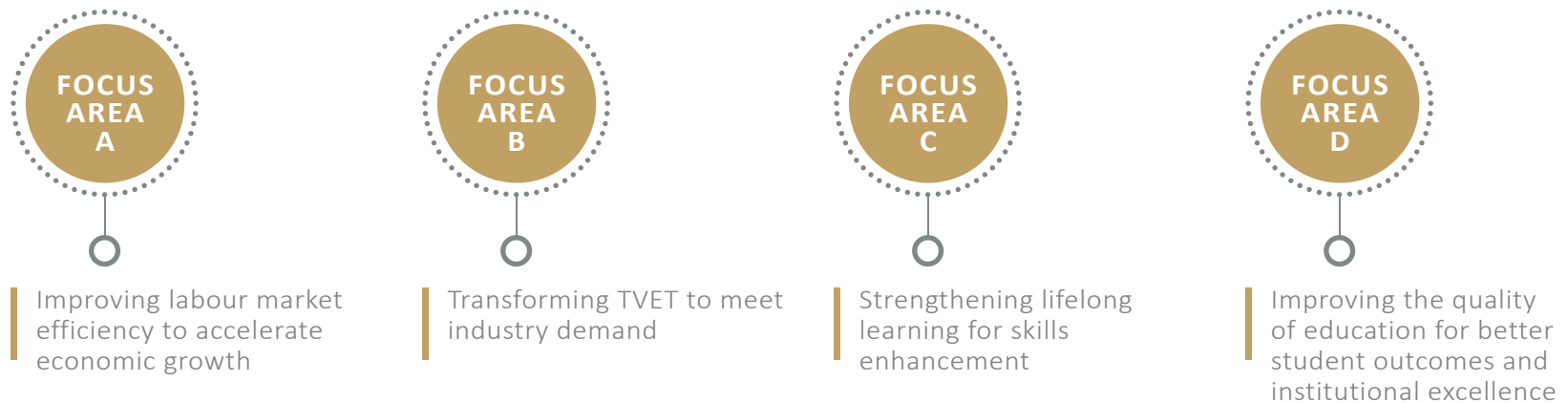
Introduction

The Eleventh Malaysia Plan, 2016-2020 sets out key strategies to enhance human capital development to meet the needs of an advanced nation. These strategies take into account the changing needs arising from the emergence of global megatrends such as disruptive technologies, shifts in demographics towards greater urbanisation and ageing population. These developments will significantly change the structure of future jobs, skills requirement and demand on the education system. During the review period, 2016-2017, Malaysia has maintained full employment while improving labour productivity. Achievements were also made in mainstreaming and broadening access to quality Technical and Vocational Education and Training (TVET) programmes, expanding lifelong learning programmes and improving the quality of education as well as global ranking of local universities. Despite these achievements, major challenges persist in terms of low creation of skilled jobs, slow wage growth, low female labour force participation rate as well as high youth unemployment. In addition, TVET landscape remains fragmented, while issues such as low student performance, existence of dilapidated schools and quality of graduates have raised concerns.



Past Performance, 2016-2017

During the review period, various initiatives under four focus areas have been undertaken to enhance human capital development where steady progress was recorded towards achieving the targets of the Eleventh Plan. The four focus areas are as follows:



