TVET DEVELOPMENT AND INSTITUTIONAL PROFILE

FOR TVET LEADERSHIP AND MANAGEMENT BENCHMARKING PROGRAMME

BEIJING , CHINA, 14-20 AUGUST 2023

CO-ORGANIZED BY:

Smart Learning Institute of Beijing Normal University
SEAMEO Regional Centre for Technical Education Development (SEAMEO TED)

Contents

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Introduction

Promoting Technical and vocational education and training (TVET), one of the seven priority areas of Southeast Asian education agenda, is imperative in supporting socioeconomic development, especially increasing employment rate, coping with complex structural challenges in the labor market, and providing sufficient qualified technical and skilled professionals. TVET cooperation between China and Southeast Asian countries is deepening with closer economic and trade ties, playing a fundamental role in enhancing people's mutual understanding and boosting regional socioeconomic development. In recent years, China and Southeast Asian countries have been jointly endeavoring towards a China-ASEAN TVET community, with successful collaborations such as joint degree programs, school-enterprise integration, joint training of administrators and faculty in the fields of advanced manufacturing, e-commerce, AI, high-speed train, ICT, smart agriculture etc., which have contributed to poverty alleviation, employment promotion and industrial transformation.

Management and leadership are keys to organizational development, efficiency and product development to ensure that employees can use their knowledge and skills to the fullest to achieve the organization's vision, mission and goals. Management and leadership cover the implementation of effective and efficient work, motivation of subordinates, assignment and assignment of subordinates according to the ability and skills of each staff, providing opportunities to develop staff capacity through training Conferences, seminars and study visits and a positive work environment.

The TVET Leadership and Management Programme for School principals are important for modern management and leadership practices in Southeast Asia and China, particularly for enhancing the roles of TVET institutions in improving teaching and learning in TVET subjects. Despite the differences in economic and industrial context, in some extend, there must be some practical lessons learns and good practice that China and ASEAN countries and TVET schools/colleges can draw and share to each other, particularly on adjusting their programs to respond to the changing skill needs; using technology in the delivery of training; training their teachers to upgrade their technical knowledge and practical skills and to promote student-centered teaching approach, institutionalizing their linkages with industries, and ensuring quality assurance mechanisms for TVET learners to contribute to their economic and industrial transformation. To realize the program, the study visit should be undertaken to capture the succinct of TVET insights from China and ASEAN countries.

During the program, all participants are required, but limited to, to join the Global Smart Education Conference: Education Transformation and Data Governance from 18 to 20 August to held in Beijing City with free of charges. The concept note for the conference is attached for your reference.

Objectives

The purposes of this program are as follows:

1) To share best practices of TVET policy and development between China and ASEAN;
2) To benchmark best practices from each other for TVET development;
3) To enhance the close cooperation between China and ASEAN in terms of TVET development;
4) To improve the roles and responsibilities of TVET school management for better quality of teaching, learning and management.

Participants

- Totally 35 participants have attended the program. They are TVET school management (principals/vice principals/presidents/vice presidents) of some vocational and technical high schools/colleges from 8 Southeast Asian countries including Brunei Darussalam, Cambodia, Indonesia, Malaysia, the Philippines, Singapore, Thailand and Timor-Leste.

- The criteria for selecting the participants are active members of SEA Vocational-Technical High Schools/College Network and principals/vice principals of technical and vocational high schools in the ASEAN countries.

Agenda

Date	Brief Activities
14 August 2023	Picking up at airport in Beijing and departing for Tianjin Arriving in Tianjin, checking in and releasing workshop materials
15 August 2023	Visit and investigation: Tianjin Light Industry Vocational Technical College The workshop opening ceremony Seminar on ASEAN-China Vocational Education Visit and investigation: Tianjin Motor Dies Co., Ltd. Cultural exchange activity (1): Tianjin Haihe River
16 August 2023	Visit and investigation: Tianjin Vocational College of Mechanics and Electricity Visit and investigation: Tianjin Maritime College Cultural exchange activity (2): Tianjin Ancient Culture Street The end of the tour in Tianjin and return to Beijing. Stay at Changping Campus, Beijing Normal University
17 August 2023	Cultural exchange activity (3): the Great Wall Exchange visit: China Education Association for International Exchange/ ASEAN-China Center
18 August 2023	Opening Ceremony of GSE 2023 Workshop: Vocational Education and Digital Technology Applications (part 1)
19 August 2023	Workshop: Vocational Education and Digital Technology Applications (part 2) Forum on Youth Skills Development and Digital Transformation
20 August 2023	Forum on Smart Village and Rural Education Transformation Visit and investigation: Alibaba Closing ceremony of GSE 2023
21 August 2023	Represents departure and transport to the airport

Expected Outcomes

The program are expected to produce outcomes as follow:

- TVET policy and development between China and ASEAN will be matched to the labor market needs mutually in terms of skills provision and resource allocation
- Best practices on TVET development and policies can be learnt and shared each other as take-home insights for individual country development plan
- Closer and closer relationship between China and ASEAN regarding market needs as ASEAN is a big market for China
- TVET school management effectiveness for principals and management as part of school-based management system
- TVET perception and dissemination will be enhanced engaging more stakeholders such as teachers, students, private sector, government and civil society for TVET development

TVET DEVELOPMENT AND INSTITUTIONAL PROFILE

TVET Development and Institutional Profile
POLITEKNIK BRUNEI (PB), BRUNEI DARUSSALAM

Prepared by Mr.Lim Kian Boon, Acting Director-Politeknik Brunei

Chapter 1: Introduction

1.1 Country Profile

Brunei Darussalam is a small country with great potential. It is ranked number one in the Islamic world in terms of the Human Development Index (HDI), which measures a country's quality of life. Strategically located on the north-west coast of the island of Borneo, right in the heart of Asia, it is just two to three hours flying distance from most ASEAN countries. Brunei has a total land area of 2226 mi² and over 100 miles of coastline along the South China Sea. Sitting on the equator, Brunei Darussalam enjoys an equatorial climate with an average temperature of about 83° Fahrenheit, high humidity and heavy rainfall.

Population and Gross Domestic Product (GDP)

Population estimates of Brunei Darussalam for 2022 was 445,400 persons, comprising 235,000 males (52.8 per cent) and 210,400 females (47.2 per cent), data released by the Department of Economic Planning and Statistics, Ministry of Finance and Economy, Brunei Darussalam.

Brunei's economy is forecast to grow by 2.6 percent in 2023, after contracting by an estimated 2.3 percent in 2022. Growth in 2023 is expected to be broad-based, reflecting the normalization of economic activity following the lifting of pandemic-related restrictions. Despite the growth rebound, the level of output in 2023 remains lower than in 2019.

Inflation is projected to be moderate i.e. 2.5 percent in 2023, but is still historically high. The fiscal balance is forecast to remain at a surplus of 0.5 percent of GDP in 2023, following a substantial improvement in 2022, owing to higher oil and gas revenue.

Literacy Rate

The literacy rate in Brunei Darussalam is about 94.9%, which is among the highest in the world. The United Nations Development Program has ranked Brunei Darussalam 30th in the "High Human Development" category.

Minimum Wages

On the 12th July 2023, His Majesty the Sultan of Brunei Darussalam consented to creation of a Minimum Wage Policy for the country. The minimum wage policy will be implemented in two phases and will apply to both the foreign and local employees whether they are full-time or part-time. These phases apply to selected industries in the country and will start at a minimum salary of $500.00 Brunei Dollars a month for full-time employees and $2.62 Brunei Dollars an hour for part-time employees. This policy will be implemented through the Employment (Minimum Wage) Order 2023 which is an addendum to Brunei's Employment Order 2009.

1.2 Education Profile

Brunei Vision 2035 (Wawasan Brunei 2035) aims to transform Brunei Darussalam by 2035 as a nation recognised for its educated and highly skilled people; improve the quality of life and build a dynamic and sustainable economy. One of the eight Outline Strategy Policy Directions (OSPD) under the Brunei Vision 2035 is to have a first-class secondary and tertiary education including technical and vocational schools that produce experts, professionals and technicians required in commerce and industry.

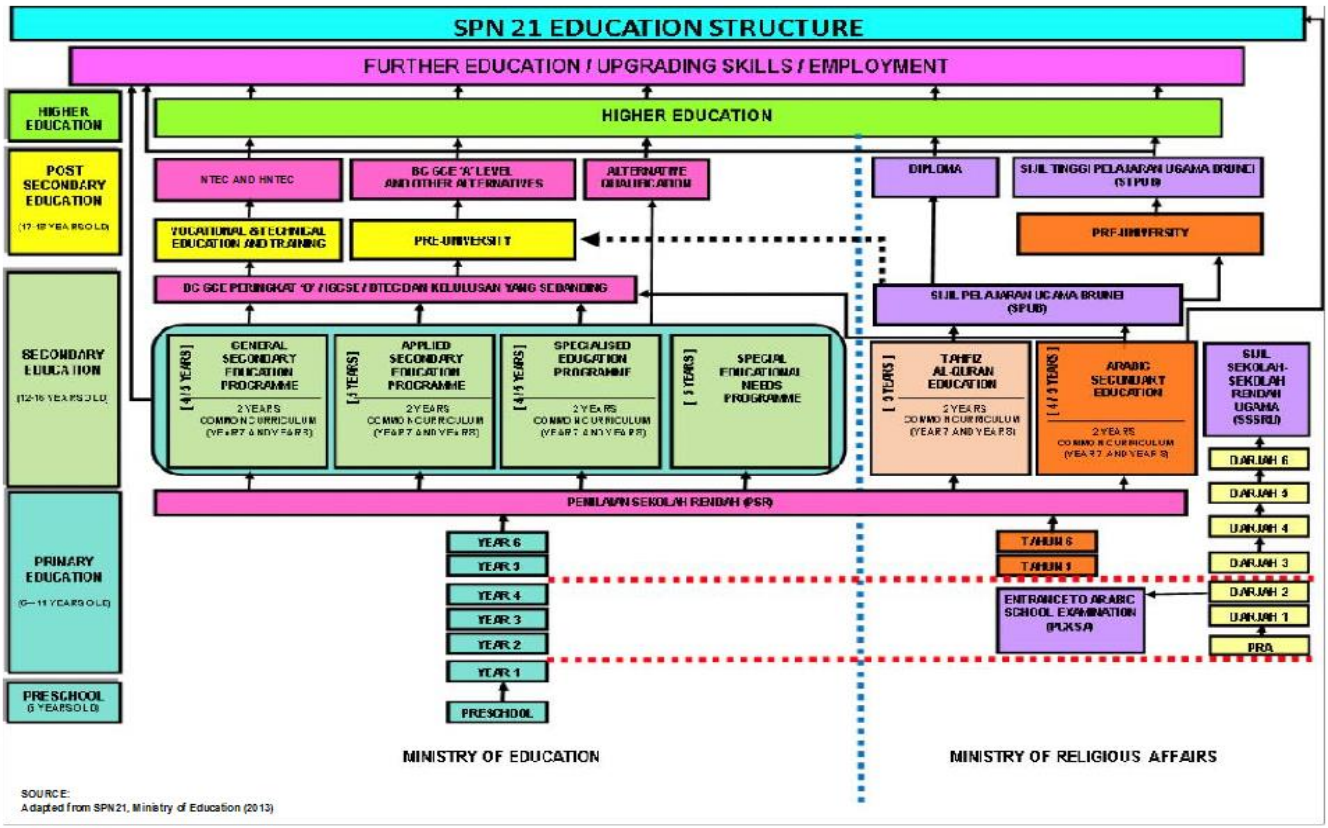
The Education levels in Brunei Darussalam are as follows:

- Pre-School Education
- Primary Education
- Secondary Education
- Technical and Vocational Education
- Higher Education
- Special Education

Education System

In response to Brunei Vision 2035, a new education system known as Sistem Pendidikan Negara Abad Ke-21 (SPN21) or National Education System for the 21st Century was introduced in 2007 (see Table 1.1). As a result, major reformation took place in the country's education system including TVET which underwent its transformation under this system to producing highly-skilled people as measured by the highest international standard. To be responsive to the changing demands of the industry and the community, the TVET system has been strategically revised and transformed to ensure that it fully contributes to national development with its "demand-driven system".

Table 1.1 Brunei Darussalam SPN21 Education Structure



TVET system

The TVET system in Brunei Darussalam can be classified as formal and non-formal. In the formal system, the TVET programmes are taught at two levels: secondary and post-secondary. At the secondary level, students can acquire basic technical and vocational skills under the Applied Programme pathway of the national education system. At the post-secondary level, the TVET programmes are offered at BDQF Level 2 – 5 in public institutions and at BDQF Level 1 – 5 in private institutions. In the non-formal system, the programmes are as an intermediate skills training and offered for a shorter duration by several Government ministries and agencies.

Currently, TVET in Brunei Darussalam is offered from Level 1 to Level 5 as shown in the Brunei Darussalam Qualification Framework (BDQF) (see Table 1.2). The BDQF is a national qualifications framework that has been stipulated in Brunei Darussalam National Accreditation Council (BDNAC) Order 2011 and is used as a tool to develop guidelines that classify qualifications based on criteria agreed at the national level and benchmarked with international good practices. BDQF consists of eight (8) levels of qualifications, which falls under three (3) sectors namely School Sector, Technical and Vocational Education Sector, and Higher Education Sector.

Table 1.2 Brunei Darussalam Qualification Framework (BDQF)

BDQF Level	School Sector Qualification	Technical and Vocational Education Sector Qualification	Higher Education Sector Qualification
8			• Doctoral Degree
7			• Master's Degree • Post Graduate Diploma • Post Graduate Certificate
6			• Bachelor's Degree
5		• Advanced Diploma • Higher National Diploma (HND) • Diploma (Level 5)	• Foundation Degree • Advanced Diploma • Higher National Diploma (HND)
4	• GCE "A" Level • IGCSE "A" Level • IB Diploma • STPU	• Diploma (Level 4) • Higher National Technical Education Certificate (HNTec)	
3	• GCE "O" Level (Grades A-C) • IGCSE and GCSE "O" Level (Grades A*-E) • SPU (Grades A-C) • BTEC Level 2 Diploma	• Skills Certificate 3 (SC3) • National Technical Education Certificate (NTec)	
2	• GCE "O" Level (Grades D-E) • IGCSE "O" Level (Grades D-E) • SPU (Grade D) • BTEC Level 2 Extended Certificate	• Skills Certificate 2 (SC2) • Industrial Skills Qualifications (ISQ)	
1	• BTEC Level Introductory Certificate	Skills Certificate 1 (SC1)	

(Adapted from source: Ministry of Education Brunei Darussalam http:moe.gov.bn/bdnac)

TVET programmes at secondary level are offered in public secondary schools as an alternative pathway from the more academic programme starting from Year 9. After Year 10 or Year 11, students can take TVET programmes either at public TVET institutions (namely Institute of Brunei Technical Education (IBTE) and Politeknik Brunei (PB)) or private institutions offering TVET programmes.

TVET Enrolment Rates

The total number of admissions across the country in 2018 had increased for all BDQF levels (except BDQF Level 4) compared to 2016 and 2017.

Admission to TVET programmes varies between different levels of education and Brunei Darussalam Standard Industry Classification (BDSIC) level which may range from three (3) months to three (3) years depending on the nature of the programmes. For example, TVET at secondary for BDQF Level 1 to BDQF Level 3 may take up to three (3) years and TVET at post-secondary both public and private sectors may take three (3) months (for value-added programmes) to three (3) years. Therefore, those enrolled shown here for each year can range from three (3) months to three (3) years of learning time.

Since the TVET programmes duration may vary from three (3) months to three (3) years, the number of students graduated per year may not correlate with the number of admissions. For example, TVET at secondary level for BDQF Level 1 to BDQF Level 3 may take up to three (3) years, while TVET at tertiary level for public and private institutions may vary between three (3) months (value-added programme) to three (3) years. Therefore, those graduates for each year can represent the outcome from three (3) months to three (3) years of learning time.

1.3 School Profile

Politeknik Brunei (PB) was established in 2012 as a provider of Technical and Vocational Education and Training at the higher education level in Brunei Darussalam to accelerate the growth of competent and quality human resources in the country, in line with Brunei Darussalam's Vision 2035.

Politeknik Brunei offers Level 5 Diploma programmes accredited by the Brunei Darussalam National Accreditation Council (BDNAC). These programmes are equivalent to a Higher National Diploma qualification in efforts to align job market readiness and opportunity for further studies.

With its vision "Generating Innovative and Future-Ready Graduates" through its mission "To Deliver Industry-Driven Quality Education & Training", Politeknik Brunei is committed to equipping its graduates with 21st century skills and competencies to sustain and drive the socio-economics of the nation.

Politeknik Brunei is a corporate body governed by its Politeknik Brunei Act, Chapter 216 under the Laws of Brunei. Politeknik Brunei currently offers Level 5 Diploma programmes under its five (5) schools, School of Business, School of Information Communication and Technology, School of Science and Engineering, School of Health Sciences, and School of Petrochemical.

Politeknik Brunei Location

Politeknik Brunei Main Campus is located in the heart of the capital of Brunei Darussalam, Bandar Seri Begawan. Politeknik Brunei has other campuses such as in the oil and gas main industry district, Belait; and also shares facilities with Universiti Brunei Darussalam in Tungku, Gadong and also the Lifelong Learning Centre in Lambak Kanan, as an initiative towards support for Brunei's Whole of Nation Approach.

Politeknik Brunei Graduation Rates

As of 13 July 2023, Politeknik Brunei graduation rate for Class of 2022 is 90.1%. This measures the number of students who graduated in a given academic year as a proportion of students who are registered full time (in a specific graduating class).

Additionally, Politeknik Brunei monitor's its employment rate for all its graduates at three (3) intervals; six (6) months after graduation, 12 months after graduation and 18 months after graduation. For Class of 2021, Politeknik Brunei's employment rate six (6) months after graduation is at 66.8% and its employment rate 12 months after graduation is at 71.5%.

Chapter 2: Development of Politeknik Brunei

2.1 School Development Plan

Politeknik Brunei moves forward with its Five-Year Development Plan (FYDP 2021-2025) focusing on 4 Key Focus Areas: Institutional Governance, Quality of Education and Training, Infrastructure Development and Strategic Partnership, to help the institution navigate the challenging frontier of 21st century education.

2.2 TVET Curriculum

The curriculum of Politeknik Brunei has been developed in accordance with the requirements of the industries in Brunei Darussalam. Furthermore, aside from the technical learning areas of Business, Science and Engineering, Information and Communication Technology, Health Sciences and Petrochemical, Politeknik Brunei inculcates the Malay Islamic Monarchy (Melayu Islam Beraja) philosophy into the students' learning for them to become responsible and valuable members of the society. In addition, the curriculum develops the learners holistically personally and professionally throughout their academic journey in areas of enrichment, extracurricular activities and competitions organized locally and internationally.

2.3 Partnership between Politeknik Brunei and Private Sector

With strong strategic partnership with industry key players and stakeholders who are involved in the development of its curriculum, Politeknik Brunei operates five (5) schools; School of Business, School of Information Communication & Technology, School of Science and Engineering, School of Health Sciences, and School of Petrochemical. Politeknik Brunei caters to the different needs of the industry and at the same time adhering to international higher educational institutions' standards.

Politeknik Brunei works closely with its External Review Committee (ERCs) appointed from private and public sectors and industries, Brunei Manpower Planning and Economic Council (MPEC), Manpower Industry Steering Committees (MISCs), and other industry stakeholders.

Politeknik Brunei also works closely with Hengyi Industries (B) Sendirian Berhad as well as Lanzhou Petrochemical University of Vocational Technology to develop and deliver Petrochemical programmes under the School of Petrochemical, to train students with necessary knowledge and skills to enable them to take up employment in the field of petrochemical industry.

Chapter 3: School Digital Transformation

3.1 Strategy and Plan for Digital Transformation

One of the main projects for the digital transformation of Politeknik Brunei is the development of an ‘e Campus Management System’ that is part of the institution’s Five-Year Development Plan (FYDP 2021-2025). The e Campus Management System or e-CMS is a single system that integrates the institution’s governance, teaching and learning, admissions, human resources management, e-commerce and many more into a single operating system that is smart and sustainable.

In addition, the institution is constantly developing innovative pedagogies that capitalize the use of technology to develop authentic blended learning strategies in order to provide equal and equitable access to quality education for all its students.

3.2 School Best Practices and Outcomes

Politeknik Brunei has several best practices that were borne out of its digitalization initiatives:

- Politeknik Brunei Learning Management System (PBLMS) – a Moodle-based learning management system that facilitates the use of a blended learning approach. PBLMS was developed by PB’s subject matter expert to facilitate the digitalization of teaching and learning.

- Politeknik Brunei Virtual Learning Experience (PBVLX) – Extension of PBLMS that enables virtual interaction and further integration of the PBLMS.

- Politeknik Brunei Hybrid-Flexible Teaching and Learning (HyFlex) – Installation of cameras, microphones and speakers in selected classrooms that are integrated into digital teaching and learning to enable asynchronous and synchronous teaching and learning. This mode enables both online and physical teaching and learning to be done at the same time transcending the limitations of physical classroom space.

- Digital Media Studio – Classrooms/facilities equipped with green screens and theatres for digital media use and productions. This enables a simulated and conducive environment for digital media students to engage in their crafts.

- Artificial Intelligence in Teaching and Learning – One of the digitalization initiatives is the use of AI in teaching and learning, particularly in the areas of Automated Marking for Computer-Aided Design under the School of Science and Engineering.

3.3 Challenges or Lessons of School Digital Transformation

The COVID-19 pandemic has strengthened our blended teaching and learning approach incorporating the use of innovative technologies such as Hybrid-Flexible (HyFlex) technology that allows for synchronous and asynchronous learning.

Change resistance has been the most prominent problem in the institution's digital transformation. The digital transformation comes in many forms such as workflow, finance, human resource management and most importantly, teaching and learning. Politeknik Brunei's academic staff are teachers/educators from different backgrounds and the most difficult challenge was retraining/reskilling the academic staff to leverage on digital tools and commit to a blended learning strategy.

3.4 Experiences and Recommendations for Digital Transformation

The most important aspect is that the communication and the strategies must be effectively and efficiently communicated from top to down. In those efforts, all staff from top to down must understand the mission and vision of the institution.

It is also important to put the students at the centre of the strategy map or in other words to adopt a more student-centred approach when developing digital transformation strategies. This puts the students/learners at the centre of initiatives and strategies when it comes to digital transformation.

Collaboration and partnerships are also important because as an educational institution that is technical in nature, Politeknik Brunei produces graduates that are assimilated or absorbed into the industry and in that regard, strategic networks are important to help the institution locate future skills and competencies that are required today and also in the future.

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TVET Development and Institutional Profile
PREAH SISOWATH HIGH SCHOOL, CAMBODIA

Prepared by Mr Sam Kamsann, Principal of New Generation School, Cambodia

Chapter 1 Introduction

1.1.Country Profile

Geography and Population

Cambodia is a south-east Asian country, slightly smaller in area than Victoria. Central plains account for two-thirds of the land area. These are surrounded by densely forested mountains, with the Gulf of Thailand to the south. The current population of Cambodia in 2023 is **16,944,826**. The capital is Phnom Penh and the national language is Khmer. Over 95% of Cambodians are Buddhists. The majority of Cambodia people live in rural areas. Most Cambodians are of Khmer origin and there are several ethnic groups living in the mountains.

GDP Per Capita

The recovery of the services sector is strengthening, driven largely by pent-up consumer demand. Cambodia's economy is firmly on a path to recovery in 2022, led by manufacturing exports and growth in services and agriculture. The economic growth for 2023 is projected to reach 5.2 percent. (World Bank , 2023). According to Trading Economics global macro models and analysts expectations, GDP per Capita in Cambodia is expected to reach **1583.00 USD** by the end of 2023.