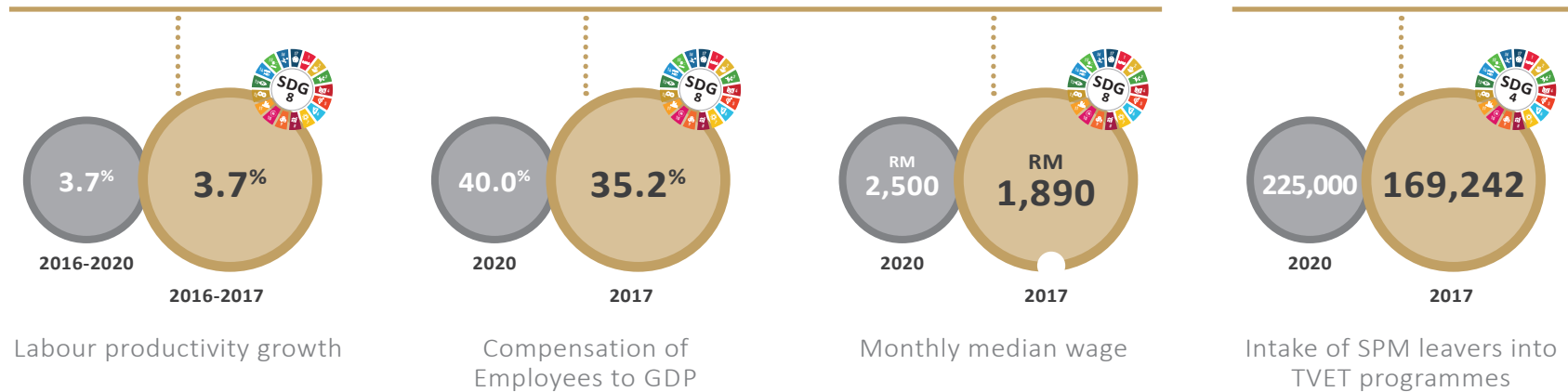
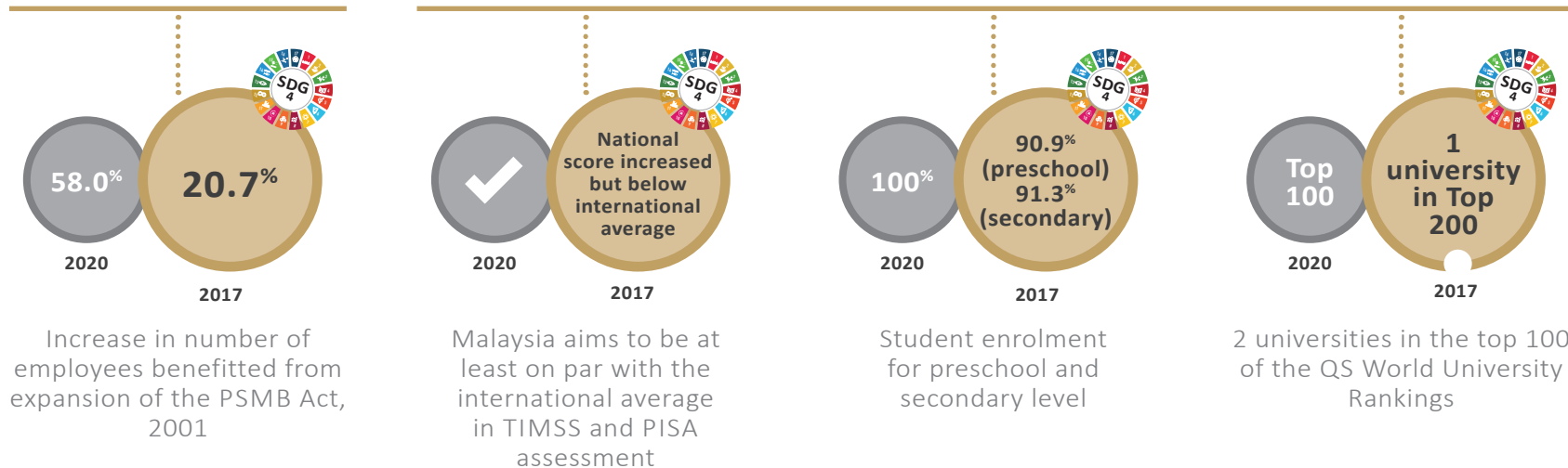
Performance of Selected Outcomes

Eight outcomes were identified where six outcomes were on track in achieving the target. These include labour productivity growth, intake of school leavers pursuing TVET after *Sijil Pelajaran Malaysia* (SPM) and student enrolment from preschool to secondary level. Two outcomes were below target, namely raising monthly median wage and positioning two universities in the top 100 of the QS World University Rankings. The performance of the selected outcomes is as shown in *Exhibit 4-1*.

Exhibit 4-1

Highlights

Eleventh Malaysia Plan: Selected Outcomes and Performance


Improving labour market efficiency
to accelerate economic
growthTransforming TVET
to meet industry
demandStrengthening
lifelong learning for
skills enhancement

● Original Target ● Performance

Performance of Focus Area and Game Changer

During the review period, achievements of key focus areas for human capital development have been encouraging. Malaysia made notable progress in maintaining full employment as well as improving labour productivity and wages. At the same time, the governance structure of TVET has been enhanced while the

coverage of lifelong learning programmes has been expanded. The quality of education system and ranking of local universities at the global level have also improved. The key results of the focus area and game changer are as follows:

Focus Area	Key Result, 2016-2017
 <p data-bbox="189 1003 667 1104">Improving Labour Market Efficiency to Accelerate Economic Growth</p>	<ul style="list-style-type: none"> <li data-bbox="758 822 1735 854">● Malaysia maintained full employment at unemployment rate of 3.4% in 2017 <li data-bbox="758 895 1709 927">● Composition of skilled workers increased from 26% in 2015 to 28% in 2017 <li data-bbox="758 967 1701 1036">● Participation of employers in the Productivity-Linked Wage System (PLWS) increased from 78,962 in 2015 to 81,057 in 2017 <li data-bbox="758 1076 1776 1145">● Female labour force participation rate increased from 54.1% in 2015 to 54.7% in 2017 <li data-bbox="758 1185 1770 1253">● Composition of low-skilled foreign workers to total labour force decreased from 17% in 2015 to 11% in 2017 <li data-bbox="758 1294 1790 1399">● Critical Occupations List, 2017/2018 published as a guide to address mismatch in the labour market. This list identifies jobs that have difficulties of being filled due to shortage of qualified candidates <li data-bbox="758 1439 1761 1507">● <i>Skim Latihan 1Malaysia (SL1M)</i> benefitted 35,240 graduates to gain on-the-job training experience and improved employability

Labour market conditions have recorded overall improvements, particularly in increasing labour productivity and maintaining low unemployment rate. However, participation of female in labour force remained low due to unattractive labour market conditions

including unattractive wages, high presence of low-skilled foreign workers and skills mismatch. In the skilled category, slow growth of job creation has suppressed growth in wages and productivity as well as increased incidences of underemployment¹.

¹ Underemployment refers to the condition of employee with higher education qualification who works below the qualification level.