Unemployment Rate

The unemployment rate in Cambodia is expected to reach 2 percent by the end of 2022, according to Trading Economics global macro models and analysts' expectations. In 2023, Cambodia's unemployment rate is projected to trend around 2 percent and 0.90 percent in 2024, according to the projections of the econometric models.[1]

Minimum Wage

According the statistics from the Ministry of Labor and Vocational Training, Cambodia has increased its monthly minimum wage to US$200 in 2023 from the current US$194 in 2022. The minimum wage standard only applies to the textile, garment, and footwear industries. Workers will continue to receive their benefits such as attendance bonuses, travel and accommodation bonuses, meal allowances, and overtime pay. In 2013, the minimum wage was only US$80 per month.

Literacy rates

Adult literacy rate is the percentage of people ages 15 and above who can both read and write with understanding a short simple statement about their everyday life. According to the Ministry of Education Youth and Sport of Cambodia, the literacy rate among Cambodian adults, aged 15 and over, has increased to 87.8 percent in 2020, remarkably up from 77.6 percent in 2008.

1.2. Education Profile

Education system

Since the national election in 1993, Cambodia has been undertaken new phase of development in the global context of development and globalization. Education was considered as a means for national rehabilitation and reconstruction (RGoC, 1994). The national rehabilitation and reconstruction was connected to improving the quality of, and access to, basic education and the reinforcement of educational administration (RGoC, 1994). Two year later in 1996, the Cambodian development context passed from the phase of rehabilitation or emergency relief toward the phase of national reconstruction and development. The first policy reform that initiated major structural changes in education levels in Cambodia was a 12-year reform plan in 1996. The education system of 4 years (for primary education level) +3 years (for lower secondary education) +3 years (for upper secondary education level).

[1] https://opendevelopmentcambodia.net/news/joblessness-in-cambodia-to-stay-around-2-in-2023/#!/story=post-166575

School education system

The Cambodian education and training system can be systematized in three streams: 1) General education including the sub sectors from early childhood education to upper secondary education, 2) Higher Education and (3) TVET, including secondary and tertiary TVET. General education and higher education are under the jurisdiction of the Ministry of

Education, Youth and Sport (MoEYS), while TVET is under the jurisdiction of the Ministry of Labor and Vocational Training (MLVT). The Education law in its article 8 distinguishes between three levels of education: primary, secondary, and higher education and two types of education: general knowledge and technical and vocational education (RoGC, 2017). Education providers can be either public or private. All education institutions are regulated, monitored, and licensed by the ministry in charge. Higher education institutions are provided with rights as institutions with administrative autonomy.

According to the Education Law, the state is in charge to ensure a comprehensive and standardized education system, which according to article 15 includes formal education, non-formal education, and informal education (RoGC, 2017).

Figure 1: Cambodian education and trainning system

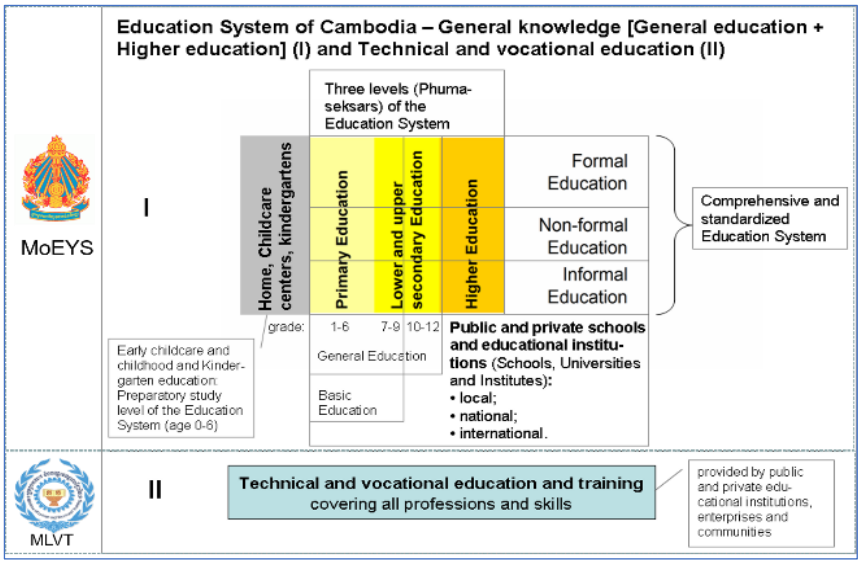


Figure 2: The education system correlating the different levels of education with typical age groups

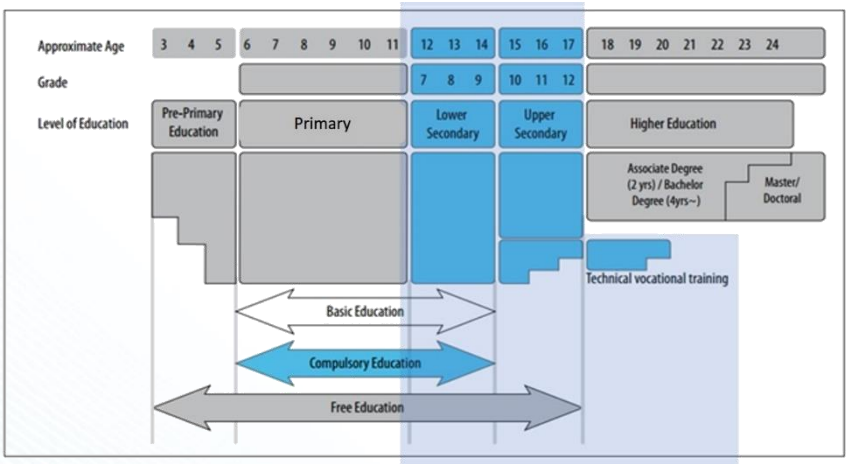


Table 1 is taken from the MoEYS Public Education Statistics & Indicators 2019 – 2020 and show the key figures of Cambodia education system.

Basic Education

The basic system and policy of education are set in compliance with Cambodian Constitution of 1993. The Constitution includes several articles related to the education sector. These are pre-determining some general important features of today's education system. Social and political factors of the last four decades from the 1950s to the 1980s determined the flux of crisis and progress of the schooling systems. Since the 1990s, Jomtien World Conference on Education for All (WCEFA), Cambodian leaders, especially in the late 1990s, have made numerous efforts to provide accessibility for nine years of its currently defined basic education, to all their citizens. The changing concepts of basic education from basic literacy to primary education, and to primary plus lower secondary education in the mid-1990s saw the expansion of learning opportunities for better lifestyle and socio-economic amelioration in contemporary Cambodia (Dy. S. S., 2014). The constitution and basic education policies ensures that all school-age children are able to go to school and access to quality education at least up to basic education level so that they can develop their characteristics in order to contribute to social and economic development of the nation. Comprehensive education reform in Cambodia began in 2000. Many children have access to education, especially children of poor families, girls, and marginalized children. The Royal Government of Cambodia and development partners have paid attention to supporting basic education for 9 years for all school age children within the Education for All Framework. Basic education graduates should have the opportunity to further their learning through participation in secondary education followed by higher or technical and vocational education (MoEYS, 2014a). The government has invested in infrastructure and teacher capacity building, one commune one primary school, one district one lower secondary school

Overview of Curriculum of Basic Education

The curriculum and syllabus of basic education were developed in accordance with the 2009 national curriculum and the 2015 curriculum framework of general education and technical education. The objectives of the national curriculum and the framework are to improve the quality of learning to meet the needs of a skilled labour force to realize the vision of becoming an upper middle-income country by 2030 and the needs for constructing digital society in a very fast changing world. The curriculum aims to shape students to be good citizens who have knowledge, skill, ethics and who can live harmoniously with others to contribute actively to the building Cambodia toward a knowledge-based society.

In addition to the development knowledge and skill for the learners, the national curriculum also emphasizes the sense of national and civic pride.

The purpose of the Basic Education curriculum is to contribute to the achievement of the aims of schooling in order that students can further their studies at the upper grades, participate in other vocational trainings or to participate in social life by ensuring that every student has acquired:

- knowledge of Khmer language and mathematics.
- knowledge of the national identity.
- an understanding of morality and civic responsibilities.
- the everyday life skills that enable participation in their local community life and Cambodian society.
- a basic understanding of the natural world and of scientific principles communicative competence in a foreign language.

To achieve the vision, mission, and purpose of the national curriculum, the 2015 national curriculum framework set core competencies of the students that includes 21st century skills as follow:

- Literacy and Numeracy
- Foreign Languages
- Information and communication technology (ICT)
- Communication and Teamwork
- Analysis and creativity
- Applying Knowledge and skills
- Personal, Family and Society Development
- Entrepreneurship and Leadership

Curriculum of primary education level

For primary education, the curriculum provides two parts which are grades 1-3 and grades 4-6. The purpose of the basic education curriculum of Grade 1-3 is is to ensure that every child has a strong foundation in literacy and Mathematics and that they develop their health, physical appearance, moral understanding, learning skills and life

skills. In Grades 1 - 3 comprises the following subjects with the indicated amount of time allocated to each subject in which there are 40 minutes per period. Art education (songs, drawing, dance, music) is included in Science and Social Studies.

The purpose of the basic education primary school Grades 4 – 6 curriculum is to expand and consolidate students' knowledge and understanding of Khmer language, mathematics, learning skills, life skills, moral, and personal development that will enable them to pursue life-long learning and to introduce students to content in the areas of Science and Social Studies.

Curriculum of lower secondary education level

The purpose of the basic education lower secondary school (Grades 7 – 9) curriculum is to provide all students with a breadth of knowledge, skills, Khmer language, Mathematics, Sciences, Social studies, Life Skills, learning skills, life skills, vocational education, moral education and personal development necessary to enable them to contribute as productive members to the growth of Cambodian society and be able to further their studies at the upper grades, participate in other vocational trainings or to participate in social life. Students who have successfully completed the Basic Education will sit for the National Examination and be awarded of the Diploma of Basic Education.

Curriculum of upper secondary education level

The purpose of the Upper Secondary school curriculum is not only to expand and consolidate students' knowledge from the basic education but also to provide them opportunity for future orientation, that is, to have capacity to continue their studies at higher education or to specialize their studies or to participate in social life by ensuring that students have acquired:

- advanced knowledge of Khmer literature and mathematics.
- deep knowledge of the national identity.
- a more complex understand of morality and civic responsibilities.
- the everyday life skills that enable participation in their local community life and Cambodian society.
- a broad understanding of the natural world and of scientific principles.
- high communicative competence in a Foreign Language.

Vocational Education

Over the past decade, Cambodia has endured dramatic growth that has brought to the forefront of economic activity new sectors such as garments, tourism, and construction. At the same time, sustained growth has brought with it new challenges. One of the major ones is to train a largely unskilled labor force to sustain growth in the medium term and to share more equitably in the benefits of development. In Cambodia, it was reported that 300,000 young people enter the job market annually. This number is expected to increase to 400,000 in the future. Creating jobs for those new entrants has been a challenge for policy makers in Cambodia. The future of the Cambodian economy lies in its young workforce. A more relevant and responsive education and training system is required to equip students with the knowledge and skills needed to become productive members of the workforces. The Royal Government of Cambodia (RGC) recognizes the importance of having a skilled workforce as the foundation for a strong and competitive economy. Youth employment is indispensable for a strong and competitive economy. Youth employment fluctuates over the past three decades but remains high at the rate about 72 per cent of the total population aged 15 to 24. Low level of education, skill-mismatch and limited role of Technical Vocational Education and Training (TVET) are found as the main challenges in youth employment, resulting in low productivity.

It is critical for Cambodia not only to improve better quality education and technical and vocational training for young people entering the labor market, but also to upgrade the skills of the existing workforce through TVET. According to the last labor force survey in 2012, it was indicated that only about 28% of Cambodia's working age population of 10.7 million had completed secondary education, and only 1% attended vocational training, while 2% attended university. To address these issues of unskilled workforce, the Royal Government of Cambodia adopted

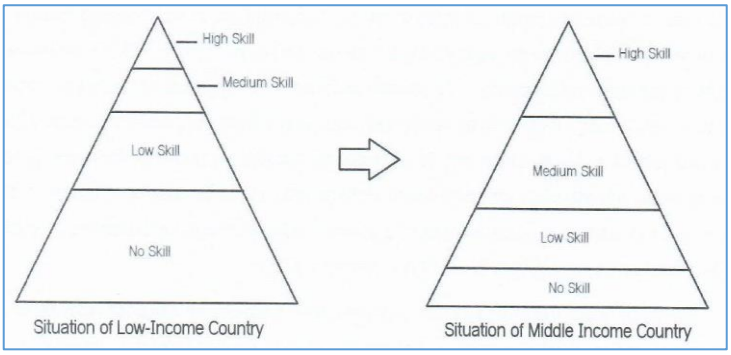
National Technical and Vocational Education and Training Policy 2017-2025 in 2017 aiming to produce skilled workforce and strengthen TVET system.

TVET Relation Policies

The Ministry of Labour and Vocation Training has recently introduced the National Policy on Technical and Vocational Training 2017 – 2025. The strategy aims to build TVET capacity generating a workforce, which responds to labour market needs and contributes to developing the industrial sector creating jobs with high quality of

workforce. Cambodia is aware of the competition context with other countries in the region. This National TVET Policy includes seven strategies and an action plan to support the implementation of the strategies.

Figure 3: National development and skills levels



Source: MoLVT, 2017

Tabe 17: Strategies of the National TVET Policy 2017-2025

Strategy	Details
1. Improving education quality of TVET to respond the need of both local and international market	• Continue and implement quality assurance system of TVET based on Cambodia National Qualification Framework • Enhance quality and skill of trainers, infrastructure including fundamental for learning and teaching to respond the change of technology and labour market demand • Develop TVET at the economic zones to meet the demanded quality
2. Enhancing opportunities in receiving TVET with job creation equity	• Increase the number of enrolment with TVET by providing options and flexibilities • Provide opportunities to people with life skill by focusing on women with fragile, poor, dropped out school students, migrate workers and minority people • Create all mechanism and means to improve the education of TVET • Improve the understanding of TVET by providing consultation, guidance about employment and skill and announcement at communities and provincial level • Create one window service and provide services more conveniently related to TVET
3. Encouraging collaboration between government and private sector and mobilizing resources from stakeholder in developing and ensuring a sustainability of TVET system	• Encourage the collaboration between public, private and stakeholders on TVET system • Enlarge the collaboration between public, private and stakeholders in development of curriculum based on the market demand and improve the skill with the existing and new technology • Create an appropriate mechanism to mobilize funds from all parties to develop the skill • Continue the implementation of studying fee and provide scholarship for poor students especially women and minority students
4. Promoting governance in the TVET system	• Strengthen legal framework mechanism for TVET to link the training match with the market demand • Organize funding mechanism based on result orientation for TVET institutions • Continue ameliorate information system of TVET and labour market information and improve the labour market analysis and forecasting and survey on the required skill

Source: MoLVT, 2017

Organizational Structure and Internal Leadership System

The Ministry of Labor and Vocational Training (MOLVT) upon its establishment in 2004 took on the responsibility for TVET programs, which used to be under the authority of the Ministry of Education, Youth and Sports (MOEYS). The Directorate General of TVET (DGTVET) under the authority of the MOLVT acts as the secretariat for the NTB. It is responsible for supporting, expanding, and assuring the quality of public and private provision of TVET. The mandate of DGTVET is as follows to:

- Develop a national policy for TVET and manage TVET systems.
- Review the needs of the labor market and prepare an occupational policy based on the national policy for TVET.
- Screen proposals for the establishment of institutions, centers and schools providing TVET services.
- Control, monitor and evaluate public and private institutions of TVET; and to
- Coordinate the communications among ministries, institutions, organizations in the region and in the world to promote TVET in cooperation with the Ministry of Foreign Affairs and international cooperation organizations.

The TVET system includes all forms of learning and development with a major technical or vocational component. This comprises formal technical or vocational education provision, whether in school, college, university, training or work settings, formal training programs, less formal / more informal learning while working, and other forms of learning which may be self-directed or involve peer learning. Formal TVET programs are delivered mostly in polytechnics and technical institutes. There exist 14 polytechnics and technical institutes delivering formal TVET courses at certificate, diploma, and degree levels. Formal TVET provision covers four main levels:

- **Certificate level:** short courses from a few weeks to less than a year leading to certificates delivered in provincial or vocational training centers, or in communities.
- **Diploma level:** Post grade 9 trade training in provincial and vocational training centers, leading to diplomas at three levels (for years 1, 2, and 3);
- **Higher diploma level.** Post-grade 12 entry plus two years of study leading to a higher diploma in technical institutes and polytechnics.
- **Bachelor level:** Entry either (a) post-grade 12 plus four years (or 4.5 years for engineering) leading to a bachelor's degree in engineering, technology or business administration or (b) higher diploma plus two (or 2.5) years for the same degrees. There are relatively few statistics about the size and characteristics of the TVET system, particularly on costs, financing and completion. The only data available covers enrolment by qualifications levels in public institutions under the MoLVT.

Non-formal training programs are delivered by a variety of providers ranging from public institutions, community centers, private providers, and small businesses offering informal apprenticeships. According to the MoLVT, an estimated 750 private businesses offering fee-based training services were identified nationwide. The largest single group offered computer and/or English language training. Other providers were identified as driving schools, dance academies and small auto or electrical workshops, which offered informal apprenticeships. There are also a range of non-formal skills development programs implemented under the set of training funds put in place by the government and donors (mainly ADB).

Table 2: TVET Levels

Cambodian National Qualification Framework Level	General Education System		TVET	Higher Education
	Ministry of Education, Youth and Sport		Ministry of Labor and Vocational Training	Ministry of Education, Youth and Sport
	General Education	Technical Education		
8			Doctoral Degree	Doctoral Degree
7			Master's Degree (Technology or Business)	Master's Degree
6			Bachelor's Degree (Technology or Business)	Bachelor's Degree
5			Higher Diploma (Technology or Business)	
4	Grade 12	Year III	TVET Certificate 3	
3	Grade 11	Year II	TVET Certificate 2	
2	Grade 10	Year I	TVET Certificate 1	
1	Lower Secondary School (Grade 7-9)		Vocational Skill Certificate	

Curriculum and Instruction of Vocational Education

The objectives of TVET are to improve people's livelihood and dignity and to enhance Cambodia's human resources with knowledge, competency, skills, working attitudes, professional ethics, productivity, and competitiveness for lifelong employability. To achieve the objectives above, the four main goals have been identified: (i) to improve

TVET quality to meet national and international market demand; (ii) to increase equitable access to TVET; (iii) to promote public–private partnerships (PPPs) and aggregate stakeholder resources to support sustainable development of the TVET system; and (iv) to improve governance of the TVET system.

A TVET curriculum is a "Plan for Training" designed to provide a complete set of learning experiences including workshop, classroom, experiential, and self-guided training delivery recommendations that will lead to the achievement of a desired set of competencies, which are as mentioned, derived from Cambodian National Qualification Framework and labor market needs. Any competency may require several learning steps to achieve mastery. Any learning step may be directed at mastering in one or several competencies.

The TVET curriculum is the document that drives the competency-based program to its destination. If specific competencies are not focused on the curriculum design philosophy, the products of the program may not be "work-ready" and therefore not relevant and not readily accepted by the industry. In response to the national labor market demand, the MoEYS has established a technical education program at secondary level for technical education implemented at general and technical high schools. The technical education curriculum which is to be implemented at general and technical high schools at upper secondary level is the core for creating productivity, quality, and efficiency through the combination of major subjects such as general subjects, required subjects, and vocational subjects, which will give students foundation and in-depth knowledge, practical experiences and expand knowledge and vocational skills in order that they can improve their livelihood and pursue further education successfully.

Goals of technical education focus on helping students to acquire competencies essentials for their chosen career paths and develop self-identity, characters, and responsibilities as a member of society. The technical education curriculum development is based on ownership and persistence, innovation, lifelong learning, and problem solving and communication skills.

Chapter 2 School Profile

2.1 School Profile of New Generation School, Preah Sisowath High School

New Generation School Preah Sisowath High School (NGS) is a model school in the biggest and the oldest high school in Cambodia which lasts longer than 118 years. Address: Norodom Blvd, Sangkat Psar Thmey III, Khan Daun Penh 12210, Phnom Penh,Cambodia Email: info@preahsisowath.edu.kh .www. preahsisowath.edu.kh;Tel: (855)89 899 632 , (855)12 399 606. https://goo.gl/maps/e6Su8eQGZSEZe5Pa8

New Generation School (NGS) is another achievement of the new profound education reform in the educational field that has good governance and high professional standard of learning in 21st century which launched to process on 23rd June 2016. This school consists of modern library and 52 classrooms which study by subject classroom. Seven Chemistry rooms and Eight physic rooms equipped with new experimental materials. Seven biology rooms equipped with new experimental materials. In this academic year 2022-2023 we have students 1773/861 teacher and staff 114/57.graduation rate is 95% ,grade A and B is about 50%.

Six computer labs equipped with 105 computers. Ten mathematic rooms are full of study materials from grade 7 to grade 12. This New Generation School (NGS) has first implemented new curriculum in public schools known as STEM-Ed which attracts outstanding students to enroll and helps those who do not like science to like it and good at it. Besides studying in the classroom, the students have high abilities to do a lot of researches, join competitions and make a good cooperation with national and international institutions. Now, New Generation School (NGS) of Preah Sisowath High School has been developing itself under good collaboration with national and international partners such as Thailand, Korea, China, Japan, America and Australia ,Vietnam and Switzerland.

1. Vision

In accordance with the Cambodian royal government visions and sustainable development goal in 2030, New Generation School of Preah Sisowath High School's visions "Transforming New Generation School (NGS) of Preah Sisowath High School to be the excellent high school in Cambodia for teaching and learning (both attitude and knowledge), researching in secondary school and a giving good community service.

2. Value

Quality of Knowledge, soft-skills, attitude and dignity

3. Mission

In accordance with these visions, New Generation School (NGS) of Preah Sisowath High School strongly commits our missions in 7 points:

1. Developing students' abilities through various ways (inside-and-outside classrooms) and providing the students with entrepreneurship, creativity, critical thinking, inter-cultural understanding and inquiry-based learning and constructivism.
2. High educational research and ICT institution for secondary school.
3. First institution for implementing STEM-Ed.
4. Improving research and national curriculum development.
5. First institution in doing research, consulting and giving a better community service.
6. Good governance center for school administrative service, financial management, transparency, accountability, and participation from students, staff and stakeholders.
4. Students' future career- path center for consultation

2.2 STEM-Ed Current Activities

New Generation School (NGS) of Preah Sisowath High School has been implementing new curriculum in accordance with the students' needs in 21st century and learning is based on real practice, experiment and outdoor-research sources from public school textbooks. The students are able to comprehend significant tasks besides learning from the teachers in the class such as using ICT for doing research and practice. In addition, the students have also formed study clubs including science club, media club and newsletter club, etc.





Nowadays, New Generation School (NGS) of Preah Sisowath High School has created high official science research in high school that is capable of challenging with other local and international students such as international exam as following:

1. Seven students joined Global Natural History Day (GNHD) for one time rewarded a silver medal in 2017, China.
2. Eight students joined National Science Children Congress from 2016-2017 in India.
3. One student joined International Physic Olympia in 2017, Holland.
4. Two students joined International Physic and Astrology Olympia from 2017-2018, Thailand.
5. Four students joined ASEAN Children Camp from 2016-2017, Indonesia and Philippine rewarded 4th rank.
6. Twelve students joined Thailand International Science Fair (TISF) from 2016-2023, Thailand.
7. Ten students joined ASEAN Science Project Competition 2023, in Thailand.

8. Three students joined Southeast Asia STEM Fair and Exposition in 2023, Thailand.
9. Two students joined 6th KVIS international Science Fair in 2023, Thailand.
10. Twelve students joined Japan Supper Science Fair (JSSF) from 2017-2023, Japan.
11. Three students joined Korean Science Academy Science Fair in 2023, Korea.
12. Three students joined SISTEMIC in 2023, Singapore.
13. Three students join International Super Science Fair in 2023, Australia.

5. Future STEM-Ed Development

New Generation School have planned to develop STEM-Ed as following:

1. Stimulating teachers' and students' research on STEM-Ed Subject worldwide.
2. Forming a research club and students' creativity
3. STEM-Ed curriculum reform to respond industrial policy in Cambodia from 2015-2025.
4. Forming a research habit and publishing STEM-Ed high-school students' achievement
5. Modernizing experiment and constructing new experimental labs to fulfill marketing needs.