Focus Area	Key Result, 2016-2017
<div data-bbox="526 546 691 701" data-label="Image"> </div> <p data-bbox="294 721 691 788">Transforming TVET to Meet Industry Demand</p> <div data-bbox="560 822 691 1003" data-label="Image"> </div> <p data-bbox="580 1016 677 1070">Game Changer</p>	<p data-bbox="782 546 1030 576">TVET governance</p> <ul data-bbox="782 612 1782 802" style="list-style-type: none"> <li data-bbox="782 612 1782 673">● Harmonised accreditation system developed and incorporated into the revised Malaysian Qualifications Framework <li data-bbox="782 709 1782 802">● Platform for harmonised rating system developed for both public and private TVET institutions based on Star Rating System under the Ministry of Human Resources and MyTVET Instrument under the Ministry of Education <p data-bbox="782 834 1378 864">Quality and delivery of TVET programmes</p> <ul data-bbox="782 901 1810 1447" style="list-style-type: none"> <li data-bbox="782 901 1810 961">● TVET institutions offered specialised programmes in niche areas including aerospace, automotive and furniture manufacturing <li data-bbox="782 997 1810 1058">● TVET institutions collaborated actively with more than 100 companies benefitted more than 10,000 trainees <li data-bbox="782 1094 1810 1155">● Flexible training approach implemented in the form of modular courses and short-term training <li data-bbox="782 1191 1810 1251">● National Dual Training System (NDTS) benefitted 20,975 trainees including 8,054 youth under the Special NDTS in 2017 <li data-bbox="782 1288 1810 1348">● TVET Graduate Tracer Study System developed in 2017 and rolled-out to all TVET institutions <li data-bbox="782 1384 1810 1445">● Contestable funding programme and matching grants introduced to promote industry-based training programmes benefitted 4,760 trainees in 2017 <p data-bbox="782 1479 1050 1509">Quality instructors</p> <ul data-bbox="782 1546 1810 1836" style="list-style-type: none"> <li data-bbox="782 1546 1810 1606">● Instructors with Vocational Instructor Certification increased by 52% from 3,063 in 2015 to 5,868 in 2017 <li data-bbox="782 1643 1810 1735">● eProfiling System developed to register and collect information on the skills and competencies of TVET instructors, registered more than 20,000 instructors from 700 public training institutions as of 2017 <li data-bbox="782 1772 1810 1836">● Industrial Attachment Training Programme introduced in 2017 benefitted 217 instructors


Focus Area	Key Result, 2016-2017
	<p>Student intake</p> <ul style="list-style-type: none"> ● Intake of TVET students increased from 163,269 in 2016 to 169,242 in 2017 <p>Rebranding TVET</p> <ul style="list-style-type: none"> ● Establishment of Malaysia Board of Technologists in 2016 to recognise technologists and TVET practitioners ● TVET Malaysia launched in 2017 to streamline the management and implementation of TVET programmes by various ministries

Transforming TVET by enabling an industry-led approach is crucial to produce skilled human capital that meets the industry demand and supports the migration of activities in all economic sectors towards knowledge-intensive activities. In this regard, TVET was identified as a game changer to accelerate the development of skilled human capital. Several initiatives have been implemented including the launch of TVET Malaysia in 2017 to mainstream and rebrand TVET. The Ministry of Human Resources (MoHR) was mandated to lead TVET Malaysia in formulating a comprehensive TVET master plan by 2020 and promoting TVET-related jobs as the preferred choice.

The number of school leavers pursuing TVET after SPM increased marginally by 3.7% to 169,242 in 2017. To improve the intake, ministries and agencies have been promoting TVET through various platforms and programmes. For example, SkillsMalaysia under MoHR has intensified TVET awareness through activities such as roadshows, campaigns and participation in competitions at national and international levels.


Towards the establishment of a harmonised accreditation system for academic and TVET stream, the Department of Skills Development (JPK) under the MoHR and Malaysian Qualifications Agency (MQA) under the Ministry of Education have revised and developed a more comprehensive Malaysian Qualifications Framework (MQF). The framework serves as a reference on the pathways for technical education and skills training, and establishes a uniform definition for TVET. The revised MQF adopted the Code of Practice for TVET Programme Accreditation while the Joint Technical Committee was established to oversee policies pertaining to accreditation of TVET, which include mobility of students between TVET institutions.

The involvement of the industry is crucial in developing the industry-led curriculum as well as enabling the instructors to leverage industry expertise to improve the effectiveness of teaching and learning in the TVET institution. Thus, in addressing skills gap to meet industry requirements, Industry Lead Bodies (ILBs) play a significant role to provide input in developing curriculum content. During the review period, an additional nine ILBs have been formed and 1,819 National Occupational Skills Standard (NOSS) have been developed. The Centre for Instructor and Advanced Skill Training (CIASST) has also developed the eProfiling System, which serves as a database on skills and competencies of all TVET instructors.

Focus Area	Key Result, 2016-2017
 <p data-bbox="233 697 691 762">Strengthening Lifelong Learning for Skills Enhancement</p>	<ul style="list-style-type: none"> <li data-bbox="782 520 1796 580">● Lifelong learning programme under the <i>Pelan Induk Pembelajaran Sepanjang Hayat Peringkat Nasional 2011-2020</i> benefitted 2.3 million participants in 2016 <li data-bbox="782 620 1796 681">● The coverage of the <i>Pembangunan Sumber Manusia Berhad Act 2001</i> expanded to include more subsectors except construction and finance <li data-bbox="782 711 1796 802">● The number of employees eligible for training under Human Resources Development Fund (HRDF) increased from 1.8 million in 2015 to 2.1 million in 2017 <li data-bbox="782 842 1796 929">● HRDF collaborated with SME Corp to provide training to small and medium enterprises (SMEs) not covered under the PSMB Act 2001, benefitted 6,697 employees in 2016-2017

The lifelong learning programme, a collaboration of 14 ministries under *Pelan Induk Pembelajaran Sepanjang Hayat Peringkat Nasional 2011-2020*, aims to continuously upgrade and improve the skills and knowledge of Malaysians. The expansion of the *Pembangunan Sumber Manusia Berhad* (PSMB) Act 2001 has enhanced the role of Human Resources Development Fund (HRDF)

as the main body in upskilling and reskilling of the workforce. The first schedule of the PSMB Act 2001 was amended in 2017 to expand its coverage to include additional services subsectors. This effort also aims to streamline the feasibility criteria for small and medium enterprises.

Focus Area	Key Result, 2016-2017
 <p data-bbox="280 1479 691 1614">Improving the Quality of Education for Better Student Outcomes and Institutional Excellence</p>	<p data-bbox="782 1302 1010 1332">Basic education</p> <ul style="list-style-type: none"> <li data-bbox="782 1366 1796 1427">● The performance of students in the TIMSS 2015¹ improved, compared with the previous cycle in 2011, with higher mean scores for mathematics and science <li data-bbox="782 1467 1796 1497">● Performance of students in the PISA 2015² improved, compared with PISA 2012 <li data-bbox="782 1528 1796 1618">● 1,321 School Improvement Specialist Coaches (SISC+) and 345 School Improvement Partners (SIPartners+) deployed to provide coaching to selected teachers and principals <li data-bbox="782 1659 1796 1689">● Number of students enrolled in preschool was 407,785 in 2017 <li data-bbox="782 1719 1796 1780">● Total of 2.7 million students enrolled in 7,985 primary schools and 2.2 million students in 2,835 secondary schools in 2017 <p data-bbox="782 1810 1860 1901">Notes: ¹ TIMSS is conducted by International Association for the Evaluation of Educational Achievement (IEA) once every four years since 1995. TIMSS 2015 is the latest cycle. ² PISA is conducted by Organisation for Economic Co-operation and Development (OECD) once every three years since 2000. PISA 2015 is the latest cycle.</p>

Focus Area	Key Result, 2016-2017
	<p>Higher education</p> <ul style="list-style-type: none"> ● Enrolment across all levels of study in Institutions of Higher Education (IHE) increased from 1.2 million in 2015 to 1.3 million in 2017 ● Enrolment of international students in IHE increased from 122,061 in 2015 to 136,293 in 2017 ● Composition of academic staff with PhD qualification in public universities increased from 43.7% in 2015 to 48.5% in 2017 ● Composition of students trained under structured entrepreneurial education increased from 34.6% in 2015 to 60% in 2017 ● RM1.6 billion of research grants distributed to fund 12,851 projects, which produced 11,428 postgraduate students, 11,683 publications and 819 intellectual properties ● Four additional public universities given autonomy status, totaling to 17 out of 20 public universities