Chapter 3 School Development Plan

New Generation Schools Expansion: Introduction

Rationale for NGS expansion

- The New Generation School (NGS) concept has generated considerable demand by Cambodian families such that there are currently 10 NGS, some of which are Grades 1-12, not only secondary.
- The NGS investments by government over the past 5-6 years have proven to be very successful in improving student learning outcomes and performance (on Grade 12 examinations, for instance).
- MoEYS wishes to expand the NGS network under STEP UP to not only improve the learning outcomes of those students in new NGS, but also to affect positive change within other secondary schools through professional learning communities and mentoring programs.

NGS Project Activity Overview

1. To provide support to SRS in the accreditation process to enable at least 3 to become New Generation Schools (NGS).
2. In the case that a proportion of SRS that begin the 3-year NGS accreditation do not continue through the full process, a total of 8 candidate schools will be considered for this support.
3. A yearly assessment will be developed and administered by the consulting firm for the candidate schools to proceed in receiving higher levels of investment.
4. Support to these SRS will include:

(a) upgrading and/or provision of classrooms, science rooms, computer labs, libraries, 3 faculty offices, student affairs facilities, auditoriums;
(b) provision of laptops for teachers; and
(c) consultant support for the school management reforms.

I. MoEYS NGS Policy Guidelines (2017): short overview

- The establishment of New Generation Schools is an official policy goal of the Ministry of Education, Youth and Sport (MoEYS) as per the new Education Reform framework disseminated by the Ministry.
- The policy guidelines enable the Ministry and its development partners to make investments in selected schools in a way that achieves 'maximal' standards of learning for Cambodia's children and youth.
- With its system of strict accreditation requirements and high governance standards, New Generation Schools add to earlier efforts to develop the education system so that children and youth, regardless of socio-economic level, can access educational services in the public sector of the very highest quality.

- The NGS approach integrates the core themes that define a New Generation School including **accountability and good governance, high professional standards, autonomy, innovation, accreditation, and a rationalized resource allocation system.**

Key Policy and Operational Strategies

1. **Rigorous school selection** with the highest potential to utilize high investment effectively.
2. **Strong partnerships** with Non-State Actors (NSAs) and the private sector to assist the Ministry in implementation and resourcing of New Generation Schools.
3. **Increased accountability of school administrators** by using multiple strategies including competitive recruitment of principals, incentives linked to high performance, creation of a new **National Oversight Board** that strictly enforces criteria for the NGS including accreditation designation and withdrawal.
4. Because of continuing issues relating to local capacity and the very large investment to be made by Government in NGS, **MoEYS oversees these independent public schools** directly from the national level.
5. **Special incentives for teachers** to improve performance as well as abolish current practices of private tutoring that undermine standards of professionalism.
6. NGS are allowed to **work outside of the policy framework applied to normal schools** so long as they can justify how proposed actions will promote innovation and increase educational quality (i.e., outside recruitment of teachers, modifications in the curriculum, use of technology such as electronic lesson plans, m-Learning, etc.).
7. The **use of technology** is a key element in NGS including access to hardware and the introduction of new educational software that enhances teaching, learning, and assessment.
8. NGS gives a **greater role for students** in managing new facilities and services (i.e., student councils, special activities, use of investment funds, student counselling, etc.).
9. NGS **increase the number of hours of instruction for students** to 36 hours per week for primary schools and 40 hours per week for secondary schools. NGS ensure that teachers adhere to official guidelines requiring them to teach full-time.
10. NGS use increased hours of instruction time to provide access to special subject themes such as STEM subjects, foreign languages, or other areas of interest to the local community.
11. NGS demonstrate that they are **meeting the needs of the poorest members of the community**. MoEYS has created a **Social Equity Fund** that enables schools to access extra funds to help students from poorer families. In addition, all unofficial fees that most affect the poor will be abolished.
12. The '**school within a school model'** uses competitive recruitment of principals and teachers, selective student identification (i.e., entry level assessments where necessary), setting new curricula, etc.
13. Allows schools to **reduce the number of students in classrooms** to increase individualized learning (i.e., 36 PTR).
14. NGS encourages **behavior change** of all school-level stakeholders including students, parents, administrators, and teachers to meet the needs of 21st Century learning.
15. Uses **new innovative designs in educational architecture** to transform classrooms and other school facilities to align with 21st Century standards.

1.3. NGS's curriculum

School Curriculum By Ministry of Education Youth and Sport

1. Math : 6 hs/week
2. Physic : 4 or 6hs/week
3. Khmer literature : 5 hs/week
4. Chemistry : 4 or 6 hs/week
5. Biology : 4 or 6 hs/week
6. ICT: 4 h/week
7. Philosophy : 1 h/week
8. History: 2 h/week
9. Geography 2h/week

10. Foreign Language: 4 h/week
11. Project research : 2 h

Total 40 Hours/Week

Target Methodologies linked to STEM

1. Method **PBL**(Problem Based Learning)
2. Method **BBL** (Brain Based Learning) Cognitive not like their age
3. Method **CBL** (Creativity Based Learning) digital learning , Game..
4. Method **PLC** (Professional Learning) Communities) sharing experiences , knowledge …

STEM Focus

1. STEM is a major focus of NGS
2. Our approach is to ensure that Theory and Practice are combined while in the Lab
3. Most of the extra hours in the curriculum have been diverted to STEM and ICT
4. Project Work is a key element of student learning

Teachers & Students Empowered to Innovate without Reference to Ministry

1. Preah Sisowath has made extensive use of its freedoms to innovate.
2. The school has changed the curriculum many times
3. We hire our own teachers
4. We have changed the timetable
5. We have signed MoUs with many institutions
6. We sign up for contests and international competitions
7. We limit class sizes and organize entrance exams

1.4. Partnership Between School and Private sector

Sustainability

After 3 years of government investment, Preah Sisowath was accredited and empowered to solicit funds from local communities, Students parents. Preah Sisowath requests $330/year for each student. School revenues have reached about US$800,000 per year. The school is ready to be self-sustained should government revenues be stopped.

2. Chapter 3 School Digital Transformation

2.1. School Best Practices of Digital Transformation

- Learning Management System, LMS.
- E-Learning
- Videos lesson for students by teacher PBL .etc.

2.2. Challenges School Digital Transformation

- Internet connection quality not stable
- ICT infrastructure is not capable

2.3. School Recommendation for Digital Transformation

- Acknowledge ICT literacy
- Internet and ICT infrastructure must be better.

TVET Development and Institutional Profile
PREAH BAT NORODOM SIHAMONI GENERAL AND TECHNICAL HIGH SCHOOL, CAMBODIA

Prepared by Mr.Heng Socheth, Principal from Preah Bat Borum Neat Norodom Sihamoni GTHS

Chapter 1 Introduction

1.1 Country Profile

The current population of Cambodia in 2023 is 16,944,826. The capital is Phnom Penh and the national language is Khmer. Over 95% of Cambodians are Buddhists. The majority of Cambodia people live in rural areas. Most Cambodians are of Khmer origin and there are several ethnic groups living in the mountains.

According to Trading Economics global macro models and analysts expectations, GDP per Capita in Cambodia is expected to reach 1583.00 USD by the end of 2023.

In 2023, Cambodia's unemployment rate is projected to trend around 2 percent and 0.90 percent in 2024, according to the projections of the econometric models.2

According the statistics from the Ministry of Labor and Vocational Training, Cambodia has increased its monthly minimum wage to US$200 in 2023 from the current US$194 in 2022. The minimum wage standard only applies to the textile, garment, and footwear industries. Workers will continue to receive their benefits such as attendance bonuses, travel and accommodation bonuses, meal allowances, and overtime pay.

Adult literacy rate is the percentage of people ages 15 and above who can both read and write with understanding a short simple statement about their everyday life. According to the Ministry of Education Youth and Sport of Cambodia, the literacy rate among Cambodian adults, aged 15 and over, has increased to 87.8 percent in 2020, remarkably up from 77.6 percent in 2008.

1.2 Education Profile

Education system

Since the national election in 1993, Cambodia has been undertaken new phase of development in the global context of development and globalization. Education was considered as a means for national rehabilitation and reconstruction (RGoC, 1994). The national rehabilitation and reconstruction was connected to improving the quality of, and access to, basic education and the reinforcement of educational administration (RGoC, 1994). Two year later in 1996, the Cambodian development context passed from the phase of rehabilitation or emergency relief toward the phase of national reconstruction and development. The first policy reform that initiated major structural changes in education levels in Cambodia was a 12-year reform plan in 1996. The education system of 4 years (for primary education level) +3 years (for lower secondary education) +3 years (for upper secondary education level).

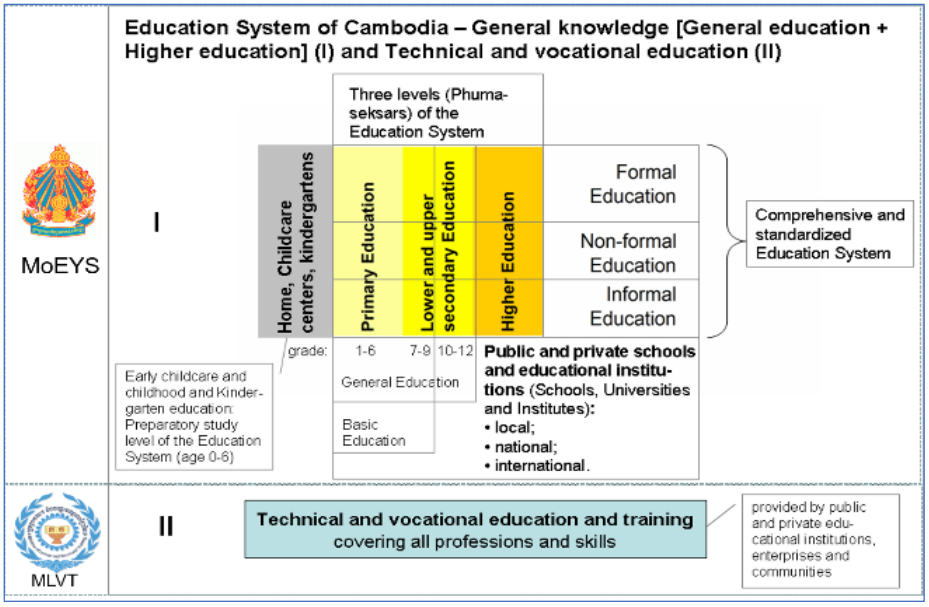
School education system

The Cambodian education and training system can be systematized in three streams: 1) General education including the sub sectors from early childhood education to upper secondary education, 2) Higher Education and (3) TVET, including secondary and tertiary TVET. General education and higher education are under the jurisdiction of the Ministry of Education, Youth and Sport (MoEYS), while TVET is under the jurisdiction of the Ministry of Labor and Vocational Training (MLVT). The Education law in its article 8 distinguishes between three levels of education: primary, secondary, and higher education and two types of education: general knowledge and technical and vocational education (RoGC, 2017). Education providers can be either public or private. All education institutions are regulated, monitored, and licensed by the ministry in charge. Higher education institutions are provided with rights as institutions with administrative autonomy.

[2] https://opendevelopmentcambodia.net/news/joblessness-in-cambodia-to-stay-around-2-in-2023/#!/story=post-166575

According to the Education Law, the state is in charge to ensure a comprehensive and standardized education system, which according to article 15 includes formal education, non-formal education, and informal education (RoGC, 2017).

Figure 1: Cambodian education and trainning system



Basic Education

The basic system and policy of education are set in compliance with Cambodian Constitution of 1993. The Constitution includes several articles related to the education sector. These are pre-determining some general important features of today's education system. Social and political factors of the last four decades from the 1950s to the 1980s determined the flux of crisis and progress of the schooling systems. Since the 1990s, Jomtien World Conference on Education for All (WCEFA), Cambodian leaders, especially in the late 1990s, have made numerous efforts to provide accessibility for nine years of its currently defined basic education, to all their citizens. The changing concepts of basic education from basic literacy to primary education, and to primary plus lower secondary education in the mid-1990s saw the expansion of learning opportunities for better lifestyle and socio-economic amelioration in contemporary Cambodia (Dy. S. S., 2014). The constitution and basic education policies ensures that all school-age children are able to go to school and access to quality education at least up to basic education level so that they can develop their characteristics in order to contribute to social and economic development of the nation. Comprehensive education reform in Cambodia began in 2000. Many children have access to education, especially children of poor families, girls, and marginalized children. The Royal Government of Cambodia and development partners have paid attention to supporting basic education for 9 years for all school age children within the Education for All Framework. Basic education graduates should have the opportunity to further their learning through participation in secondary education followed by higher or technical and vocational education (MoEYS, 2014a). The government has invested in infrastructure and teacher capacity building, one commune one primary school, one district one lower secondary school.

Curriculum of Basic Education

The curriculum and syllabus of basic education were developed in accordance with the 2009 national curriculum and the 2015 curriculum framework of general education and technical education. The objectives of the national curriculum and the framework are to improve the quality of learning to meet the needs of a skilled labour force to realize the vision of becoming an upper middle-income country by 2030 and the needs for constructing digital society in a very fast changing world. The curriculum aims to shape students to be good citizens who have knowledge, skill, ethics and who can live harmoniously with others to contribute actively to the building Cambodia toward a knowledge-based society.

In addition to the development knowledge and skill for the learners, the national curriculum also emphasizes the sense of national and civic pride.

The purpose of the Basic Education curriculum is to contribute to the achievement of the aims of schooling in order that students can further their studies at the upper grades, participate in other vocational trainings or to participate in social life by ensuring that every student has acquired:

- knowledge of Khmer language and mathematics.
- knowledge of the national identity.
- an understanding of morality and civic responsibilities.
- the everyday life skills that enable participation in their local community life and Cambodian society.
- a basic understanding of the natural world and of scientific principles communicative competence in a foreign language.

Vocational Education

Over the past decade, Cambodia has endured dramatic growth that has brought to the forefront of economic activity new sectors such as garments, tourism, and construction. At the same time, sustained growth has brought with it new challenges. One of the major ones is to train a largely unskilled labor force to sustain growth in the medium term and to share more equitably in the benefits of development. In Cambodia, it was reported that 300,000 young people enter the job market annually. This number is expected to increase to 400,000 in the future. Creating jobs for those new entrants has been a challenge for policy makers in Cambodia. The future of the Cambodian economy lies in its young workforce. A more relevant and responsive education and training system is required to equip students with the knowledge and skills needed to become productive members of the workforces. The Royal Government of Cambodia (RGC) recognizes the importance of having a skilled workforce as the foundation for a strong and competitive economy. Youth employment is indispensable for a strong and competitive economy. Youth employment fluctuates over the past three decades but remains high at the rate about 72 per cent of the total population aged 15 to 24. Low level of education, skill-mismatch and limited role of Technical Vocational Education and Training (TVET) are found as the main challenges in youth employment, resulting in low productivity.

It is critical for Cambodia not only to improve better quality education and technical and vocational training for young people entering the labor market, but also to upgrade the skills of the existing workforce through TVET. According to the last labor force survey in 2012, it was indicated that only about 28% of Cambodia's working age population of 10.7 million had completed secondary education, and only 1% attended vocational training, while 2% attended university. To address these issues of unskilled workforce, the Royal Government of Cambodia adopted National Technical and Vocational Education and Training Policy 2017-2025 in 2017 aiming to produce skilled workforce and strengthen TVET system.

Chapter 2: School Profile of Preah Bat Norodom Sihamoni General and Technical High School

Preah Bat Norodom Sihamoni High School was established in 2010 on land are about 13 hectares . It is located in Kampong Tralach District, Kampong Chhnang Province, Cambodia. Preah Bat Sihamoni High School is processing both General and Technical Education. For the General Education, it processes from grade 7 to grade 12, and Technical Education, which includes Electricity, Agronomy Veterinary and Food Processing. All technical students have to learn for 3 year (year 1 to year 3)

Vision and Mission Statement

Our vision is to be a pre-eminent both general and vocational education institution that produces competent graduates with the necessary knowledge, skills and attitudes relevant to compete in the local and regional market. This vision aligns with shifts in the industry needs and labor market trends, which animates our mission:

- To provide formal general and vocational education in line with national and regional standards
- To establish strategic partnerships with public and private sectors
- To produce skillful human resources to apply the demand of free market context.

School Demographic Information

For New Academic Year 2021 this school has

1. **General Education:**
   There are 85 teachers and 1369 students, this number is included 878 female students
2. **Technical Education:**

a.Teacher's information:

Agronomy: 16 teachers. There are 07 Females

Electricity: 07 teachers. No Females

Veterinary: 08 teachers. There are 02 Females

Food Processing: 03 teachers. They are all females

Totally, there are34 Technical Teachers

bStudents 'information: Totally, there are 478 technical students. This number is included 209 females

3. **Views of School and students 'activities**



A.Computer and Electricity skills.



B. Agronomy Skill

C. Food Processing Skill

D. Veterinary Skill

TVET Development and Institutional Profile
PREAH SIHAMONI GTHS HIGH SCHOOL, CAMBODIA

Prepared by Mr.Ry Sarom, Vice Principal of Preah Sihamoni GTHS

Chapter 1: Introduction

1.1 Country Profile

Cambodia is a Southeast Asian country with a population of approximately 16 million people. Its current Gross Domestic Product (GDP) is about USD 30 billion. The country's employment rate is currently at 82.80%, while the literacy rate is at 88.91% in 2021. Cambodia has set its minimum wage to be around USD 200 per month.

1.2 Education Profile

Cambodia's Ministry of Education, Youth, and Sport oversees all levels of education, including vocational training. Vocational programs offered through various centers provide specialized training, lasting from one to three years, with practical experience through internships. In 2017-2018, around 43,171 students attended public TVET schools, while 6,141 chose private institutions, indicating increasing interest in vocational education for practical skills and job market readiness. The government remains committed to enhancing the TVET sector to equip the youth with valuable skills for successful careers.

1.3 School Profile

Preah Norodom Sihamoni General and Technical High School was built in 2013 which was given as a present by The king Norodom Sihamoni, located in Chheu Teal Village, Morom Commune, Angkor Chey District, Kampot Province, is a renowned institution that specializes in agricultural studies. The school is committed to providing quality education and practical skills to its students, empowering them for successful careers in the agricultural sector.

In the academic year 2022-2023, Preah Norodom Sihamoni General and Technical High School had 57 staff members, with 23 being female. The school management consists of a director and three vice principals, ensuring efficient administration. Among the staff, 47 focus on general knowledge, while six specialized staff members impart technical skills **in Animal Husbandry** and **agronomy**, providing hands-on expertise for students.

Chapter 2: School Development Plan

2.1 School Development Plan

The School Development Plan (SDP) for Preah Norodom Sihamoni General and Technical High School aims to be a leading institution in agricultural education, empowering students with practical skills and knowledge for success in the industry. We will enhance the curriculum, support faculty development, improve infrastructure, provide student support, promote gender equality, strengthen industry partnerships, and engage with the community. Through these initiatives, we envision a school that nurtures potential, fosters inclusivity, and prepares students to make valuable contributions to Cambodia's agricultural sector.

2.2 Technical Education Curriculum

In the academic year 2022-2023, With an enrollment of 702 students, including 367 females, out of the total students, 54 have chosen technical education, with 26 being female, indicating growing interest in vocational training.

Preah Norodom Sihamoni General and Technical High School also students to study 31 hours per week on different subjects including Khmer General Education Program for 17 hours per week and Technical Program (includes practice) for 14 hours per week. It also requires students to have a 2 months' internship at the end of year 2 and organizes 2 study tours per year for its students. Over the past five years (2017-2022), the school witnessed 138 successful technical education graduates, equipped to make valuable contributions to the society.

Preah Norodom Sihamoni General and Technical High School has been fully recognized and given credibility by the Ministry of Education Youth and Sport of Cambodia.

Chapter 3: School Digital Transformation

3.1 Strategy Plan for digital transformation

The Digital Transformation Strategy Plan for Preah Norodom Sihamoni General and Technical High School aims to create a technologically advanced learning environment. This plan includes upgrading IT infrastructure, integrating technology into the curriculum, providing faculty training, and implementing virtual learning platforms. By leveraging technology effectively, the school seeks to enhance teaching and learning outcomes, empowering students for success in the digital age.

3.2 School Best Practices and Outcomes

The school management has
1. Accountability and transparency
2. Organize the division of tasks well
3. All employees respect time, discipline, order and a good environment
4. Manage administrative work and technical work well
5. All staff are united and cooperate well

All in all, the result of the school is that the students' annual studies get good results.

3.3 Challenges or Lessons of School Digital Transformation

School digital transformation comes with its share of challenges and valuable lessons. One significant challenge is ensuring equitable access to technology for all students, considering varying economic backgrounds. Additionally, managing the integration of technology into the curriculum and ensuring its effective use requires continuous training for teachers.

3.4 Experiences and Recommendations for Digital Transformation

Through, these challenges, schools learn the importance of adaptability, fostering a culture of innovation, and embracing technology as a tool for enhancing education. With proper planning and perseverance, schools can overcome obstacles and successfully navigate the digital transformation journey, reaping the benefits of a modern and dynamic learning environment.

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TVET Development and Institutional Profile
BAVET GENERAL AND TECHNICAL HIGH SCHOOL, CAMBODIA

Prepared by:

- *Mr. Mr.Pol Savuth, Principal,Bavet General and Technical High School*
- *Mr.Pen Vuthy, Senior Teacher, Bavet General and Technical High School*

Chapter 1: Introduction

1.4 Country Profile

Cambodia, country on the Indochinese mainland of Southeast Asia. Cambodia is largely a land of plains and great rivers and lies amid important overland and river trade routes linking China to India and Southeast Asia. It has a population of approximately 16 million people. The current population of Cambodia in 2023 is 16,944,826, a 1.06% increase from 2022. The population of Cambodia in 2022 was 16,767,842, a 1.08% increase from 2021. The population of Cambodia in 2021 was 16,589,023, a 1.17% increase from 2020. In addition, Its current Gross Domestic Product (GDP) is about USD 30 billion. The country's employment rate is currently at 82.80%, while the literacy rate is at 88.91% in 2021. Cambodia has set its minimum wage to be around USD 200 per month.

1.5 Education Profile

Since the national election in 1993, Cambodia has been undertaken new phase of development in the global context of development and globalization. Education was considered as a means for national rehabilitation and reconstruction (RGoC, 1994). The national rehabilitation and reconstruction was connected to improving the quality of, and access to, basic education and the reinforcement of educational administration (RGoC, 1994). Two year later in 1996, the Cambodian development context passed from the phase of rehabilitation or emergency relief toward the phase of national reconstruction and development. The first policy reform that initiated major structural changes in education levels in Cambodia was a 12-year reform plan in 1996. The education system of 4 years (for primary education level) +3 years (for lower secondary education) +3 years (for upper secondary education level).

The Ministry of Education, Youth and Sport achieved the Education Strategic Plan 2014–2018 in collaboration with members of the Education Sector Working Group and other stakeholders. The achievements include: increasing equitable access to education services at all levels, particularly the nine years of basic education; growing opportunities for disadvantaged children and youth to enroll at all levels; strengthened governance of public educational institutions; improved quality of education through strengthening teachers' capacities; and increasing scholarships for poor students. Critical quality improvement measures and responses to education services, especially the reform of the upper secondary exam and other types of exams, enabled MoEYS to outline further prioritized reform programmes, such as: improving the teaching profession, assessing student achievement, reviewing curricula and core textbooks, and higher education reform. Young Cambodians have become more active as a result of interventions by all stakeholders, including the process of the Child and Youth Council, Red Cross volunteer youths, and Scout youths. MoEYS offers other interventions, including providing technical and soft skills, job market information, and career counselling and orientation. Physical education and sport are also key priorities, building on the success of Cambodian sports professionals who have won gold medals at the World, Asian and Southeast Asian Championships, the Southeast Asian Games, and other competitions.

As results, Cambodia's Ministry of Education, Youth, and Sport oversees all levels of education, including vocational training. Vocational programs offered through various centers provide specialized training, lasting from one to three years, with practical experience through internships. In 2017-2018, around 43,171 students attended public TVET schools, while 6,141 chose private institutions, indicating increasing interest in vocational education for practical skills and job market readiness. The government remains committed to enhancing the TVET sector to equip the youth with valuable skills for successful careers.