The quality of basic education system which covers preschool, primary and secondary continuously improved by enhancing access to equitable education opportunities. The enrolment rate for preschool education remained high at 90.9%. Meanwhile, the enrolment rate for primary level continued to improve from 97.2% in 2015 to 97.9% in 2017 and continued to maintain universal enrolment² rate. At the secondary school level, the enrolment rate increased from 88.3% in 2015 to 91.3% in 2017. In addition, several initiatives were carried out to improve the quality of education for better student outcomes and institutional excellence. School-based assessment was implemented with strong emphasis on higher order thinking skills (HOTS). HOTS was integrated in the curriculum, assessment, pedagogy and co-curricular activities to inculcate a thinking culture. Furthermore, the science, technology, engineering and mathematics (STEM) education was improved to enhance existing curriculum in schools. The expected outcome aims to improve the performance of students to achieve at least on

par with the international average score in Trends in International Mathematics and Science Study (TIMSS) and Programme for International Student Assessment (PISA).

The focus of higher education aspires to improve student outcomes, empower governance of public universities, strengthen Industry Centres of Excellence (ICoE)³ and establish local universities of global repute. Among salient achievements in higher education during the review period include increased graduate employability rate and enrolment in public and private universities as well as better ranking of public universities in the global standing. Meanwhile, the quality of academicians in public universities has improved as reflected by the higher number of academic staff with PhD qualification. In addition, the number of publications and citations from research produced by public universities has also increased.

² Universal enrolment refers to enrolment rate which has reached at least 95% based on the definition by the United Nations Educational, Scientific and Cultural Organisation (UNESCO) Institute for Statistics.

³ The ICoE programme creates an avenue for industry players to establish laboratories and teaching facilities within the universities to provide students with exposure to the latest technologies.

Issues and Challenges



Labour Market

In order for the **labour market** to operate more efficiently and support economic growth, issues and challenges such as skilled composition of jobs, reliance on low-skilled foreign workers, youth unemployment, graduate underemployment and low female labour force participation rate need to be addressed. There is also a mismatch between demand and supply in the labour market. This is particularly evident in the skilled job category where only 112,300 jobs were created as compared to 306,808 graduates produced by IHE in 2017. The number of registered¹ foreign workers reduced from 2.1 million in 2015 to 1.8 million in 2017. However, dependency on low-skilled foreign workers was still high in several sectors, including construction at 28.3%, agriculture at 25.8%, and manufacturing at 25.7%.

Malaysia continued to attain full employment with 3.4% unemployment rate. However, the unemployment rate among youth (aged 15-24 years) increased from 10.7% in 2015 to 10.8% in 2017, which was equivalent to 283,000 youth including fresh graduates. In addition, 146,000 or 40.4% of total youth graduates in 2016 were employed in semi-skilled job category, implying underemployment. Female labour force participation rate grew strongly during the Tenth Malaysia Plan, from 46.8% in 2010 to 54.1% in 2015 but subsequently increased marginally to 54.7% in 2017. Based on the Labour Force Survey 2017, there were still 4.8 million women in the working age category outside of labour force. This number represented 67.5% of the total working age population who are outside of labour force, compared to only 32.5% who are men. This indicates underutilised potential human capital.

Notes: ¹ The data of registered foreign workers is based on the amount of *Pas Lawatan Kerja Sementara* issued by the Ministry of Home Affairs.



TVET

The existence of two accreditation bodies, namely the MQA and JPK, has led to differing standards, rating systems and quality of the **TVET** programmes. TVET diploma graduates with JPK accredited programmes still have limited access to pursue higher education at degree level. This is due to the JPK curriculum which emphasises on practical components, thus perceived as less academically inclined as well as different quality assurance mechanism between MQA and JPK. On the other hand, TVET diploma graduates from MQA accredited institutions have better opportunities to pursue higher education in IHE. Due to these differences, graduates of JPK accredited programmes are perceived to be disadvantaged in terms of opportunity for further study, employment prospect and starting salary.