Basic Education

The basic system and policy of education are set in compliance with Cambodian Constitution of 1993. The Constitution includes several articles related to the education sector. These are pre-determining some general important features of today's education system. Social and political factors of the last four decades from the 1950s to the 1980s determined the flux of crisis and progress of the schooling systems. Since the 1990s, Jomtien World Conference on Education for All (WCEFA), Cambodian leaders, especially in the late 1990s, have made numerous efforts to provide accessibility for nine years of its currently defined basic education, to all their citizens. The changing concepts of basic education from basic literacy to primary education, and to primary plus lower secondary education in the mid-1990s saw the expansion of learning opportunities for better lifestyle and socio-economic amelioration in contemporary Cambodia (Dy. S. S., 2014). The constitution and basic education policies ensures that all school-age children are able to go to school and access to quality education at least up to basic education level so that they can develop their characteristics in order to contribute to social and economic development of the nation. Comprehensive education reform in Cambodia began in 2000. Many children have access to education, especially children of poor families, girls, and marginalized children. The Royal Government of Cambodia and development partners have paid attention to supporting basic education for 9 years for all school age children within the Education for All Framework. Basic education graduates should have the opportunity to further their learning through participation in secondary education followed by higher or technical and vocational education (MoEYS, 2014a). The government has invested in infrastructure and teacher capacity building, one commune one primary school, one district one lower secondary school.

Overview of Curriculum of Basic Education

The curriculum and syllabus of basic education were developed in accordance with the 2009 national curriculum and the 2015 curriculum framework of general education and technical education. The objectives of the national curriculum and the framework are to improve the quality of learning to meet the needs of a skilled labour force to realize the vision of becoming an upper middle-income country by 2030 and the needs for constructing digital society in a very fast changing world. The curriculum aims to shape students to be good citizens who have knowledge, skill, ethics and who can live harmoniously with others to contribute actively to the building Cambodia toward a knowledge-based society.

In addition to the development knowledge and skill for the learners, the national curriculum also emphasizes the sense of national and civic pride.

The purpose of the Basic Education curriculum is to contribute to the achievement of the aims of schooling in order that students can further their studies at the upper grades, participate in other vocational trainings or to participate in social life by ensuring that every student has acquired:

- knowledge of Khmer language and mathematics.
- knowledge of the national identity.
- an understanding of morality and civic responsibilities.
- the everyday life skills that enable participation in their local community life and Cambodian society.
- a basic understanding of the natural world and of scientific principles communicative competence in a foreign language.

To achieve the vision, mission, and purpose of the national curriculum, the 2015 national curriculum framework set core competencies of the students that includes 21st century skills as follow:

- Literacy and Numeracy
- Foreign Languages
- Information and communication technology (ICT)
- Communication and Teamwork
- Analysis and creativity
- Applying Knowledge and skills
- Personal, Family and Society Development
- Entrepreneurship and Leadership

Curriculum of primary education level

For primary education, the curriculum provides two parts which are grades 1-3 and grades 4-6. The purpose of the basic education curriculum of Grade 1-3 is is to ensure that every child has a strong foundation in literacy and Mathematics and that they develop their health, physical appearance, moral understanding, learning skills and life skills. In Grades 1 - 3 comprises the following subjects with the indicated amount of time allocated to each subject in which there are 40 minutes per period. Art education (songs, drawing, dance, music) is included in Science and Social Studies.

The purpose of the basic education primary school Grades 4 – 6 curriculum is to expand and consolidate students' knowledge and understanding of Khmer language, mathematics, learning skills, life skills, moral, and personal development that will enable them to pursue life-long learning and to introduce students to content in the areas of Science and Social Studies.

Curriculum of lower secondary education level

The purpose of the basic education lower secondary school (Grades 7 – 9) curriculum is to provide all students with a breadth of knowledge, skills, Khmer language, Mathematics, Sciences, Social studies, Life Skills, learning skills, life skills, vocational education, moral education and personal development necessary to enable them to contribute as productive members to the growth of Cambodian society and be able to further their studies at the upper grades, participate in other vocational trainings or to participate in social life. Students who have successfully completed the Basic Education will sit for the National Examination and be awarded of the Diploma of Basic Education.

Curriculum of upper secondary education level

The purpose of the Upper Secondary school curriculum is not only to expand and consolidate students' knowledge from the basic education but also to provide them opportunity for future orientation, that is, to have capacity to continue their studies at higher education or to specialize their studies or to participate in social life by ensuring that students have acquired:

- advanced knowledge of Khmer literature and mathematics.
- deep knowledge of the national identity.
- a more complex understand of morality and civic responsibilities.
- the everyday life skills that enable participation in their local community life and Cambodian society.
- a broad understanding of the natural world and of scientific principles.
- high communicative competence in a Foreign Language.

Vocational Education

Over the past decade, Cambodia has endured dramatic growth that has brought to the forefront of economic activity new sectors such as garments, tourism, and construction. At the same time, sustained growth has brought with it new challenges. One of the major ones is to train a largely unskilled labor force to sustain growth in the medium term and to share more equitably in the benefits of development. In Cambodia, it was reported that 300,000 young people enter the job market annually. This number is expected to increase to 400,000 in the future. Creating jobs for those new entrants has been a challenge for policy makers in Cambodia. The future of the Cambodian economy lies in its young workforce. A more relevant and responsive education and training system is required to equip students with the knowledge and skills needed to become productive members of the workforces. The Royal Government of Cambodia (RGC) recognizes the importance of having a skilled workforce as the foundation for a strong and competitive economy. Youth employment is indispensable for a strong and competitive economy. Youth employment fluctuates over the past three decades but remains high at the rate about 72 per cent of the total population aged 15 to 24. Low level of education, skill-mismatch and limited role of Technical Vocational Education and Training (TVET) are found as the main challenges in youth employment, resulting in low productivity.

It is critical for Cambodia not only to improve better quality education and technical and vocational training for young people entering the labor market, but also to upgrade the skills of the existing workforce through TVET. According to the last labor force survey in 2012, it was indicated that only about 28% of Cambodia's working age population of 10.7 million had completed secondary education, and only 1% attended vocational training, while 2% attended university. To address these issues of unskilled workforce, the Royal Government of Cambodia adopted National Technical and Vocational Education and Training Policy 2017-2025 in 2017 aiming to produce skilled workforce and strengthen TVET system.

Curriculum and Instruction of Vocational Education in Cambodia

The objectives of TVET are to improve people's livelihood and dignity and to enhance Cambodia's human resources with knowledge, competency, skills, working attitudes, professional ethics, productivity, and competitiveness for lifelong employability. To achieve the objectives above, the four main goals have been identified: (i) to improve TVET quality to meet national and international market demand; (ii) to increase equitable access to TVET; (iii) to promote public–private partnerships (PPPs) and aggregate stakeholder resources to support sustainable development of the TVET system; and (iv) to improve governance of the TVET system.

A TVET curriculum is a "Plan for Training" designed to provide a complete set of learning experiences including workshop, classroom, experiential, and self-guided training delivery recommendations that will lead to the achievement of a desired set of competencies, which are as mentioned, derived from Cambodian National Qualification Framework and labor market needs. Any competency may require several learning steps to achieve mastery. Any learning step may be directed at mastering in one or several competencies.

The TVET curriculum is the document that drives the competency-based program to its destination. If specific competencies are not focused on the curriculum design philosophy, the products of the program may not be "work-ready" and therefore not relevant and not readily accepted by the industry. In response to the national labor market demand, the MoEYS has established a technical education program at secondary level for technical education implemented at general and technical high schools. The technical education curriculum which is to be implemented at general and technical high schools at upper secondary level is the core for creating productivity, quality, and efficiency through the combination of major subjects such as general subjects, required subjects, and vocational subjects, which will give students foundation and in-depth knowledge, practical experiences and expand knowledge and vocational skills in order that they can improve their livelihood and pursue further education successfully.

Goals of technical education focus on helping students to acquire competencies essentials for their chosen career paths and develop self-identity, characters, and responsibilities as a member of society. The technical education curriculum development is based on ownership and persistence, innovation, lifelong learning, and problem solving and communication skills.

Chapter 2: School Profile of Bavet General and Technical High School

a.) School Background and location

Bavet General and Technical High School is located in Bavet Leu Village, Sangkat Bavet, Bavet City, Svay Rieng Province, 42 km from Svay Rieng Town, 167 km from Phnom Penh, and 3 km from Bavet International Gate with a total land area of 50 400 square meters. Basically, this school has changed its names for stages. From 1986-198, the school was established, located next to Bavet Primary School, as an annex school for Chantrea Secondary School Level 1. From 1988-1989, The Ministry of Education decided to establish a Bavet Secondary School level 1 in accordance with No. 016, dated 19 January 1989 of the Ministry of Education, signed by HE Pen Navuth. Then from 2011-2012 Bavet Secondary School expanded into Bavet High School through No. 2286, dated 23 August 2011 with 571 students, 248 females and a total of 34 staffs, 4 females, processed only10th grade. Finally, in 2016, the school changed its name from Bavet High School to Bavet General Education and Technical High School according to No. 279, dated March 17, 2016 of the Ministry of Education, Youth and Sports.

On May 9, 2018, Samdech Akka Moha Sena Padei Techo Hun Sen visited students and teachers and provided a three-story school building equal to 30 rooms, 2 dormitory buildings equal to 20 rooms and 1 office, 3 rooms, basketball court, football, fence, concrete road, gate, by the request of the principal, dated 22 January 2018. Until the recent time,

there have been three generations of school principals, Mr. Ok Nao Meun (1986-2006), Mr. Preap Sarin (2006-2011) and Mr. Pol Savuth (June 29, 2012 to the present time).

b.) Communication Address

- Facebook: វិទ្យាល័យចំណេះទូទៅនិងបច្ចេកទេសបាវិត
- Email: pol.savuth.hs@moeys.gov.kh
- Tel: +85592440008/ +855884425777
- Telegram: +85592440008/ +855884425777

c.) Structure of Management

Bavet General and Technical High School has 1 school principal, a joint manager, 2 deputy directors, 1 in charge of education, 1 in charge of administration, discipline, youth and technical education. The School Management Committee is composed of 11 representatives from the parent-student community, with the role of chairperson.

d.) Situation of Staff

Bavet General and Technical High School has a total of 64 staff members, 13 females, no framework 'C', 20 framework 'B', 2 females, 44 framework 'A', 11 females and no contract officer.

Table1: Staff Statistics by 2022-2023

Skill-based staff	framework 'C'		framework 'B'		framework 'A'		Total	
	Total	Female	Total	Female	Total	Female	Total	Female
General Education	0	0	18	2	26	6	44	8
Technical Education	0	0	2	0	18	5	20	5
Total	0	0	20	2	44	11	64	13

Table2: Staff Statistics for Technical Education by 2022-2023

Skill-based Staff	framework 'C'		framework 'B'		framework 'A'		Total	
	Total	Female	Total	Female	Total	Female	Total	Female
Electronics	0	0	0	0	0	0	0	0
Electricity	0	0	1	0	8	1	9	1
Agronomy	0	0	1	0	4	1	5	1
Mechanics	0	0	0	0	1	0	1	0
Food Processing	0	0	0	0	4	3	4	3
Information &Technology	0	0	0	0	1	0	1	0
Total	0	0	2	0	18	5	20	5

e.) Students Situation

In the academic year 2022-2023, there are 1,308 general education and technical high school students, 662 females, of which 1,153 general education students, 608 females and 155 technical education students, 54 females.

Table1: Secondary Student Statistics by 2022-2023

Grades	Grade 7		Grade 8		Grade 9		Total	
	Total	Female	Total	Female	Total	Female	Total	Female
A	42	24	44	30	42	27	128	81
B	41	15	44	24	42	26	127	65
C	42	21	43	26	45	27	130	74
D	42	16	43	25	42	23	127	64
E	42	19	44	24	43	14	129	57
F	42	19	43	19	43	17	128	55
G	41	14					41	11
Total	292	128	261	148	257	134	810	410

Table2: High School Student Statistics by 2022-2023 for General Education

Grades	Grade 10		Grade 11		Grade 12		Total	
	Total	Female	Female	Female	Total	Female	Total	Female
A	51	32	42	30	39	24	132	86
B	42	31	45	17	38	25	125	73
C	50	31			36	8	86	39
Total	143	94	87	47	113	57	343	198

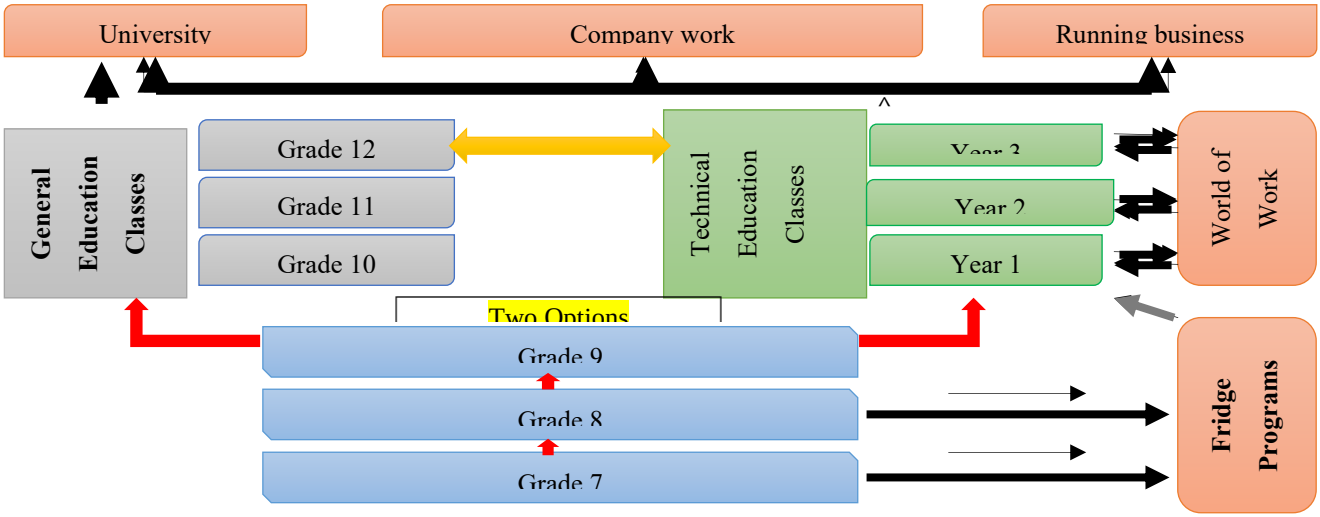
Table3: High School Student Statistics by 2022-2023 for Technical Education

Majors	Year 1		Year 2		Year 3		Total	
	Total	Female	Total	Female	Total	Female	Total	Female
Electricity	31	3	16	5	35	6	82	14
Agronomy	17	3	15	9	13	8	45	20
Food Processing	7	5	8	7	13	8	28	20
Total	55	11	39	21	61	22	155	54

f.) Rates of Graduated Students

School Year	Grade 9		Grade 12		Technical Student (Year 3)		Total	
	Total	%	Total	%	Total	%	Total	%
2013-2014	100	84,03	41	53.95			141	
2014-2015	102	85.71	37	57.81			139	
2015-2016	112	99.12	53	82.81			165	
2016-2017	139	74.00	63	85.14			202	
2017-2018	104	87.39	84	86.60			188	
2018-2019	117	78.52	66	79.52			183	
2019-2020	175	100.00	90	100.00	39	100.00	304	
2021-2022	135	95.07	55	74.32	27	100.00	217	
2022-2023	157	90.75	50	80.65	41	100.00	248	
Total	1141		539		107	100	1786	

➢ ***EDUCHATION SYSTEM IN BAVET GENERAL AND TECHNICAL HIGH SCHOOL***



Chapter 3: School Development Plan of Bavet General and Technical High School

2.1 School Development Plan

The School Development Plan (SDP) for Bavet General and Technical High School aims to provide a leading institution in agronomy, electricity, food processing and other relevant fields in education to empower students with practical skills and knowledge to the demands of the industry. We will enhance the curriculum, support faculty development, improve infrastructure, provide student supports, promote gender equality, strengthen industry partnerships, and engage with the community. Through these initiatives, we envision a school that nurtures potential, fosters inclusivity, and prepares students to make valuable contributions to Cambodia's technical sector.

1.a. School visions

Bavet General and Technical High School is a public secondary school to educate and train students to acquire knowledge, skills and ethics effectively in response to the development of the labor market in the new era.

1.b. School Missions

- Educate and train students to acquire knowledge, skills, technology, ethics in order to earn a living, work or continue their studies to higher education.
- Teach students how to create extra careers while studying to improve their quality of life.
- Strengthen foreign language education for students for regional and global communication.
- Collaborate with schools, community partners, private sector companies and local and international development partners.
- Establish a level competency test for students at the beginning of the new school year to select the level of knowledge and ability to compete in class divisions.

2.2 Technical Education Curriculum

In the academic year 2022-2023, With an enrollment of 1308 students, including 662 females, out of the total students, 155 students have chosen technical education, 54 females, indicating growing interests in vocational training. Moreover, it gets students to study 34 hours per week on different subjects for General Education Classes and Technical classes Program (includes practice) for 39 hours per week. It also requires students to have a 2 months' internship at the end of year 2 and organizes 2 study tours per year for its students. Over the past five years (2017-2022), the school witnessed 107 successful technical education graduates, equipped to make valuable contributions to the society. Bavet General and Technical High School has been fully recognized and given credibility by the Ministry of Education Youth and Sport of Cambodia.

2.3 Partnership with Private Sectors

Based on the school visions and missions, we have made a friendly cooperation with student-parents and various specialized agencies such as the collaborations with Non-Government Organizations (NGOs), Factories, industries, and private companies. Moreover, we've had an oversee cooperation with other countries: China, Indonesia, Singapore, Japan, and Vietnam.

Chapter 3: Digital Transformation of Bavet General and Technical High School

3.1 Strategy Plan for digital transformation

To enhance the study in a fast developed Technological society, Bavet General and Technical High School aims to create a technologically advanced learning environment. This plan includes upgrading IT infrastructure, integrating technology into the curriculum, providing faculty training, and implementing virtual learning platforms. By leveraging technology effectively, the school seeks to enhance teaching and learning outcomes, empowering students for success in the digital ages.

3.2 School Best Practices and Outcomes

To reach the effective management and leadership, the school Principal has taken some prior actions and assigned some tasks to the junior staff due to their learned skills and specializations. Those powerful points are:

a. Personnel management and division of tasks to staff
b. Accountability and transparency
c. Administration and Finance
d. Planning Technical work, directing, teaching and learning
e. Organize Staff meeting, student meeting, technical meeting
f. All employees respect time, discipline, order and a good environment
g. Build up communication and source of income
f. Motivation

3.3 Challenges or Lessons of School Digital Transformation

Actually, Digital transformation comes with its share of challenges and valuable lessons. One significant challenge is ensuring equitable access to technology for all students, considering varying economic backgrounds. Additionally, the internet connection isn't stable to support the teaching and learning processes. Meanwhile, some instructors are poor of ICT knowledge.

3.4 Experiences and Recommendations for Digital Transformation

In the response to these challenges, school learn the importance of adaptability, fostering a culture of innovation, and embracing technology as a tool for enhancing education. In additions, the relevant sides must develop and learn more to acknowledge the ICT literacy. It would be better if the internet connection and ICT infrastructures should have been upgraded continually.

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TVET Development and Institutional Profile
GENERAL AND TECHNICAL PUOCK HIGH SCHOOL, CAMBODIA

Prepared by *By Mr. An Limkheng, School Principal*

Chapter 1 Introduction

Cambodia is a south-east Asian country, slightly smaller in area than Victoria. Central plains account for two-thirds of the land area. These are surrounded by densely forested mountains, with the Gulf of Thailand to the south. The current population of Cambodia in 2023 is **16,944,826**. The capital is Phnom Penh and the national language is Khmer. Over 95% of Cambodians are Buddhists. The majority of Cambodia people live in rural areas. Most Cambodians are of Khmer origin and there are several ethnic groups living in the mountains.

The recovery of the services sector is strengthening, driven largely by pent-up consumer demand. Cambodia's economy is firmly on a path to recovery in 2022, led by manufacturing exports and growth in services and agriculture. The economic growth for 2023 is projected to reach 5.2 percent. (World Bank , 2023). According to Trading Economics global macro models and analysts expectations, GDP per Capita in Cambodia is expected to reach **1583.00 USD** by the end of 2023.

The unemployment rate in Cambodia is expected to reach 2 percent by the end of 2022, according to Trading Economics global macro models and analysts' expectations. In 2023, Cambodia's unemployment rate is projected to trend around 2 percent and 0.90 percent in 2024, according to the projections of the econometric models.[3]

According the statistics from the Ministry of Labor and Vocational Training, Cambodia has increased its monthly minimum wage to US$200 in 2023 from the current US$194 in 2022. The minimum wage standard only applies to the textile, garment, and footwear industries. Workers will continue to receive their benefits such as attendance bonuses, travel and accommodation bonuses, meal allowances, and overtime pay. In 2013, the minimum wage was only US$80 per month.

Adult literacy rate is the percentage of people ages 15 and above who can both read and write with understanding a short simple statement about their everyday life. According to the Ministry of Education Youth and Sport of Cambodia, the literacy rate among Cambodian adults, aged 15 and over, has increased to 87.8 percent in 2020, remarkably up from 77.6 percent in 2008.

1.2 Education Profile

Since the national election in 1993, Cambodia has been undertaken new phase of development in the global context of development and globalization. Education was considered as a means for national rehabilitation and reconstruction (RGoC, 1994). The national rehabilitation and reconstruction was connected to improving the quality of, and access to, basic education and the reinforcement of educational administration (RGoC, 1994). Two year later in 1996, the Cambodian development context passed from the phase of rehabilitation or emergency relief toward the phase of national reconstruction and development. The first policy reform that initiated major structural changes in education levels in Cambodia was a 12-year reform plan in 1996. The education system of 4 years (for primary education level) +3 years (for lower secondary education) +3 years (for upper secondary education level).

The Cambodian education and training system can be systematized in three streams: 1) General education including the sub sectors from early childhood education to upper secondary education, 2) Higher Education and (3) TVET, including secondary and tertiary TVET. General education and higher education are under the jurisdiction of the Ministry of Education, Youth and Sport (MoEYS), while TVET is under the jurisdiction of the Ministry of Labor and Vocational Training (MLVT). The Education law in its article 8 distinguishes between three levels of education: primary, secondary, and higher education and two types of education: general knowledge and technical and vocational education (RoGC, 2017). Education providers can be either public or private. All education institutions are regulated,

[3] https://opendevelopmentcambodia.net/news/joblessness-in-cambodia-to-stay-around-2-in-2023/#!/story=post-166575

monitored, and licensed by the ministry in charge. Higher education institutions are provided with rights as institutions with administrative autonomy.

According to the Education Law, the state is in charge to ensure a comprehensive and standardized education system, which according to article 15 includes formal education, non-formal education, and informal education (RoGC, 2017).

Basic Education

The basic system and policy of education are set in compliance with Cambodian Constitution of 1993. The Constitution includes several articles related to the education sector. These are pre-determining some general important features of today's education system. Social and political factors of the last four decades from the 1950s to the 1980s determined the flux of crisis and progress of the schooling systems. Since the 1990s, Jomtien World Conference on Education for All (WCEFA), Cambodian leaders, especially in the late 1990s, have made numerous efforts to provide accessibility for nine years of its currently defined basic education, to all their citizens. The changing concepts of basic education from basic literacy to primary education, and to primary plus lower secondary education in the mid-1990s saw the expansion of learning opportunities for better lifestyle and socio-economic amelioration in contemporary Cambodia (Dy. S. S., 2014). The constitution and basic education policies ensures that all school-age children are able to go to school and access to quality education at least up to basic education level so that they can develop their characteristics in order to contribute to social and economic development of the nation. Comprehensive education reform in Cambodia began in 2000. Many children have access to education, especially children of poor families, girls, and marginalized children. The Royal Government of Cambodia and development partners have paid attention to supporting basic education for 9 years for all school age children within the Education for All Framework. Basic education graduates should have the opportunity to further their learning through participation in secondary education followed by higher or technical and vocational education (MoEYS, 2014a). The government has invested in infrastructure and teacher capacity building, one commune one primary school, one district one lower secondary school.

Vocational Education

Over the past decade, Cambodia has endured dramatic growth that has brought to the forefront of economic activity new sectors such as garments, tourism, and construction. At the same time, sustained growth has brought with it new challenges. One of the major ones is to train a largely unskilled labor force to sustain growth in the medium term and to share more equitably in the benefits of development. In Cambodia, it was reported that 300,000 young people enter the job market annually. This number is expected to increase to 400,000 in the future. Creating jobs for those new entrants has been a challenge for policy makers in Cambodia. The future of the Cambodian economy lies in its young workforce. A more relevant and responsive education and training system is required to equip students with the knowledge and skills needed to become productive members of the workforces. The Royal Government of Cambodia (RGC) recognizes the importance of having a skilled workforce as the foundation for a strong and competitive economy. Youth employment is indispensable for a strong and competitive economy. Youth employment fluctuates over the past three decades but remains high at the rate about 72 per cent of the total population aged 15 to 24. Low level of education, skill-mismatch and limited role of Technical Vocational Education and Training (TVET) are found as the main challenges in youth employment, resulting in low productivity.

It is critical for Cambodia not only to improve better quality education and technical and vocational training for young people entering the labor market, but also to upgrade the skills of the existing workforce through TVET. According to the last labor force survey in 2012, it was indicated that only about 28% of Cambodia’s working age population of 10.7 million had completed secondary education, and only 1% attended vocational training, while 2% attended university. To address these issues of unskilled workforce, the Royal Government of Cambodia adopted

National Technical and Vocational Education and Training Policy 2017-2025 in 2017 aiming to produce skilled workforce and strengthen TVET system.

Chapter 2 School Profile

2.1. General Information

- 1961-1962, the school was built during the reign of the presidency of King Sihanou, named High School of Soraya Varaman II.
- From 1962-1963, the school was renamed high school, and they performed well until 1970.
- From 1970-1979, the school closed its doors.
- 1981-1982 High School opened the doors for students to re-enroll with 95 students, 21 women, and 5 tutors.
- Until November 27, 1990, schools were authorized to be established as high schools by the Ministry of Education, Youth and Sports.
- On March 10, 2016, the school was renamed the General and Technical Puock High School.

- Until now, there are 21 buildings, 187 educational staff, 91 women, total students of 4268 Women 2538 divided into 84 classes, including 77 general knowledge classes (7 to 1st classes 2) Technical and technical classes have seven classes of electricity (first year with 2 classes, second year, 2 classes, 3rd year 1 Class) and two classes of electronics (the first year, the second year, had a total of 237 students.

- Geographic Location: Located in the Brayut village, Puock Commune, Puock districts, Siem Riep provinces, 1,5 kilometers from the central province (west).

- Relations of graduate School: Knat High School, Donswa High School, Boyondognok High School, and Daun Tra High School.

- Social-cultural status (procedure of living in ethnic...) The villagers are marketed with marketplaces in the capital governor district of Puok with tourist areas, find agriculture (wheat, farming, growing vegetation, prevention, and livestock), businesses, construction workers, and transporting visitors.

2.2 School Information

❖ **Staff Information**

- About School Director
  - Mr. Anne Limkeng held a Master's degree in Vocational certificate with a teacher of higher education position. He is a school principal with good relations, commitment, effort, relations and better unity with the referee community Territorial authorities at all levels, offices, museums, and national and international ministries, combining and innovating the organization's tangible to make schools more prosperous, respond to the quality and effectiveness of education.
  - Mr. Suy Sang Vat held a Master's degree in Vocational certificate with a teacher of higher education position. He is a vice-principle in charge of administrative and technical schools.
  - Mr. Sen held a Master's degree in Vocational certificate with a teacher of primary education position. He is a vice-principal in charge of graduate studies and high school regulations.
  - Mr. Kim Ron held a Master's degree in Vocational certificate with a teacher of higher education position. He is a vice-principle in charge of primary academic and primary regulation.
- About Teachers

  A total of 187 women, 91 women, 27 non-teaching staff, 0 9 women, and 160 teaching staff, 82 women. The school is looking forward to working with teachers of graduate sections like electronics, electronics, computers, geography, geology..... etc.

Teacher Development (Capacity Building)	Primary village	Graduate Secretary	Bachelor	Higher Environment	Dr.
Number of Teachers	25/9F	22/21F	107/51F	6/1F	
Number of Non-Teachers	0	20/7F	5/2F	2/0F	

- Student Information
    - Number of students to enroll

Academic year	2018-2019	2019-2020	2020-2021
Number of students	83/1F	115/2F	195/6F

    - Student flow (give up class)

Academic year	2017-201 8	201 8-20 19	20 19-2020
Number of promoting students to a higher level	31/0F	46/0F	90/2F
Number of un-promoting students to a higher level	0/0F	1/0F	8/0F
Number of students giving up	12/0F	20/1F	7/0F

    - Number of graduating students

Academic year	2017-201 8	201 8-20 19	20 19-2020
Number of grade 9 students	289/167F	439/257F	378/211F
Number of third-year students	Not availability	16/0F	10/0F

    - School infrastructure information
        - Road and environmental situation: Good
        - Study building (over-lack classrooms): 84 classrooms, 63 rooms, such lack of classrooms.
        - Support room (professional counseling library, health consulting room, bathroom laboratory...) Schools are in short supply for experiments (none) and bathrooms (inadequate)
        - Water supply system: The preparation hall is already available.
        - During the count
        - Involvement from parents, staff, community, school management committee, and the Classroom Management Committee

2.3 Resource Source

- Human Resources: Master-Tutor
- Budget: School income, brick budget (SOF), and development counterparties.
- MATERIALS: For skilled learning and teaching administrations...

2.4 Challenges

- Our high school has a lack of technical teachers, like three electronic teachers, two electronics, and two additional computers.
- Lack of academic buildings

TVET Development and Institutional Profile
SAINT FRANCOIS GENERAL EDUCATION AND TECHNICAL HIGH SCHOOL (SFT), CAMBODIA

Prepared by *Mr.Yun Sam ath, School Director ,Saint Francois General knowledge and Private technical high school*

Chapter 1. Introduction

1.1. Country Profile

Cambodia is a Southeast Asian country with 16.94 million (2023) population. Its current GP is USD 31.88 billion and ranked 109th in the world. The country's employment rate is currently at 82.80 % while the literacy rate is at 83.91%. Cambodia has set its minimum wage to be KHR 818,800.00 per month.

1.2. Education Profile

Education in Cambodia is controlled by the state through the Ministry of Education at the national level and by the Department of Education at the provincial level. The Cambodian education system includes pre-school, primary school, general secondary school, higher education and non-formal education.

Formal TVET is under the direct management of the Ministry of Labor and Vocational Training. There are three programs offered in formal TVET education such as TVET program, the Vocational diploma, and the TVET program at tertiary level. They are long-term courses (2-4 years) that required different qualifications.

Over the past two decades, more than 86 thousands students have enrolled in TVET training centers and the overall drop-out rate is low (4.5 percent). Out of the 38 institutions, 8 are located in Phnom Pen, the rest (30) are spread across the country.

1.3. School Profile

In 2003, Saint Mary of the Smile parish Chamkartieng, located in Chamkartieng village, Kus commune, Tramkak district, Takeo province, Kingdom of Cambodia. Bishop Olivier was at this time also in charge of the diocese education commission in Phnom Penh.

Because of the poverty level, many drop-out students were unable to continue their studies in Phnom Penh. Bishop Olivier initiated the establishment of a technical high school to train young professionals in collaboration with the Ministry of Education, Youth and Sport. But it was not possible to achieve that goal then, because the Ministry of Education, Youth and Sport have not policies for technical high schools yet.

Nevertheless, Bishop Olivier decided to open Saint Francois High School of General Education. In addition to the academic program, a number of technical skills such as agriculture, secretariat and silk weaving, were added. From 2003 to 2015, Bishop Olivier continued running this General Education High School, which specialized in agricultural and tourism, aimed at helping poor and disadvantaged students to gain access to technical knowledge. And the goal was to help them truly gain the skills, abilities and capacities to build a livelihood and alleviate rural poverty.

In 2015, the Ministry of Education reformed the national education policy with a focus on technical education. Capitalizing on these new orientations, Bishop Olivier initiated a committee to coordinate the establishment of the Technical High School specialized in agriculture which was completed in 2015 by the Declaration and Circular No. 2519, dated 2nd September 2015, officially recognized by the Ministry of Education, Youth and Sport. On November 1, 2018 a department of tourism was included and it currently locates in Angkorki village, Tapam commune, Tramkak district, Takeo province, Kingdom of Cambodia.

SFT currently offers two tecnical programmes, namely agriculture and tourism for three years to general and technical diploma programs. It regularly has an enrollment of approximately 60 students on a yearly basis with a stable numbers of 32 staff members which comprises administrators, teachers and non teaching staff. The school's percentage of graduate employability is normally within 80% to 95% while a small percentage of its graduates often pursue their study in tertiary education.

Chapter 2. School Development

2.1. School Development Plan

SFT has set the development plans such as curriculum, teachers and students qualifications, students' life skills, school's infrastructure and environment, maintenance and repair school building and facilities and making money through entrepreneur ship program. And base on the above plans, scholl will targets that 70% of its graduates to enter workforce upon completion of their study, 20% pursue their study at tertiary education once they earn their diploma and 10% use their skills to become entrepreneurs.

2.2. TVET Curriculum

The school curriculum is based on the standard syllabus and framework introduced to every technical schools in the country. The students learn a combination of general knowledge and technical subjects, along with several courses focusing on improving their soft skills. The students need to attain a certain grade in all subjects and fulfill several requirements in order to proceed to the following semester. Students' assessments comprise ongoing assessment and final examination which are administered every semester. Prior to their graduation, they are expected to complete their final year project and a 3-month internship in the actual fields.

2.3. Partnership Between Schools and Private Sector

Saint Francois General Education and Technical High School has consistently formed a network with various agencies specialized in areas that are aligned with its curriculum through notes of understanding (NOU). SFT has also formed collaborations with the following institutions such as Saint Paul institute Cambodia, Comfirel Company Cambodai, Ecole d'Hotellerie et de tourisme Paul Dubrule Cambodia, National Polytechnic institute of Cambodia and SMK Negeri 1 lubuk DALAM Malaysia.

Chapter 3. School Digital Transformation

3.1. Strategy and Plan for Digital Transformation

Digital transformation does affect various aspects, including in the education sector. The digital school program aim at improving the following areas:

- Digital literacy program for teachers.
- Building Digital classrooms to support the teaching and learning process
- Wifi access in the school area.
- Official website
- Interactive whiteboard.
- Interactive digital learning content.
- School management system application.

3.1 School Best Practices and Outcomes

- The school has formed collaborations with several organizations and institutions that resulted in continuous virtual real-time learning experience for the students and teachers to actively participate in, particularly during pandemic.

3.3. Challenges or Lessons of School Digital Transformation

- It requires a consistent system check in order to prevent system malfunction and there must be a backup or contingency plans in place in case if any malfunction occurs that can be also caused by power disruption. It is also extremely crucial for students and teachers to receive tutorials and training on how to use virtual platforms such as Zoom and Google Meet particularly the technical aspects to make sure they are well-versed on how to use basic features of such application during actual virtual events such as conferences or masterclasses.

3.2 Experiences and Recommendations for Digital Transformation

- Digital transformation can be challenging due to the rapid changes of technology and digital resources. Hence, it is vital for continuing professional development programmes on specific use of certain digital resources or technological tools to be conducted for teachers. It is also vital to form network with government agencies, community clubs, startups and non-government associations to create a dynamic and constant exchange of information as well as skill and technology transfer that can keep the school abreast of new trends and technology.

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TVET Development and Institutional Profile
BINA INSANI UNIVERSITY, INDONESIA

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Chapter 1. Introduction

1.1 Country Profile

The population of Republic of Indonesia is about 280 million people. The employment rate is about 5,45. The literation rate is 62%. The lowest Minimum Wage is Rp 1.958.169 applied in Central Java Province and the highest Minimum Wage is Rp 4.900.798 applied in DKI Jakarta Province.

1.2 Education Profile

A. Education System

Educational level refers to a stage in continuing education which is determined based on the level of development of the learning participant as well as the flexibility and the depth of learning materials.

- Basic Education
- Secondary Education
- Higher education
- Special Education
- Pre-School Education
- Out-of-School Education

B. Basic Education

According to Law No. 2/1989 and Government Regulation No. 28/1990, basic education is general education with a duration of 9 years, including 6 years in Primary School and three years in Lower Secondary School or equivalent educational level. Basic education aims to provide assets in the form of abilities to learning participants so they may develop their lives and lifestyles as individual members of society, citizens, and human beings, as well as to prepare them to attend secondary education.

The basic education unit that implements the six year educational program consists of two major divisions, i.e. general primary school and primary school for the handicapped. The basic education unit that implements the three-year educational program after the six-year program is either general lower secondary school or lower secondary school for the handicapped. Apart from these schools, there are also primary education units which are based on Moslem religion and organized by the Ministry of Religious Affairs. These schools are known as Madrasah lbtidaiyah which is the equivalent of primary school and Madrasah Tsanawiyah, equivalent of lower secondary school.

As a general education institution, primary education is obliged to contain at least the following subjects in the curriculum: Pancasila education, religious education, citizenship, Indonesian language, reading and writing, mathematics (including arithmetic), introduction to science and technology, geography, national and general history, art and craft, physical and health education, drawing, and English language. The mentioned courses are not the formal title of the subjects, but rather the field of study, the basic material presented to form personality and ability instilled and developed through basic education. More than one field of study may be united to become one subject, or conversely, one field of study may be dispersed across more than one subject matter.

According to Law no. 2/1989 article 39, which is further clarified by Minister of Education and Culture's Decree No. 060/U/1993 of 1993, the primary education curriculum contains 10 subjects, as follows: (1) Pancasila and citizenship education; (2) religious education; (3) Indonesian language (including reading and writing); (4) mathematics (including arithmetic); (5) natural science (science and technology introduction); (6) social sciences (including geography, national and general history); (7) art (including drawing); (8) physical and health education; (9) English language and; (10) local content (a number of assorted subjects).

C. Secondary Education

Secondary education is education that is organized for graduates of basic education. Types of secondary education cover the broad fields of general, vocational, religious, officials, and special education.

General secondary education focuses on knowledge expansion and skills improvement of students and preparing students for further education. Vocational secondary education focuses on the development of skills that apply to a certain specific occupation and preparing students for employment as well as developing professional attitude. Religious secondary education focuses on the mastery of the teaching of the respective religions. Official secondary education focuses on ability improvement to support the implementation of official duties for government officials or potential government officials. Finally, special secondary education is carried out for students with physical and/or mental disorders.

General secondary education is undertaken in general secondary schools and Madrasah Aliyah (Islamic secondary schools). The objectives of general secondary education are to: (1) increase the knowledge of students so that they may progress to higher education levels and to develop themselves in line with advances of knowledge, technology and art, and (2) increase the ability of students to become contributing members of society, through developing useful mutual relationships with their social, cultural and natural surroundings. To achieve such objectives, the teaching program is organized into two stages, consisting of: the general teaching program which is applied in class I and II, and special teaching programs (more specific in nature) which begin to be implemented in class III in accordance with the ability and interests of the individual students.

Vocational secondary education is carried out in vocational secondary schools, which are schools that run educational programs adjusted to employment needs for certain occupations. The secondary vocational education program consists of six groups, namely: (1) the Agricultural and Forestry Group, (2) the Technological and Industrial Group, (3) the Business and Management Group, (4) the Social Welfare Group, (5) the Tourism Group, and (6) the Art and Crafts Group.

The educational activity implementation in vocational education units is based on the valid national curriculum, a curriculum that is adjusted to environmental needs and conditions, and the specific characteristics of the related educational units. The secondary vocational curriculum is organized into general and vocational programs. The general program consists of a number of subjects which are considered the normal minimum requirements for students of this level and are compulsory for all students in the framework of forming the character of the wholesome Indonesians. This program consists of the following subject matters: Pancasila and Citizenship Education; Religious Education; Indonesian Language and Literature; Physical and Health Education; and National and General History. The vocational program consists of basic vocational subjects and vocational skill development topics. The function of basic vocational education is to instill the ability to develop and adapt in line with the development of science, technology and arts in relation to the respective study program. The function of vocational skills development is to form productive ability which can be practically applied to employment in the respective occupations.

D. Higher education

Higher education is the continuation of secondary education through the in-school education channel. This channel consists of two divisions, academic and professional education. Academic education is directed particularly toward mastery of technological science and/or arts in the academic sense, whereas professional education is directed more toward the preparation of certain applied skills useful in the workforce,

The higher education implementation unit is the higher education institution. Such educational units can be in the form of academies, polytechnics, tertiary school institutes, or universities. Academies are higher education institutions that carry out professional education in one or a part of certain branch of knowledge, technology or arts. Polytechnics are higher education institutions which undertake professional education in a number of special fields. Tertiary schools are higher education institutions which carry out academic and/or professional education in

only one specific discipline. Institutes are higher education institutions that consist of a number of departments which undertake academic and/or professional education in one group of similar scientific disciplines. Universities are higher education institutions that consist of a number of departments which undertake academic and/or professional education in many scientific technological, or arts disciplines.

The educational units referred to as academies and polytechnics run diploma programs as a part of professional education. Higher education units in the form of tertiary schools, institutes and universities run academic and/or professional education courses in the form of graduate and post-graduate programs. Post-graduate programs are in the form of Magister's and Doctor's degrees. Professional education is in the form of a diploma program that offers 4 levels of study from diploma I through to diploma 4. Diploma programs can be continued to a higher level known as Specialist 1 or 2 level, if students meet the entry requirements.

E. Special Education

Special education is formed to meet the educational needs of those who suffer from physical and/or mental disorders. Special education is aimed at instilling skills that help the people who suffer physical, mental, behavioral or social problems, to more readily adapt to society. This is done through the development of skills, attitudes, and knowledge that enable students to develop work skills, skills to help them interact with their social, cultural, and natural environments, and/or pursue further education.

The different types of disorders that are catered for in special education include (1) partial or complete sight impairment (blindness), (2) partial or complete deafness, (3) physical disabilities such as crippled limbs or disfigured limbs which result in impaired mobility or senses, (4) mental or behavioral disabilities such as retardation, which cause assimilation difficulties in normal schools, the family environment or society. Students may be handicapped in both physical and mental disabilities.

The form of special educational units as regulated by Law No. 2 of 1989 are special kindergarten schools, with a duration of 3 years; special primary schools with a duration of at least 6 years; special lower secondary schools with a duration of at least 3 years; and special upper secondary schools, also with a duration of at least 3 years.

F. Pre-School Education

Based on Law No. 2/1989, Article 12 verse (2), apart from the educational levels dealt with above, there is also an educational unit known as pre-school education. The objective of pre-school education is to stimulate the physical and intellectual growth and development of children outside the family environment before entering primary school or out-of-school educational programs. The focus of education is on the development of attitude, knowledge, skills and creative abilities, so that children may adapt to their environment quicker and easier, and for their further growth and development. However, attendance at pre-school education is not a prerequisite or requirement for entry into primary school.

The forms of pre-school education include Kindergartens, Play Groups and Child Care Centers. Kindergartens are classed as in-school education facilities while play groups and child care centers are included under the banner of out-of-school education. Apart from these units, there are also special Islamic pre-schools which are of the same status as kindergartens. These schools are called Bustanul Atfal and Raudlatui Atfal, and are organized by the Ministry of Religious Affairs.

Kindergartens are run for children aged 4 to 6 years with a one or two year education duration. Children's welfare in play groups and child care centers is the responsibility of the Minister of Social Affairs, while the educational aspects are organized by the Minister of Education and Culture (Government Regulation No. 27 of 1990, Article 5).

Pre-school educational units in the form of play groups and child care centers may be attended by children under the-age of 3 years. The content of the pre-school educational program for kindergartens as run through the in-school channel must include Pancasila morals education, religion, discipline, language ability, thinking exercises, creativity, social skills, feelings and emotions, manual skills and physical fitness and health.

G. Out-of-School Education

Out-of-school education are educational activities carried out outside of the formal school system. Out-of-school education is not necessarily organized into levels or stages and continuous. The characteristic that differentiates out-of-school education from school education is its flexibility which includes flexible course duration and study times, no participant age limits, and flexible course content, implementation and assessment procedures. The out-of-school education unit covers family education learning group, special courses like computer, and other similar educational units. Family education is designed to promote religious awareness, cultural values, moral values and special home and social skills.

The major objectives of out-of-school education are to: (1) serve the needs of the learners so that they may grow and develop as rapidly as possible, and develop self worth and improve the quality of their lifestyle throughout life; (2) organize learning activities to help learners to gain skills, attitudes and knowledge needed for their development, for work as a livelihood, or continue on to higher levels of education; and (3) meet the societal demand for education that cannot be fulfilled by the formal education channel alone.

The forms of out-of-school education include courses, learning groups and others such as play groups, and child care centers and similar educational units. The courses are run for education participants as assets to develop themselves, to find a livelihood and/or continue on to higher levels of education. The learning groups that are organized by the Government consist of the Learning Group Packet A, and the Learning Group Packet B. The Learning Group Packet A provides material for the learners to achieve primary school qualifications, and the Learning Group Packet B provides material for lower secondary qualifications. Other out-of-school units such as child care centers and play groups are organized by the Ministry of Social Affairs and the Ministry of Education and Culture in a cooperative arrangement.

H. TVET System

Formal TVET

Public and private vocational high schools (SMKs) and Islamic vocational schools (MAK) offer three-year programmes to students that lead to secondary certificate level qualifications. Apart from enrolling in the programme, TVET students are encouraged to also pursue skills certificate courses from industries while they are still in school to enhance their employability skills. These vocational secondary certificate level qualifications (SMK) entitle the learners to pursue further TVET at the tertiary level to receive diploma certificate one (D1). While the general duration of these programmes is 3 years, some vocational schools extend it by one year. These programmes are called SMK-Plus and the learners graduate with a D1 degree, and can directly access TVET at D2. Graduates of these programmes are also entitled to access the labour market.

Vocational secondary schools focus on developing students' expertise in these main sectors or fields: technology and engineering; information and communication technology; health; arts, crafts, and tourism; agro-business technology; and business and management. However, majority of the institutes specialize primarily in technology and industry (86%) or business and management programmes (76%). SMKs offer 144 competences, however, about 60% of the competency proportion is filled only by 10 major competencies namely: computer and network engineering; accounting; office administration; light vehicle engineering; engineering machinery; motor vehicle engineering; multimedia; marketing; and engineering cooler.

Upon completion of three years of secondary studies at the SMK, graduates are awarded the secondary certificate. From here on, they have different options:

1. Directly join the labor market by filling job vacancies available in industries related to their course of study;
2. Work independently as entrepreneurs;
3. Pursue higher education at tertiary institutions

In accordance with the Higher Education Act, vocational programmes are offered by a variety of tertiary institutions like: community colleges, academies, advanced schools, institutes and universities.

SMK graduates can pursue higher studies at Polytechnics (Politeknik) by enrolling in three-year Diploma Certificates (DI-DIV) and still continue on the professional track to specialist I and II (Sp.1 and Sp.2)9. They are regulated by the Ministry of Research, Technology and Higher Education (MoRTHE).

Non Formal TVET

The name of the program is Community Learning Centre (PKBM). It is an Equivalency programme under the Ministry of Education and Culture.

The target audience of the program is people who did not have access to regular education, specifically in urban areas.

One of the PKBM programmes is the 'Equivalency programme' that offers courses in packages (Pakets) to study groups (Kejar) and equals the formal education streams. For example, Paket A is equal to elementary school (Sekolah Dasar - SD); Paket B is equivalent to junior secondary school (Sekolah Menengah Pertama - SMP); and Paket C is similar to senior secondary school (Sekolah Menengah Atas/ Kejuruan - SMA/SMK). Study groups primarily target people living in remote areas; however, they are also conducted in urban areas to prepare workers and trainees to enter the job market with specific upgraded skills.