The TVET landscape is fragmented as TVET programmes are offered by various institutions such as agencies under different ministries, state skills development centres and private institutions. The TVET programmes offered by these institutions are often similar but with varying standards and lack areas of specialisation. Although TVET graduates and practitioners are classified as technologists, they are not fully recognised by the industry. Hence, TVET graduates are not recognised as professionals and are unable to demand higher wages. As a result, 72% of TVET graduates received a starting salary of less than RM1,500 monthly¹. In addition, the lack of practical industry exposure among TVET instructors in public institutions affected the effectiveness of the TVET training.

Notes: ¹Based on Study on the Demand and Supply of Human Capital Requirements on TVET, 2016.



Lifelong Learning

Currently, **lifelong learning** initiatives are being implemented by various ministries and agencies for Malaysians aged 15 years and above, those who have dropped out of formal education as well as for those who are employed, unemployed and retired. However, these initiatives lack of coordination in terms of planning and implementation. This is exacerbated by the absence of an effective regulatory framework. Thus, there is a need to ensure programmes are coordinated effectively and resources are utilised optimally. There is also a lack of proper recognition by employers to incentivise employees to undertake lifelong learning. In addition, the uptake of lifelong learning programmes is hampered by the lack of information dissemination, promotion and industry involvement. Meanwhile, the PSMB Act 2001, that regulates lifelong learning programme for Malaysian workers, does not comprehensively cover all economic sectors.



Education

The enrolment rate in preschool for 2017 was below the targeted national rate, mainly due to the lack of awareness on the importance of preschool **education**. Although the enrolment rate at the lower secondary level was at 95.6%, the upper secondary level for Form 4 and Form 5 enrolment rate recorded a lower percentage at 84.8%. This implies that students are opting out from continuing their secondary education in upper secondary level.

There still remain many dilapidated schools in rural areas especially in Sabah and Sarawak despite the continuous investment in the physical infrastructure in education sector. This situation poses many challenges to both teachers and students as it affects the quality of teaching and learning. Students need to learn in a safe, hygienic and conducive environment to improve their academic performance.

Performance of students in the TIMSS and PISA has raised concerns on the quality of the education system. The achievement in TIMSS 2015 was lower than the target of 500 points despite the increase in scores compared to the previous cycle in 2011¹, with 465 points for mathematics and 471 points for science. Meanwhile, the international average for PISA 2015 was 490 for mathematics and 493 for both reading and science. Malaysia scored lower than the international average, with 446 points for mathematics, 431 points for reading and 443 points for science, despite recording improvements in all the domain subjects as compared to the previous cycle in 2012².

Notes: ¹ The scores for TIMSS 2011 at national level were 440 for mathematics and 426 for science.

² The scores for PISA 2012 at national level were 421 for mathematics, 398 for reading and 420 for science.



Higher Education

Graduate employability rate for **higher education** has improved steadily over the years from 76.1% in 2015 to 79.1% in 2017. Nevertheless, feedback from industry highlighted that graduates lacked problem solving and communication skills. Moreover, the percentage of graduates employed in the semi-skilled job category increased from 28.2% in 2015 to 35.2% in 2017 implying a mismatch and underemployment.

Meanwhile, the research, development and innovation (R&D&I) activities undertaken by IHE are uncoordinated and fragmented due to lack of collaboration between academia, industry and public research institutions. In addition, industry has yet to fully leverage the capabilities and expertise in ICoE of IHE. Even though there is a marked increase in publications, intellectual properties and postgraduates, utilisation of R&D&I output by IHE remains low. In terms of governance among 17 public universities with autonomy status, challenges remain in the areas of operation, management and financial sustainability. There is also a need of a more balanced representation of professionals and industry in the governing board of universities.

Conclusion

Some progress was made during the review period, particularly in increasing labour productivity and wages, strengthening TVET, expanding lifelong learning and improving the quality of education. However, several issues and challenges need to be addressed, including the need to improve labour market efficiency, transform the TVET and education system and further strengthen lifelong learning programmes. Therefore, concerted efforts are needed to accelerate human capital development to meet the requirements of an advanced nation.