The other program is Vocational Learning Centres (BLK) – Type A, B, C; Community-based training; Mobile training units under Ministry of Manpower and Transmigration – National Training for Work system. Its target audience is poor individuals and school dropouts (vocational education); (in)formal workers (job placement services). Qualifications received is in BLK certificate.

Qualifications and training provided by BLKs are of three types: BLK Type A: it is offered by larger training providers in urban centres that provide industrial training and service skills, along with smaller players that provide training in different technologies and skills for self-employment; BLK Type B: this involves smaller urban centres that offer informal education comprising self-learning, family and community education; and BLK Type C: it is offered by the training providers from rural areas.

BLK programmes cover a wide range of areas, including Hotel/Tourism, Telematics/IT, Agriculture, Institution (Train PNS), Construction, Apprenticeship, Electricity, Mechanical Technology, and Commerce.

Agriculture and hotel/tourism are the most promising programmes for employability. Graduates receive a BLK certificate upon successful completion of their BLK course. BLKs are a part of the National Training for Work System, which is regulated by the Ministry of Manpower and Transmigration (MoMT) under the Law No. 13 of 20035 on 'Manpower Act and Government Regulation on National Training for Work system' (System Pelatihan Kerja Nasional).

TVET enrollment rates

In Indonesian Higher Education Institution, the total number of the students are 1.313.657 students in 2022. 15,1 % of the total students is the percentage of the students who study in vocational higher education institution (198.362 students). In Senior High School the total number of the student is 11.817.259 student. 42,7% of the total students is the percentage of the student vocational senior high school students.

TVET graduation rates

1.3 School Profile

Bina Insani University which is abbreviated by BIU is located in Bekasi Municipality, West Java Province Indonesia. It is surrounded by 11 industrial areas. The five largest industrial areas are East Jakarta Industrial Park (EJIP), MM 2100 Industrial Area, Jababeka Industrial Area, Lippo Cikarang Industrial Area and Greenland International Industrial Center. There are around 7.600 multinational companies operating in the industrial areas.

BIU student body is 1.573 students and 61 faculty members consisting of 3 Doctors, 4 Doctor Candidates and 54 masters. There are 2 faculties: Faculty of Economics and Business and Faculty of Informatics. There are 9 (nine) majors: Degree in Informatics, Information System, Software Engineering, Management, and Accounting and 3 year diploma in Information Management, Accounting, Management, Administration Management and Secretary. There are 250 graduates on the average every year.

Chapter 2. School Development

2.1. School Development Plan

As BIU mission statement is to be the most trusted and prime university nationwide with global reputation in 2044 BIU leadership has set up long term strategic planning for 25 years to go, which is divided into 5 stages. Each stage has short term planning for 5 years. The 5 stages are Teaching University (2020-2024), Excellent Teaching University (2025-2029), Pre-Research University (2030-2034), Research University (2035-2039) and Excellent Research University (2040-2044). During the first stage, Teaching University (2020-2024), BIU sets up the following 2020-2024 goals:

1. To be in Top 500 Webometric ranking;
2. All study programs and BIU institution are nationally accredited with at least a grade of B or Very Good status;
3. Stakeholder Satisfaction Index (Alumni, Users, Employees, Lecturers, Students) reaches ± 85%
4. The number of new student admissions increases ± 10% each year
5. Absorption of graduates in work and entrepreneurship is more than 91%
6. Getting the license of master program in computer science from the government

Developing an integrated campus management information system

2.2. TVET Curriculum

At this moment BIU applies Competency-Based Education (CBE). It is an educational approach that centers on the demonstration of specific skills, knowledge, and abilities (competencies) as the primary criteria for evaluating student progress and success. Unlike traditional education, which is often structured around time-based systems, CBE focuses on a student's mastery of content and skills, allowing for more individualized and flexible learning experiences.

BIU plan to make a shifting from Competency Based Education to Outcome Based Education. Outcome-Based Education (OBE) is an educational approach that focuses on defining specific learning outcomes or competencies that students should achieve by the end of a course, program, or educational experience. Instead of traditional education methods that emphasize instructional methods and content delivery, OBE centers on what students should be able to do or demonstrate after completing their education. Competency-Based Curriculum (CBC) and Outcome-Based Curriculum (OBC) are both student-centered educational approaches that focus on defining specific learning outcomes and competencies. While they share some similarities, there are also distinct differences between the two:

A. Focus of Assessment:

In Competency-Based Curriculum (CBC): The emphasis is on the acquisition and demonstration of specific skills and competencies. Students are required to show mastery of each competency before progressing to the next level or topic. Assessment is typically focused on evaluating students' abilities to perform particular tasks or apply knowledge in practical situations. In Outcome-Based Curriculum (OBC): The focus is on broader learning outcomes and objectives. While competencies may still be part of the curriculum, OBC places more emphasis on the overall learning goals students should achieve. Assessment in OBC measures whether students have met these broader learning outcomes, which may encompass a range of skills, knowledge, and attitudes.

B. Level of Detail in Learning Outcomes:

In Competency-Based Curriculum (CBC): The learning outcomes are often highly detailed and specific. Each competency is broken down into discrete elements that students must master, and assessments are designed to measure proficiency in each of these elements. In Outcome-Based Curriculum (OBC): The learning outcomes are more general and encompassing. OBC focuses on broader educational goals that encompass multiple competencies and skills, providing a broader view of what students should achieve.

C. Progression and Advancement:

In Competency-Based Curriculum (CBC): Students advance through the curriculum based on their demonstrated mastery of specific competencies. They can move at their own pace and may progress more quickly through material they excel in. In Outcome-Based Curriculum (OBC): Progression is often tied to the achievement of overall learning outcomes or objectives. Students advance when they have met the required outcomes, which may involve demonstrating proficiency in multiple competencies.

D. Application and Implementation:

In Competency-Based Curriculum (CBC): CBC is more commonly used in vocational or technical training programs, where specific skills and competencies are essential for success in particular professions or industries. In Outcome-Based Curriculum (OBC): OBC is often implemented in various educational settings, including K-12 schools, higher education institutions, and broader academic programs. It is used to guide the overall educational experience, emphasizing a more comprehensive view of student learning.

E. Assessment Methods:

In Competency-Based Curriculum (CBC): Assessment in CBC is heavily focused on direct demonstrations of skills and competencies, often through practical assessments, simulations, or performance-based evaluations. In Outcome-Based Curriculum (OBC): Assessment in OBC can include a mix of direct demonstrations of skills and competencies along with other types of evaluations, such as exams, projects, and presentations, to assess broader learning outcomes.

In summary, both Competency-Based Curriculum (CBC) and Outcome-Based Curriculum (OBC) prioritize student learning outcomes, but CBC places a stronger emphasis on specific competencies and their mastery, while OBC focuses on broader learning objectives and overall educational goals. The choice between the two approaches depends on the educational context, learning objectives, and the desired level of granularity in defining learning outcomes.

2.3. Partnership Between Schools and Private Sector

BIU is trying to develop its network in 5 (Five) elements. They are Government, Society, Business, Academician and Media. BIU is working together with local, provincial, and national government in some programs that directly answer the social problems. BIU is working hand in hand on some projects with non-profit organizations which have same concerns with BIU. Besides, BIU is also collaborating with the business in job placement, internship, curriculum review, Industrial Visit, and invited teachers. And BIU uses media to report some important activities.

Chapter 3. School Digital Transformation

3.1. Strategy and Plan for Digital Transformation

The leadership of BIU comes to realize that BIU has to create added values to achieve much better customer values and much better competitive advantage in the market. Creating the added values is conducted through digital transformation from paper campus to paperless campus. There is no doubt that digital transformation will bring about a Good University Governance. Digital transformation will create transparency, accountability, responsibility, reliability and fairness. BIU aims at paperless campus. Paperless campus will also give stakeholders of BIU benefits such as cost minimization, speed, database, data driven decision making.

Paperless campus strategy will make BIU competitive in the market. BIU can create better functional benefits and emotional benefits as well as lower the tuition fee. It will be added values for the students and parents when BIU not only offer more benefits but also lower the price.
The above postulate encourages BIU leadership to go digital to achieve strong positioning in the market by transforming from paper to paperless campus.

Due to the transformation, there will be some changes taking place. BIU leadership is, however, trying to create balance between mind and machine, product and platform, and core and crowd. We need to create machines to help us solve problems and make decisions. BIU does not only depend on the machine but also harness employees' mind for problem solving and decision making. Besides, BIU needs to create platforms but does not forget to create products. BIU need to harness its core but does not forget that BIU also needs external experts. In short, BIU leadership need to create balances among them.
How does BIU create the balance? BIU needs to study further whether a thing is a mind or machine work, whether to create products or to build platforms and whether a thing is a core job or a crowd job.

It is undeniable that the changes caused by the transformation will affect BIU business structure. BIU leaders will restructure BIU organization by referring to the Matrix of Change. Some post will be deleted, and the other posts will be added. BIU needs new teams. There will be skill evaluation and job rotation. Some personnel will be possibly provided with training programs to acquire new skills and knowledges.

It is a huge change that needs intense communication among stakeholders. BIU will be successful in this transformation if we work in team. Teamwork needs understanding among the team members on what and how to achieve. Understanding needs communication. Intense communication will minimize conflicts and maximize supports. We need supports, not conflict, to transform in a fast way.

BIU will make a new job desk and reshuffle its manpower. BIU manpower needs new skills. We will apply knowledge management and learning organization. BIU needs to create a platform where it can store manpower tacit knowledge and where the employees can access so they can also learn from the experiences of other employees. With a hope we will have digital ambidexterity.

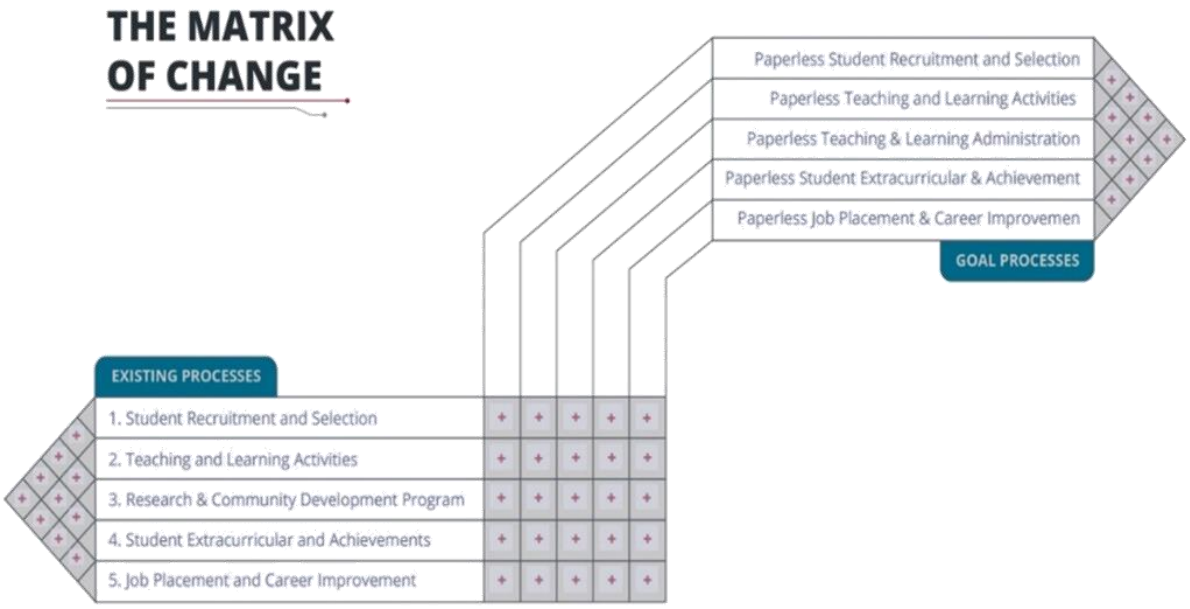
The transformation we want to work on is moving from a paper campus to a paperless campus. We know that paperless campus management can reduce campus administration costs. The paperless activities we aim for are student recruitment and selection, teaching and learning activities, teaching, and learning management, financial management, and graduate placement. It is believed that BIU can reduce the administrative costs of the campus operation. BIU is encouraged to use digital marketing in the recruitment process but printed promotional tools are still needed. Hybrid activities can also be found in other business processes.

BIU leadership needs to be aware of the era of disruption. Many companies are falling, but new digital-based companies are growing very quickly. BIU leadership must prepare to face global competition. If not, Biu is possible to be disrupted. To avoid disruption, digitization is expected to offer speed, low cost and benefits. The leadership is committed to maintaining digital literacy. To survive, a digital mindset and capabilities are needed.

To make sure that BIU is on track in its transformation BIU needs to test the concept of the paperless campus. First of all, BIU needs to create a task force to prepare for the concept of paperless campus. The task force will refer to MOC in preparing the concept. The BIU leadership is conducting a focused group discussion on the concept and ask for feedbacks from the audiences. The audiences consist of BIU stakeholders and experts. The result of the focused group discussion is a revised concept of paperless campus.

The next step is to list what services can be provided for BIU stake holders by referring to the MOC. And then, decide what applications needed to meet the services. And then, find out the applications BIU has had and does not have yet. Also find out whether existing applications can be developed to fulfil the needs of services. The task force will assign other teams to execute some programs of paperless campus such as system analysis and application development.
There will be series of testing and training that involve the users of the applications. There will also be some revisions before they are being launched. These innovation processes are continuously conducted in order to achieve the best.

Picture 1: The Matrix of Change



3.2.School Best Practices and Outcomes

BIU has implemented some digitalization in campus management with some web-based applications. Here are some apps that BIU uses:

A. **Work Monitoring Apps**. By using Work Monitoring Apps. the employees can record their presence online with exact in and out office time indicator and absence and leave accumulation record. The employees also report their daily activity progress by using Work Monitoring Apps. Each employee is evaluated and scored every month by their superiors to maintain the best employee performance. Work monitoring also has a chatting menu for each employee to communicate and coordinate to serve stakeholders better. The outcome of this Work Monitoring is that the employee performance can be monitored and improved from time to time.

B. **E-SPMI Apps**. E-SPMI is an application for Internal quality assurance. By using E-SPMI BIU can implement 5 steps in internal quality assurance system online. The 5 steps are Standardizing, Standard Implementation, Internal Audit Quality, Standard Controlling, and Standard Leverage.

C. **E-Knowledge Management System (E-KMS).** E-KMS is an application for employees to disseminate knowledges and information that they acquire from variety of sources so that other employees can also learn and acquire the same knowledges and information being shared in the flatform. The outcome of the apps is that the employees know what standards they do not achieve, how to achieve and if they have been achieving they should lever new standards or the standards remain the same.

D. **E-Campus.** E-Campus is an apps for enrollment, finance, academic records like teaching reports, syllabus, student and teacher presence, academic transcript, and learning management systems. The outcome of E-Campus is well paperless academic activities with low-cost operation.

E. The other apps in BIU are e-library, e-asset, e-Journal and e-Logistics.

3.3.Challenges or Lessons of School Digital Transformation

Digital transformation has changed the culture of BIU from paper to semi paperless campus. Some administrative works have been shifted from man to machine. The digital literation is also increasing from time to time. Accurate data are presented, and decision-making processes are fast and effective. The service delivery is much faster and service quality is much improving so that the stakeholder satisfaction rate is much better from time to time.

Digital transformation implementation is not easy. It needs persistent efforts to encourage employees to learn and master new apps. Intense communication among the employees is needed to avoid conflicts due to digital transformation. Importantly, the leadership ensures the reward and punishment enforcement based on the campus regulation are implemented.

3.4. The Experiences and Recommendations for Digital Transformation

Based on BIU experiences in implementing digital transformation it is recommended that the campus leadership to set up its digitalization goals and generate the goals to units in the campus organization as their short-term goals. The campus leadership also formulates and issues some regulation about digital transformation. The campus leadership is obliged to evaluate the progress of each target of each goal and ensure that the units work on achieving the targets. Importantly, the leadership needs to enforce reward and punishment regulations. Campus leadership also needs to implement learning organization strategy to enable the internalization of digital literate and digital culture.

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TVET Development and Institutional Profile
SMK NEGERI 1 KALIMANTAN SELATAN, INDONESIA

Prepared by *Mr.Amran Ali, Schoool Principal of SMK negeri 1 Kalimantan Selatan*

Chapter 1. Introduction

1.1. Country Profile

The Republic of Indonesia is located between the continents of Asia and Australia. It comprises 16,056 islands, with 34 provinces spreading over five main islands and four archipelagos. The five main islands include Sumatra, Java, Kalimantan, Sulawesi and Papua. The four archipelagos are Riau, Bangka Belitung, Nusa Tenggara, and Maluku. Papua (319,036.05 sq km) is the largest of the 34 provinces and the smallest is Daerah Khusus Ibukota (DKI) Jakarta (664.01 sq km).

Indonesia is the largest archipelago in the world. It consists of five major islands and about 30 smaller groups. The islands are located at a crossroads between two oceans, the Pacific and Indian Oceans, and straddles two continents, Asia and Australia/Oceania. Its strategic location in maritime Southeast Asia has always shaped the cultural, social, political and economic life of the country, which only gained independence from the Netherlands in 1945.

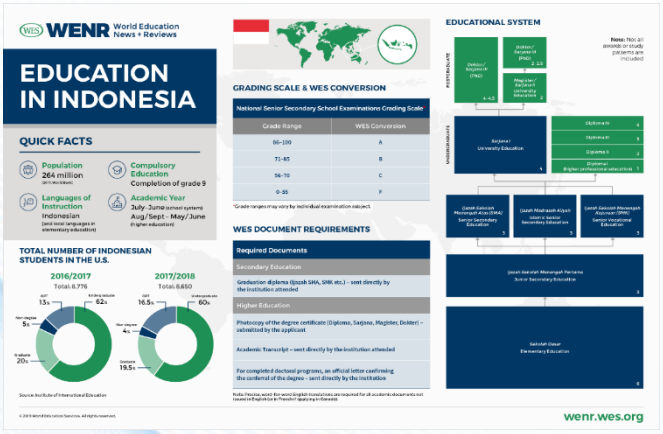
Apart from its vast territory, Indonesia has a dense population and is rich in natural resources. It is also rich in cultural diversity, with each region having its own unique cultural characteristics, local language, dance, custom and costume. UNESCO inscribed Indonesian batik on its Representative List of the Intangible Cultural Heritage of Humanity.

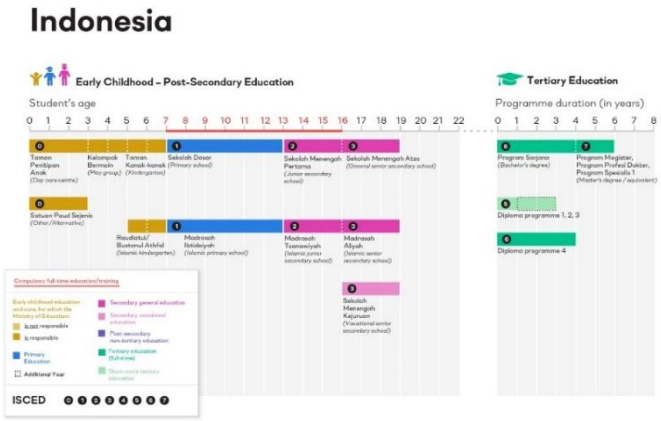
The current population of Indonesia is 282,258,966 as of Thursday, July 13, 2023, based on Worldometer elaboration of the latest United Nations data.

Based on the size of the Gross Domestic Product (GDP), the Indonesian economy, based on current prices in the first quarter of 2023, reached IDR 5,071.7 trillion and IDR 2,961.2 trillion based on constant 2010 prices.

1.2. Education Profile

Education in Indonesia falls under the responsibility of the Ministry of Education, Culture, Research, and Technology or Kemdikbudristek and the Ministry of Religious Affairs. In general, in Indonesia itself there are three levels of the national education system, which became known as the 12 year compulsory education. Starting from the education level of Elementary School at six year, three years at Junior High School (SMP), and three years at High School .





1.3. School Profile

Construction of SMK Negeri 1 Simpang Empat began in 1999 and its establishment was inaugurated by the Governor of South Kalimantan on November 17 2000 by Decree of the Minister of National Education No: 217/O/2000 dated November 17 2000 with the name SMK Negeri 1 Batulicin with the Principal Drs. Suhartoyo. At the beginning of its establishment this school had 2 (two) Expertise Competencies, namely: 1. Mechanical Engineering, 2. Mining Geology. Then in Year 2 (two) the Agronomy Skills Competency is developed. Based on an analysis of customer needs, in 2003 SMK Negeri 1 Batulicin opened 2 (two) new Competency Skills at the same time, namely: 1. Light Vehicle Automotive Engineering, 2. Computer and Network Engineering through the Re-Engineering program.

In 2004 there was a change of Principal from Drs. Suhartoyo to Amiruddin, S. Pd and in 2006 SMK Negeri 1 Batulicin changed its name to SMK Negeri 1 Simpang Empat through the Decree of the Tanah Bumbu Regent No. 331 of 2007 Dated October 5, 2007.

In 2012, 2 (two) Expertise Competences were reopened, namely: 1. Plantation Plant Agribusiness and Welding Engineering. In 2015 the results of the analysis of customer needs opened a new Expertise Competency, namely: Multimedia. In 2017, we reopened 2 (two) Expertise Competences at the same time, namely: 1. Food Crops and Horticulture Agribusiness, 2. Power Generation Engineering.

- Students : 1515
- Teachers : 83
- Staff Administration : 30

Chapter 2. School Development

2.1. School Development Plan

RENCANA KERJA SEKOLAH JANGKA MENENGAH (RKJM)
SMK NEGERI 1 SIMPANG EMPAT
KABUPATEN TANAH BUMBU, PROVINSI KALIMANTAN SELATAN
2021 S/D 2024

NO	PROGRAM/PENGEMBANGAN KEGIATAN STRATEGIS	TAHUN DAN SUMBER DANA												KET.
		TAHUN 2021			TAHUN 2022			TAHUN 2023			TAHUN 2024			
		BOS	BOSDA	LAINNYA	BOS	BOSDA	LAINNYA	BOS	BOSDA	LAINNYA	BOS	BOSDA	LAINNYA	
1.	**PENGEMBANGAN STANDAR KOMPETENSI LULUSAN (SKL)**													
	a. *Pengembangan ATP, Pengembangan Silabus, Pengembangan Modul Ajar (RPP), Pengembangan Job Sheet dan SOP, Pengembangan Metodologi pembelajaran*													
	b. *Bimbingan Belajar*													
	c. *Penyusunan Kriteria Kenaikan Kelas*													
2	**PENGEMBANGAN STANDAR ISI (SI)**													
	a. *Workshop/Pendampingan Kurikulum*													
	b. *Workshop/Pendampingan Perangkat Pembelajaran*													
	c. *Workshop/Pengembangan Perpustakaan*													
	d *Workshop/Pendampingan PKG*													

Rencana Kerja Jangka Menengah SMKN 1 Simpang Empat 2021 - 2024

NO	PROGRAM/PENGEMBANGAN KEGIATAN STRATEGIS	TAHUN DAN SUMBER DANA												KET.
		TAHUN 2021			TAHUN 2022			TAHUN 2023			TAHUN 2024			
		BOS	BOSDA	LAINNYA	BOS	BOSDA	LAINNYA	BOS	BOSDA	LAINNYA	BOS	BOSDA	LAINNYA	
	e. *Workshop/Pendampingan Penyusunan e-Raport*													
3	**PENGEMBANGAN STANDAR PROSES**													
	a. *Pengembangan Model Pembelajaran (K-13) revisi 2018,dan kurikulum SMK-PK, Kurikulum Prototype*													
	b. *Praktik Kerja Industri, Magang Siswa dan Guru*													
	c. *Promosi Sekolah*													
	d *Bursa Kerja*													
	e. *Kegiatan guru tamu (outsourcing)*													
4	**PENGEMBANGAN STANDAR PENILAIAN**													
	a. *Penyusunan Kisi-kisi Ulangan Tengah Semester (UTS)*													
	b. *Penyusunan Kisi-kisi Ulangan Akhir Semester (UAS)*													
	c. *Pelaksanaan Ujian Tengah Semester (UTS)*													
	d *Pelaksanaan Ujian Akhir Semester (UAS)*													
	e. *Pelaksanaan Ujian Remidial*													
	f. *Pelaksanaan Assesmen Nasional XII*													
	g *Pelaksanaan Uji Kompetensi Produktif*													
5	**PENGEMBANGAN STANDAR PENDIDIK DAN TENAGA KEPENDIDIKAN (PTK)**													

Rencana Kerja Jangka Menengah SMKN 1 Simpang Empat 2021 - 2024

NO	PROGRAM/PENGEMBANGAN KEGIATAN STRATEGIS	TAHUN DAN SUMBER DANA												KET.
		TAHUN 2021			TAHUN 2022			TAHUN 2023			TAHUN 2024			
		BOS	BOSDA	LAINNYA	BOS	BOSDA	LAINNYA	BOS	BOSDA	LAINNYA	BOS	BOSDA	LAINNYA	
	a. Peningkatan Kompetensi Kepala Sekolah													
	b. Peningkatan Kompetensi Wakil Kepala Sekolah													
	c. Peningkatan Kompetensi Kepala Program Keahlian													
	d. Peningkatan Kompetensi Guru													
	e. Peningkatan Kompetensi KaTas danTenaga Kependidikan													
	f. Peningkatan Kompetensi Tenaga Laboran, pustakawan													
	g. Pembinaan Tenaga Pembina Osis/Ekstrakurikuler													
	h. Kelompok Kerja Guru, Musyawarah Guru Mata Peajaranl, Musyawarah Guru BK													
6	PENGEMBANGAN STANDAR PENGELOLAAN													
	a. Musyawarah Kerja Kepala Sekolah (MKKS)													
	b. Insentif Pengelola BOSDA dan BOS													
	c. Insentif Pengelola Sekolah													
	d Honorarium Pendidik dan Tenaga Kependidikan (Honorer Sekolah)													
	e. Honorarium bagi Guru yang melebihi Jam Minimum													
	f. Insentif bagi Tenaga Kependidikan yang mendapat Tugas Tambahan													
	g Pengembangan Wawasan Wiyata Mandala													
	h Belanja Rumah Tangga Sekolah													

NO	PROGRAM/PENGEMBANGAN KEGIATAN STRATEGIS	TAHUN DAN SUMBER DANA												KET.
		TAHUN 2021			TAHUN 2022			TAHUN 2023			TAHUN 2024			
		BOS	BOSDA	LAINNYA	BOS	BOSDA	LAINNYA	BOS	BOSDA	LAINNYA	BOS	BOSDA	LAINNYA	
	i. Pelaksanaan Rapat-rapat Sekolah													
	j. Program Ketatausahaan, Perpustakaan, Laboraturium dan Bengkel													
	k. Honorarium Panitia Pelaksana Tingkat Sekolah													
	l. Pelaksanaan Evaluasi Diri Sekolah (EDS)													
	m Akreditasi sekolah													
	n Evaluasi Diri Guru													
	o. Pangkalan Data Sekolah													
7	PENGEMBANGAN STANDAR SARANA PRASARANA													
	A PENGADAAN													
	a. Pengadaan Alat Tulis Kantor													
	b. Pengadaan Komputer (desktop/laptop)													
	c. Pengaadaan Printer													
	d Pengadaan Kipas Angin/AC													
	e. Pengadaan Proyektor													
	f. Pengadaan Alat Kebersihan													
	g Pengadaan Peralatan TV,Tape Recorder, Sound System													
	h Pengadaan Meubelair Sekolah													
	i. Pengadaan Jaringan Listrik													
	j. Pengadaan Jaringan Air													

NO	PROGRAM/PENGEMBANGAN KEGIATAN STRATEGIS	TAHUN DAN SUMBER DANA												KET.
		TAHUN 2021			TAHUN 2022			TAHUN 2023			TAHUN 2024			
		BOS	BOSDA	LAINNYA	BOS	BOSDA	LAINNYA	BOS	BOSDA	LAINNYA	BOS	BOSDA	LAINNYA	
	k. Pengadaan Jaringan Internet													
	l. Pengadaan Bahan Praktikum													
	m Pengadaan Buku Pelajaran dan Penunjang													
	n. Pengadaan Majalah Sekolah dan Koran													
	o. Pengadaan Peralatan Rumah Tangga Sekolah													
	p. Pengadaan Alat Praktikum													
	q. Pengadaan Software Pembelajaran													
	r.													
	B PEMELIHARAAN													
	a. Stensil/ Mesin pengganda													
	b. Komputer/Laptop													
	c. Printer/Scanner													
	d Air Conditioner (AC)													
	e. Jaringan Internet													
	f. Jaringan Listrik													
	g. Website													
	h. TV, Tape Recorder, CCTV													
	i. Service Alat praktek													
	j. Perawatan Meubelair													
	C REHABILITASI RINGAN													

NO	PROGRAM/PENGEMBANGAN KEGIATAN STRATEGIS	TAHUN DAN SUMBER DANA												KET.
		TAHUN 2021			TAHUN 2022			TAHUN 2023			TAHUN 2024			
		BOS	BOSDA	LAINNYA	BOS	BOSDA	LAINNYA	BOS	BOSDA	LAINNYA	BOS	BOSDA	LAINNYA	
	4. Pengembangan Non Fisik													APBD
	a. Pengembangan Kurikulum Nasional dan Implementatif													APBD
	b. Pengembangan Pendidikan Karakter													APBD
	c. Pengembangan Kelas Industri dan Kelas Wirausaha													APBD
	d. Pengembangan Sekolah Adiwiyata													APBD
	e.													
	C KABUPATEN													
	1 Sinkronisasi Program Pengembangan Daerah													Sinkr
	2 Pengembangan Sekolah Adiwiyata													Sinkr
	3 Pengembangan Program Pendidikan Karakter													Sinkr

Mengetahui :
Komite SMKN 1 Simpang Empat,

Teguh Supriyanto
Ketua,-

Simpang Empat, Juli 2021
Kepala SMKN 1 Simpang Empat,

Drs. Amran Ali, MM.
NIP. 19671221 199412 1 004

Rencana Kerja Jangka Menengah SMKN 1 Simpang Empat 2021 - 2024

2.2. TVET Curriculum

SMKN 1 Simpang Empat as the center of excellence applies the Merdeka curriculum. The application of the Independent Curriculum in Vocational Schools aims to increase the innovation and creativity of students so that they are ready to face the industrial world.

This independent curriculum has three characteristics, that is;

1. Project-based learning;
2. Focusing on essential material; And
3. Teacher flexibility.

2.3. Partnership Between Schools and Private Sector

SMKN 1 Simpang Empat cooperates with the companies with a total of 100 companies. To achieve harmony between Vocational High Schools and the Industry through link and match program (8 + i) ;

- Curriculum synchronization
- Teaching Factory
- PJBL implementation
- Guest Teacher from Industry
- Industrial Visit
- Field Work Practices (PKL)
- Commitment Employment
- Vocational competency tests (UKK),
- Teacher Training (Technology update)
- Competence Certification
- Industrial vocational class.

Chapter 3. School Digital Transformation

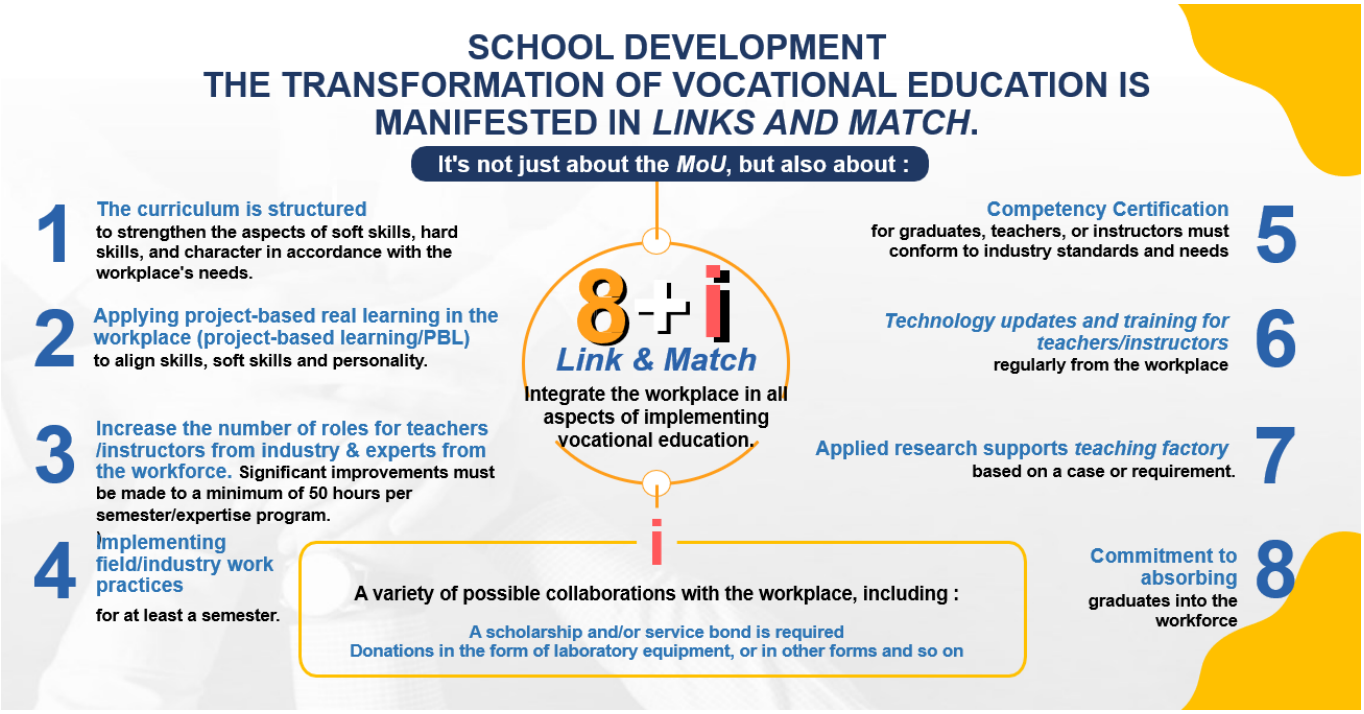
3.1. Strategy and Plan for Digital Transformation

Digital transformation does affect various aspects, including in the education sector. The digital school program has been implemented at SMKN 1 Simpang Empat so that it remains relevant to the times.

Program Digital School developed at SMKN 1 Simpang Empat

- Digital literacy program for teachers.
- Building Digital classrooms to support the teaching and learning process
- Wifi access in the school area.
- Official website
- Learning Management System.
- Smartphone devices (tablets) for students.
- Interactive whiteboard.
- Learning materials in the form of digital school books.
- Interactive digital learning content.
- School Management System Application.

3.2. School Best Practices and Outcomes



3.3. Challenges or Lessons of School Digital Transformation

Incomplete knowledge of the skills needed to achieve meaningful digital.

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TVET Development and Institutional Profile
SMK NEGERI 5 BANJARMASIN, INDONESIA

Prepared by *By Dr.Drs. H. Syahrir, MM, Headmaster of SMK Negeri 5 Banjarmasin*

Chapter 1. Introduction

1.1 Indonesian Profile

Indonesia is the largest archipelago in the world. It consists of five major islands and about 30 smaller groups. The islands are located at a crossroads between two oceans, the Pacific and Indian Oceans, and straddles two continents, Asia and Australia/Oceania. Its strategic location in maritime Southeast Asia has always shaped the cultural, social, political and economic life of the country, which only gained independence from the Netherlands in 1949.

Population

The current population of Indonesia is 282,258,966 as of Thursday, July 13, 2023, based on Worldometer elaboration of the latest United Nations data.

Gross Domestic Product

Based on the size of the Gross Domestic Product (GDP), the Indonesian economy, based on current prices in the first quarter of 2023, reached IDR 5,071.7 trillion and IDR 2,961.2 trillion based on constant 2010 prices.

Indonesia's economy in the first quarter of 2023 against the first quarter of 2022 grew by 5.03 percent (y-on-y). From the production side, the Transportation and Warehousing Business Field experienced the highest growth of 15.93 percent. Meanwhile, from the expenditure side, the Goods and Services Export Component experienced the highest growth of 11.68 percent.

Literacy rate

Indonesia literacy rate 95,44 %. This data shows is literacy rate in Indonesia is high.

Minimum Wage

The official minimum wage in Indonesia for the year 2023 ranges from IDR 1,981,782 (monthly) in Yogyakarta, to IDR 4,901,798 (monthly) in Jakarta.

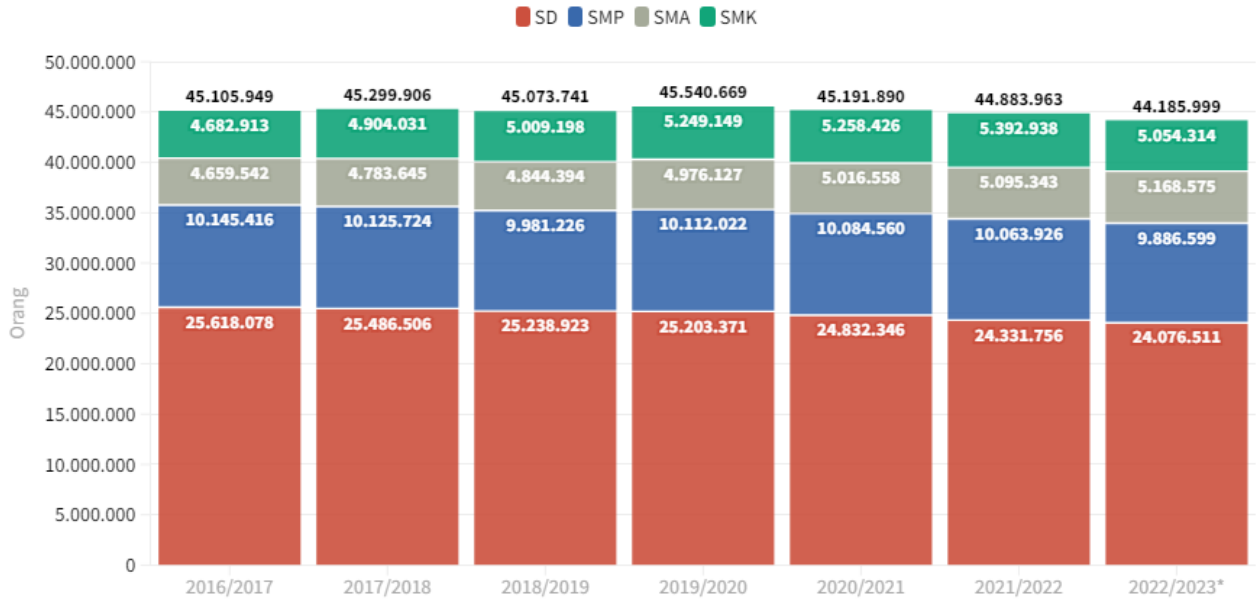
1.2 Education Profile

a. Indonesia Education system

Education in Indonesia falls under the responsibility of the Ministry of Education, Culture, Research, and Technology or Kemdikbudristek and the Ministry of Religious Affairs.

In general, in Indonesia itself there are three levels of the national education system, which became known as the 12-year compulsory education. Starting from the education level of Elementary School at six year, three years at Junior High School (SMP), and three years at High School.

b. TVET enrollment rates



In the 2022/23 school year, there were approximately 5.05 million students in vocational high schools in Indonesia. Vocational high schools, offers three-year courses in technology and engineering, health, arts and craft, tourism, ICT, agro-business and agro-technology, and business management.

1.3 School Profile

SMKN 5 Banjarmasin is located in Banjarmasin City, Kalimantan Selatan Province, Indonesia. SMKN 5 Banjarmasin is the largest school in Kalimantan province with a total of 2359 students and have Land Area : 4.2 Ha. SMKN 5 Banjarmasin has 156 Teachers and 52 Administratif Staff. There are 11 Expertise Program : Construction And Housing Engineering, Design Modeling And Building Information, Geospatial Technique, Electrical Engineering, Mechanical Engineering, Metal Fabrication And Welding Techniques, Computer Networking & Telecommunications, Automotive Technique, Electronic Technique, Chemical Engineering and Visual Commnication Design.

SMKN 5 Banjarmasin is a SMK center of excellence for advanced schemes that has implemented an independent curriculum. Independent curriculum is strengthened through partnerships and alignment with the Industrial world, which eventually becomes a reference SMK as a driving school.

In 2017, SMKN 5 Banjarmasin get LSP-P1 license National Professional Certification Agency (BNSP). LSP- P1 is an education and /or training institution whose main objective is to carry out work competency certification for competency-based education/training participants and/or human resources from the network of its parent institution. Each year has tested the competence of class XII students which is equivalent to level 2 or 3 qualifications at the KKNI and issued competency certificates with the Garuda logo. Furthermore, the Competency Certificates issued by SMK graduates can be recognized by the business world and the process of recruiting skilled workers.

Based on the Decision of the National Accreditation Board for Schools No: 1346/BAN-SM/SK/2021, states that SMK Negeri 5 Banjarmasin won Accreditation A "Excellent" with a score of 91. This is an extraordinary achievement for the school.

Chapter 2. School Development

2.1 School Development Plan

As SMKN 5 Banjarmasin mission statement is Carrying out learning that refers to the applicable National Education Standards and Work Competency Standards, Oriented towards building superior character in knowledge and skills that are beneficial to the environment. SMKN 5 Banjarmasin leadership has set up long term strategic planning for 5 years to go. Here are sets up the following 2021-2025 goals:

1. Creating people of Faith, Diversity, Collaboration, Independent, Critical and Creative Reasoning
2. Producing a qualified Labor in the all sector and having a level of knowledge, skills according to job demands, ready to work and entrepreneurship.
3. Strengthening the "Link and Match" of vocational education and Industrial world.
4. Able to communicate globally.
5. Organizing fun, Project-Based Learning and Integrating Digital Technology and Environmental Culture.
6. Creating Clean & tidy schools, Cultured in Literacy, cultured in industry.
7. Creating a pleasant learning atmosphere.
8. Organizing Education that develops the potential of students through extracurricular activities.
9. Making SMKN 5 a startup center in South Kalimantan.
10. Carry out the Teaching Factory Program and refer to the Indonesian National Work Competency Standards.

2.2 TVET Curriculum

Currently the curriculum used in Indonesia today is the Independent Curriculum (KM). Where previously the prototype curriculum was developed as a flexible curriculum framework and focused on essential material and character development. This refers to the Project for Strengthening Pancasila Student Profiles or known as P5.

The Merdeka Curriculum be applied at various levels of education, from basic education to higher education. One of the implementation of the Independent Curriculum which is quite influential is at the SMK level

SMKN 5 Banjarmasin as Center Of Excellence use the Merdeka curriculum (Independent Curriculum) and has been implemented since 3 years ago as a pilot project in South of Kalimantan Province. In this independent curriculum has three characteristics, that is Project-based learning, Focusing on essential material and Teacher flexibility. The application of the Independent Curriculum in Vocational Schools aims to increase the innovation and creative power of students so that they are ready to face the industrial world.

2.3 Partnership Between School and Private Sector

To prepare graduates with qualified competencies in line with the needs and developments of Industry, SMKN 5 develops collaboration and cooperation with the industry as a whole and in depth with a total of 250 industry through link and match program (8 + i) ;

a. Curriculum is prepared together with the Industry and the school
b. Applied research supports Teaching Factory
c. Project Based Learning implementation
d. Guest Teacher from Industry
e. Field Work Practices (PKL)
f. Commitment Employment
g. Technology updates and training for teachers/instructors
h. Competence Certification

"i" includes various opportunities for cooperation that can be carried out with the Industrial world.

Chapter 3. School Digital Transformation

3.1 Strategy & Plan for Digital Transformations

Era Education 4.0 illustrates how development is Digital technology has reached the stage of artificial intelligence integration (Artificial Intelligence), has a major impact on various digital devices and applications in the education system and learning mechanisms. Dynamics change Society 5.0 also contributes to the transformation of education.

Various digital devices are integrated into learning models so that they can become learning solutions innovative and creative. At least there are several teacher competencies have in digital platforms including 1. ICT tools for learning; (2) collaborative learning tools, and; (3) Use of social media for learning.

Some school strategies and plans related to digital transformation are SMK N 5 Banjarmasin implements several programs to increase the capacity of teachers and education by use ICT device and use a digital platforms in the teaching and learning process. Teachers and educators will be trained to create creative content to support student

learning materials with Digital Device. The Principal give letter of assigment to Teachers at SMKN 5 Banjarmasin participate in ICT-based learning training organized by the Ministry of Education, Culture, Research and Technology.

The other, SMKN 5 Banjarmasin implements LMS-based learning in the classroom with a variety of application software. The principal also always encourages the learning community to share in self-development in utilizing digital platforms. It is expected that teachers can integrate ICT into the process learning is needed to develop higher order thinking skills students, develop skills in the field, increase effectiveness, efficiency and attractiveness of the learning process for example Google Class room, Edmodo, Google Sites, Whatsapp, Teamviewer, Google Form, and Google Drive. etc.

SMKN 5 Banjarmasin is also preparing infrastructure such as to support the internet network like Wifi access in the school area. Provide interractive white board, Official website, Learning materials in the form of digital school books (digital Library) and School Management System Application.

3.2 School Best Practice and Out Come

SMKN 5 Banjarmasin has implemented some digitalization in school management with some web-based applications. Here are some apps that SMKN 5 Banjarmasin School uses:

1. Learning Manajemen System App.

Several applications are used by teachers for classroom learning to create various learning innovations that suit the needs of students like Edmodo, Google Class Room, Moodle.

Some teachers also use Collaborative Learning Applications. The concept of collaborative learning can involves interactions between teachers and students within one school, across schools, across regions, and even across geographies. So that collaborative learning can goes well, it is important to take advantage of information technology and communication (ICT). One way to do this is to use various collaborative learning applications like ; Google Docs, Google sheet, Google Slide,

For Assesment, Some teachers at SMKN 5 Banjarmasin also use the Application Of Student Assessment (Google Form, Quizez etc)

2. Work Monitoring Apps (fingerprint attendance machine)

By using Work Monitoring Apps, Teachers and Adminstrative staf can record their presence online with exact in and out office time indicator and absence and leave accumulation record. The employees also report their daily activity progress by using Work Monitoring Apps. Each employee is evaluated and scored every month by their superiors to maintain the best employee performance.

3. School Manajemen Application

Through S.Id Aplication , the Principal can control all the activities and performance of the Teachers and Education Staff including; Learning Activity Report, Teacher Learning Plan, Waka/Kaprog/Katas Work Programs, Teaching Schedules, Teacher Picket Schedules, PPKS Documents, Eskul and OSIS Activity Reports and etch.

4. PKL (Apprentice student) Monitoring Aplication)

The school has implemented an application to monitor the activities of apprentice students in the industry. The application is made for a school to replace a journal book. School PKL Supervisor Teachers can monitor activity reports online.

5. School Security App

Schools apply CCTV Smart Viewer. This allows schools to carry out live monitoring, play audio, Pan/Tilt/Zoom control, Playback, and other advanced features.

6. Perpus.Kita

Libraries become very strategically presented in support learning because it is one of the learning resources that can be utilized both by educators and students. One of the libraries a school that has implemented a digital library is the SMK N 5 Banjarmasin library.

3.3 Challenges or Lessons of School Digital Transformation

The rapid development of digital transformation requires Vocational high schools to adapt technological developments to efforts to improve the quality of education, especially in the learning process. The digital literation is also increasing from time to time.

Digital transformation implementation is not easy. It needs efforts to encourage Teacher to learn and master new apps. Intense communication among the Teachers is needed to avoid conflicts due to digital transformation. So, digital disruption is no a threat to the Teacher who have a high digital literacy.

Behind the progress of digital transformation which has a positive impact, but there are also negative impacts that can be caused in the education : (a) Alot of interesting information for students on the internet makes students sometimes not focus when learning (b) A Lots of interesting information or online games make students lazy to learn. (c) Students can forget to carry out their study (d). Information technology allows influences from abroad to enter very freely and are very difficult to contain. That's all challenge due to Development of Digital Technology.

3.4 Experiences and Recommendation For Digital Tranformation

The changes caused by the Industrial 4.0 era created challenges and opportunities for education. Especially for Vocational High Schools (SMK) which are designed to produce graduates who are ready to compete in the Industrial world.

Based on SMKN 5 Banjarmasin experiences in implementing digital transformation, it is recommended that the School to set up its digitalization goals in as short-term goals. School leaders always evaluate the progress of each target in the program and ensure that all teachers improve their competency quality in terms of digital literacy. All Teachers also need to implement learning strategies to enable the internalization of digital literacy and digital culture.

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TVET Development and Institutional Profile
SMKN 13 MEDAN, INDONESIA

Prepared by *Mr.Ramles Ayetman, Vice of headmaster,SMK Negeri 13 Medan, Indonesiea*

Chapter 1. Introduction

1.1. Country Profile : Indonesia is the largest archipelagic country in the world which is located in Southeast Asia. The number of islands owned by Indonesia

1.2. Education Profile

Pancasila Student Profile in the framework of the vision of Indonesian education in the future at SMK Negeri 13 Medan Education is an important factor in achieving the vision of a better future Indonesia. One of the future visions of Indonesian education is the realization of a society that has strong character and upholds the values of Pancasila. Therefore, the government through the Ministry of Education, Culture, Research and Technology (Kemendikbudristek) formulated the Merdeka curriculum as an effort to develop the profile of Pancasila students.According to the Ministry of Education and Culture (2022), the Merdeka curriculum is a curriculum that aims to develop the abilities and character of students so that they have an entrepreneurial spirit, creativity and innovation, and master digital literacy.In addition, this curriculum also focuses on developing the character of students based on Pancasila values.

1.3. School Profile

SMKN 13 MEDAN is an educational unit with a SMK level in Sei Mati, Kec. Medan Labuhan, Medan City, North Sumatra. In carrying out its activities, SMKN 13 MEDAN is under the auspices of the Ministry of Education and Culture.ADDRESS OF PRIVATE VOCATIONAL SCHOOL 13 MEDANSMKN 13 MEDAN is located at JL. SERUWAI No 257, MEDAN LABUHAN, Sei Mati, Kec. Medan Labuhan, Medan City, Indonesia of North Sumatra, with postal code 20252.CONTACT THAT CAN BE CONTACTED If you want to ask questions or contact SMKN 13 MEDAN directly,. Accreditation 31-12-2018 No. ISO Certification Certification Process Teacher : 95 Male Students : 508 Female Students : 507 Study Group: 40 Curriculum : SMK 2013 REV. Industrial Automation Engineering Implementation: Morning / 6 days School Based Management .

Chapter 2. School Development

2.1. School Development Plan

As an effort to prepare vocational high school graduates to become independent individuals capable of creating jobs, the Directorate of Vocational High School Development and The Southeast Asian Ministers of Education Organization (SEAMEO) Secretariat have produced 3,132 entrepreneurial students through the Batch 1 to Batch III Entrepreneurial Printing School program. This program has been attended by 175 vocational high schools in 34 provinces. A total of 206 certificates have been distributed to students who are able to generate a turnover of IDR 5 million to > IDR 25 million in 3 months. "In 2019 there was socialization of the Entrepreneurial Printing School program via video conferencing. And the enthusiasm is quite high, currently it is recorded that 710 vocational high schools from 34 provinces have registered in this program.On the same occasion, the Minister of Education and Culture also witnessed the signing of a cooperation agreement for the provision of Government assistance from the Directorate of Vocational High School Development of the Directorate General of Basic and Middle Education (Ditjen Dikdasmen) for Vocational Schools which were given guidance and improved learning, for Vocational Schools which carried out teaching factory learning, and Middle Schools vocational creative product development and entrepreneurship.

2.2. TVET Curriculum

SMK Negeri 13 Medan in 2019 has declared itself as a Vocational province which is expected to be a reference for the development and administration of public and private vocational education or Vocational High Schools (SMK). One important measure of the success of implementing SMK is how much its graduates are absorbed in the world of business and industry.

This absorption is related to the open unemployment rate in North Sumatra in 2016 which is still dominated by the high rate of SMK graduates of 13.69%. However, in 2017 this figure decreased to 8.07% and shifted Diploma graduates which caused an open unemployment rate of 9%.Vocational High School graduates are expected to immediately work in the business and industrial world, but most of them are unemployed. This is generally due to a miss match between the demand and supply sides, a mismatch between the demand for a relatively large number of workers, but the available workforce does not have the skills needed by the business and industrial world. From Kadin Indonesia data nationally, in 2020 the demand for middle management workers is expected to reach 17 million people. Meanwhile, the estimated availability to fill this need is only around 8 million people. This is a problem and a challenge in the implementation of SMK in North Sumatra

In an effort to develop an education and training system in North Sumatra, especially related to vocational education as is done in TVET, we present some information on the results of research and development.

2.3.Partnership Between Schools and Private Sector

Industry as a Place for Work Apprenticeship Apprenticeship System (apprenticeship) is the oldest vocational education system in the history of vocational education. The apprenticeship system is a fairly effective system for educating and preparing someone to deepen and master more complex skills that are impossible or have never been carried out through mass education in schools. In the apprenticeship system, an unexpert novices) study with people who are experts (expert) in a particular vocational field. The apprenticeship system can also help vocational students understand work culture, the required professional attitude, quality culture, and customer service. The limitation of the apprenticeship system is that this system can only accommodate a small number of apprentices, so it is not able to solve the problem in point 1 in accommodating SMK students as a place of practice in mastering a competency. The apprenticeship system has been practiced by several schools so far. The dual system adopted from the German system has also been implemented in Indonesia, and was well developed before the crisis because it received the support of a large number of businesses and industries. This dual system had received good support from the government by issuing a policy (MoU) between the Ministry of National Education, the Ministry of Manpower, and the Ministry of Industry at that time. Industry is encouraged to want to cooperate with SMK and be willing to accept

SMK students do the practice. But now this system is rarely implemented because many industries were closed during the crisis and now the government has not succeeded in establishing the industry

Chapter 3. School Digital Transformation

3.1. Strategy and Plan for Digital Transformation

The specialty at the Center of Excellence Vocational School besides the use of digital platforms, is the existence of standardsindustry on vocational practice learning tools. The practical tools in SMK are almost all industry standard, especially for the majors pinned on the submission

Center of Excellence Vocational High School program. The program to improve the quality of facilities and infrastructure is carried out tosupport world-standard learning in the Electrical Power Installation Engineering (TITL) department which isthe majors proposed in the Center of Excellence program, in practice learning have usedmore advanced practice tools. The practical tools provided are Sneider's industry standardGermany complies with the mandate of the government regulations for schools that get the programCenter of Excellence Vocational High School grant. Not only certain majors in the Center of Excellence Vocational School, but the school has made effortsalso holding partners for the standardization of practice tools for majors solearning will be more in sync with the real industrial world.

3.2. School Best Practices and Outcomes

Vocational High School students prioritize practical theory rather than writing, this is because Vocational High School students are targeted at vocational subjects which really have to learn a lot in practical theory. The lessons for vocational students are the same as for high school students, the advantage is that vocational students have additional skills lessons and have more theory than other subjects.

3.3. Experiencing Direct Work Practices

What is felt by SMK students is that they will be required to carry out industrial work practices (prakerin). This practice must be done if you want to graduate with good grades. Prakerin will be carried out by SMK students when they are in class XI, but there are also other schools that carry out field Industrial practice in class XII.

Ready to work after graduating from SMK

Another advantage of SMK graduates is that they are ready to work. Vocational High School students can work quickly from the skills they have since attending school. Opportunities to work are greater when compared to high school graduates. In terms of expertise, of course SMK is more skilled in finding work. That's why many SMK graduates go straight to work.

Opportunities to open a business are easier Everyone has different beliefs in finding and choosing a path in life or career. For vocational students nowadays, many think that they prefer to open their own business rather than working for other people. Indeed, in opening a business, of course, requires initial capital. But in looking for venture capital it can be more easily obtained if they have high determination and desire.So, those are some of the advantages of SMK compared to SMA, I hope this is useful and can be an illustration for those of you who may be confused about choosing a school.

3.4. Challenges or Lessons of School Digital Transformation

The changes caused by the Industrial 4.0 era created challenges and opportunities for education. Especially for Vocational High Schools (SMK) which are designed to produce graduates who are ready to compete in the world of work.Inevitably, in the digital era, the breakdown of Vocational High Schools is highly anticipated for activities that are very close to digital technology and wider connections. Enabling SMK graduates to create startups or contribute to technology-based business innovations.The Industrial Age 4.0, marked by the adoption of digital technology and digital transformation in various economic sectors, has had a significant impact on SMK graduates. Moreover, the Industrial Age 4.0 brought major changes in the way of work and business with the adoption of digital technologies such as artificial intelligence (AI), internet of things (IoT), data analysts and automation technology. This creates a greater demand for SMK graduates who have information and communication technology (ICT), programming, graphic design, or other digital-related skills.

3.5. Experiences and Recommendations for Digital Transformation

Digital technologies such as machine learning , automation, blockchain , IoT , and others allow customers to get almost what they want exactly when they need it. These new digital technologies have caused shifts in customer expectations, resulting in a new type of modern shopper. Let's explain how the digital first approach works?What is a “digital first customer experience”?

“Digital first” refers to the ever-changing need to think and create better consumer experiences by keeping a digital mindset. This approach combines customer expectations with the trending digital landscape and enables businesses to innovate new products and services.How can businesses improve user experience by following a digital approach? The answer lies in the current digital trends that are bringing businesses one step closer to their users.Before we continue, you may also read- “How to recession proof your business using digital transformation solutions”.This is reinforced by the data that SMK education is in great demand by the communitySchool Profile School location, number of students and teachers, trade and school specialization, and graduation rates

Refrences : SMKN 13 Medan

TVET Development and Institutional Profile
SULTAN IDRIS EDUCATION UNIVERSITY (UPSI), MALAYSIA FACULTY OF TECHNICAL AND VOCATIONAL EDUCATION, MALAYSIA

Prepared by *Prof Dr. Ramlee Mustapha, Prof. of TVET of Department of Engineering Technology, Faculty of Technical and Vocational Education, Sultan Idris Education University*

Chapter 1: Introduction

1.1. Country Profile Population, GDP, employment rates, literacy rates and minimum wages

Population size of Malaysia was approximately 32 million in 2021. The Malaysia's GDP was roughly US$406 billion in 2022. The annual GDP growth is about 4.5%. The employment rate fluctuates based on various factors, but it was about 69% in 2021. The unemployment rate is 4.5% in 2020. Malaysia boasts a high literacy rate, often reported above 90% − indicating the country's strong emphasis on education. This can vary based on the region within Malaysia, but as of 2020, the monthly minimum wage in major cities was set at MYR 1,200 (around US$285).

1.2. Education Profile Education system, TVET system, TVET enrolment rates and TVET graduation rates

In 2021, the population of Malaysia is roughly 32 million and the total workers in this country are about 15,347,500 (Department of Statistics, 2021). The percentage of the Malaysian skilled workers are estimated at 27.5 % of the total workforce (The Star, 2020). Since 1906 when the first formal vocational schooling system was established in Malaya by the colonial British, the TVET development in this country has been affected by significant milestones (Mustapha, 2017). Established in 1964, TVET Division (BPLTV) in the Ministry of Education was entrusted to manage TVET in public vocational, technical, and national secondary schools and vocational colleges. In 2020, BPLTV managed nine technical schools, 87 vocational colleges, 357 national secondary schools offering advanced vocational courses, 26 national secondary schools offering industrial apprentice programs, and four specialized vocational secondary schools for special needs students (Krishnan, 2020). In 1969, the first polytechnic was established in Malaysia for post-secondary students. Other large public TVET providers are the community colleges (established in 2001) and vocational colleges (established in 2012). In 2019, there were 556 public TVET institutions and 692 private TVET institutions in Malaysia offering TVET programs with a total of 5,603 registered programs (Department of Skills Development, 2020). In 2022, the public budget allocated for TVET was estimated at MYR 6 billion. Majority of the TVET graduates were in manufacturing, ICT and engineering technology sectors. In 2015, there were 142,000 TVET graduates and the figure is expected to increase to 188,000 in 2030 (jpkmalaysia.com).

The typical age of entering TVET program in Malaysia is 13 year-old where a student can choose to participate in Vocational Foundation Program (Program Asas Vokasional – PAV) in a secondary school. The exit age is dependent on the type of TVET program the student enrolled. For secondary school students who enrolled in MPV (Vocational Subjects) the exit age is 17 year-old and for students who further their studies in vocational colleges, college communities, or polytechnics for a diploma program, the typical graduation age is 21 year-old. For the students who entered technical universities for undergraduate engineering technology program, typical entering and exiting age is almost the same as any university undergraduate programs. The teacher-student ratio in Malaysian TVET institutions is recommended by the Malaysian qualification agencies to meet the ratio of 1:25 (Malaysia Board of Technology, 2019). What is unique in Malaysia is that all technical or vocational secondary schools are government-funded.

1.3. School profile, school location, number of students and teachers, trade and school specialization, and graduation rates

Faculty of Technical and Vocational Education, Sultan Idris Education University (UPSI)

Started as a unit under the Art Department in the Faculty of Art and Music in 2005. Establishment of the Life Skills Department in 2008. Establishment of the Faculty of Technical and Vocational Education (FTVE) on 1 June 2010. The Faculty offers three (3) major programs in the field of Technical and Vocational Education:

- Bachelor of Education (Home Economic) with Honours,
- Bachelor of Education (Technology Design) with Honours, and
- Bachelor of Education (Agricultural Sciences) with Honours.

Since its establishment in July 2010, FTVE UPSI strives to educate and produce future technical and vocational teachers, scholars and professionals who are competitive in the open market to meet the needs of the nation.

The vision of the faculty is to spearhead the leadership of technical and vocational education by producing TVET educators and professionals who are needed by the schools, industry, and society in the future. The faculty mission is to nurture relevant knowledge and skills of technical and vocational education through teaching, research, consultation and community service in the context of human development to achieve the university's vision.

Presently, the faculty comprises 76 staff. Of which, 42 academic staff (88% hold PhD degree) and 34 administrative and clerical staff. The facilities in the faculty includes: Engineering Drawing and Design Lab, Electrical and Digital Electronics and Robotics Lab, Mechanical and Welding Lab, Automotive Lab, Wood and Furniture Lab, Fashion Design Lab, F & B Lab, Hospitality Lab, and Agriculture Farm.
The graduation rate from this TVET Faculty is 94%.

The faculty also offers post graduate studies (M.Sc and PhD degrees) in these majors:

- Technical and Vocational Education and Training (TVET)
- Engineering Technology
- Agricultural Science

The post graduate programs are open to foreign students. Foreign students need to have adequate TOEFL or IELTS scores to be admitted into post graduate programs at Sultan Idris Education University. In general, the total fee for post graduate program for one student for four (4) semesters is about USD 10,000.

Chapter 2. School Development

2.1. School Development Plan

In the context of UPSI, which is known for its emphasis on teacher training and education, such an approach may involve blending educational theory and practice with insights from areas like psychology, technology, sociology, and others to develop more effective teaching strategies. For TVET Faculty, the development plan is to nurture AI and green talents and to expand smart TVET infrastructure.

2.2. TVET Curriculum

Since UPSI has been designed to produce teachers so the Faculty of Technical and Vocational Education was also designed to produce TVET teachers. Paryono (2015) found a number of factors that could influence TVET teacher education curriculum in Malaysia such as organizational change, technological development, labor market development, reform and changing political priorities, and internationalization. In addition, TVET teacher education in Malaysia is primarily prepared through university or teacher training institutes (Mustapha, 2017).

The Malaysian TVET system has a school-based curriculum (Mustapha, 2017). Vocational school teachers themselves often lack of industrial experience. School learning is not well integrated with the workplace. The practical skills training facilities in school is often outdated and may no longer be used in industry. One way to solve this problem is to develop partnership with industry and trade. Modern apprenticeship or “dual-system” might be a viable solution.

Thus, the Malaysian government, through the decision of the Minister Council on 19th May 2004, has agreed to implement National Dual Training System (NDTS). NDTS was introduced to provide the comprehensive training to produce K-workers. NDTS will provide the competencies and fulfil the industries’ needs. The approach involves the delivery of training in two places, namely 30% of the total training on basic skills and theoretical knowledge being taught in the training institute, while the remaining 70% on the practical and hands-on training being delivered in the workplace in the industry. The most distinguishing feature of the NDTS compared to other skills training programmes is the requirement for coaches and trainers to infuse or integrate human and social skills as well as learning skills besides the technical skills.

2.3. Partnership Between Schools and Private Sector

TVET Teacher quality is also an issue in Malaysia and it is expected that by the year 2020, all teachers in Malaysia (broadly defined) must possess a baccalaureate degree before they can join the teaching profession to ensure all teachers pass the "quality criteria" before leaving the university or teacher training institute. Malaysia's TVET system is also imbued with these other challenges, among which are: lack of effective coordination, poor sharing of resources and articulation within the system, thus reflecting inefficiency in the system. There is no single oversight body to coordinate the TVET system. Initially there was a lack of qualification standards and a demand-supply mismatch.

It is interesting to note that most TVET teachers in Malaysia are recruited from fresh graduates of vocational and technical colleges and universities. Hence, the lack of industrial experiences is a significant concern. To ensure that TVET teacher education programmes are relevant to the needs of the industries, there is a need to provide the TVET teachers with industrial experience according to the specific country requirements. Developing linkages with the industries during initial teacher preparation programme is needed, with specific emphasis on the unique nature of TVET and the realities of the world of work.

Chapter 3. School Digital Transformation

3.1. Strategy and Plan for Digital Transformation

Digital transformation in my university involves the adoption and integration of digital technology across all areas offered at the university. Hence, it is fundamentally changing how the institution operates and delivers values to students, faculty, and staff. It's also a cultural change that requires my organization to continually challenge the status quo. This can be manifested in several ways:

1. E-Learning Platforms: These platforms enable students to access learning materials online, engage in virtual classrooms, and obtain support and feedback.
2. Digital Administrative Systems: Improved data systems for the management of student records, admissions, and other administrative tasks can enhance efficiency.
3. Online Research Resources: Digital databases and online research tools can support academic research.
4. Virtual Collaboration Tools: These tools can facilitate communication and collaboration among students and between students and faculty, supporting cooperative learning and knowledge sharing.

In the context of UPSI, considering its emphasis on teacher training and education, digital transformation could potentially involve innovative methods of teacher-student interaction, digital literacy training for student teachers, digital administration, and the use of advanced technology like AI in improving pedagogical methods.

3.2. School Best Practices and Outcomes

UPSI has focus on four (4) pillars and seven (7) Best Practices:
FOUR Pillars:

1. Integrated Infostructure
2. Digital Infrastructure
3. ICT Support System
4. ICT Governance System

SEVEN Best Practices:

1. Smart Digital Management
2. Smart Digital Lifestyle
3. Smart Digital Education
4. Smart Digital Network
5. Big Data Center
6. Advanced Digital Infrastructure
7. Smart Cybersecurity

3.3. Challenges or Lessons of School Digital Transformation

Generally, UPSI Faculty of Technical and Vocational Education would focus on technical and vocational skills education. This could include a variety of areas, from engineering and industrial skills to technology, trade skills, and potentially digital or ICT skills. However, the challenges to implement digital transformation in my institution are as follows:

1. Lack of Latest Infrastructure: My institution may not have the necessary digital infrastructure in place. Implementing a full-scale digital transformation could require significant investment in hardware, software, and systems.
2. Resistance to Change: Resistance from both educators and students can be a significant barrier. They may be comfortable with traditional methods and nervous about using new technologies.
3. Need for Training: Both faculty and students will need to be trained to use new technologies. Again, this can require significant time and financial resources.
4. Cybersecurity Risks: Digital tools can be vulnerable to hackers and malware. My institution will need to invest in strong cybersecurity measures to protect its systems and users.
5. Lack of Technical Support: My institution does not have a strong IT department so it may struggle to implement and maintain new technologies.
6. Equity and Access: There is still a digital divide in my institution, with this transformation might leave some students behind who don't have reliable access to the internet and digital devices.
7. Privacy Concerns: With the use of digital technologies and particularly AI, there are concerns related to data privacy and protection.
8. Assessment: Evaluating the progress of students can be more complex in a digital environment and necessitates the development of new assessment strategies.
9. Financial Constraints: Integrating digital and AI technologies requires financial investment not only in the technologies themselves but also in related areas such as training, maintenance, and security. My institution may not have the necessary funding.
10. AI Curriculum Development: Adapting the curriculum for AI digital teaching and learning can be an enormous task requiring expert input and significant time commitment.

Despite these challenges, the implementation of digital transformation is essential for the modernization of my TVET institution in enhancing the learning experience. With careful planning and emphasis on staff training, infrastructure, change management, and cybersecurity, these obstacles can be overcome.

3.4. Experiences and Recommendations for Digital Transformation

Digital transformation, especially with the inclusion of Artificial Intelligence (AI), is crucial for the progress and effectiveness of my TVET institution. Here are a few recommendations:

1. Digital Learning Platforms: Implement e-learning platforms and virtual lab environments. This will offer a more collaborative and interactive learning experience for students. Through AI, learning can be personalized for each student based on their understanding and progress.
2. AI Enabled Curriculum: Implement an AI-driven curriculum to provide students with up-to-date insights and practical experiences in their respective fields. AI can help in creating a dynamic curriculum that adjusts to the evolving industry trends and the individual capabilities of the students.
3. Virtual Tutors: AI can be used to create virtual tutors, providing students with round-the-clock assistance, responding to their queries, and boosting interactive learning.
4. Big Data Analysis: Utilize AI for big data analysis. A vast amount of information can be collected and analyzed to make strategic decisions, improve courses, and understand trends.
5. AI in Operations: AI can be used to enhance operational efficiency in administration, course scheduling, student evaluations, etc. Automation of these processes can lead to lesser human errors and improved efficiency.
6. AI Skill-based Training: Use AI to create skill-based training programs. It can predict the skills needed in the future and can design the training program accordingly.
7. Collaboration with AI Companies: They should actively collaborate with companies that specialize in AI, not only for technical support but also to stay updated with the latest developments and understand the practical applications of AI.

8. Upskilling Faculty Members: There should be programs in place for teachers to learn and adapt to these advances in technology. Their digital literacy is an integral part of the digital transformation process.
9. Digital transformation is a journey. It requires careful planning and the willingness to adapt and evolve. But with proper implementation, digital transformation with AI integration can provide numerous benefits to my TVET institution.

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TVET Development and Institutional Profile
KENINGAU VOCATIONAL COLLEGE, MALAYSIA

Prepared by *Ms.CHRISTINE STANISLAUS KINSIK, Director of KENINGAU Vocational College*

Chapter 1: Introduction

1.1 Country Profile

Malaysia is a Southeast Asian country with 33.57 million population. Its current GP is USD 447 billion and ranked 35th in the world. The country's employment rate is currently at 67.1 % while the literacy rate is at 95.71%. Malaysia has set its minimum wage to be MYR 1,500 per month.

1.2 Education Profile

Malaysia education is split into two ministries: Ministry of Education and Ministry of Higher Education. Ministry of Education oversees education prior to tertiary education which includes vocational colleges that are administered under the ministry. There are 91 vocational colleges in Malaysia that operate under the ministry of education and each vocational colleges offer various programmes under several main disciplines. The vocational colleges offer four-year diploma which requires a completion of internship as a prerequisite to graduation. The enrollment rate for vocational colleges is almost 100% while graduation rate is over 90%.

1.3 School Profile

Keningau Vocational College (KVC) was established in 1981 and it was formerly known as Keningau Vocational School before transforming to Keningau Technical School in 1998 and eventually became Keningau Vocational College in 2013. The school's mission is to elevate technical and vocational education and training (TVET) through the empowerment of its students in various specialties. The school's vision is to become a powerhouse in TVET with superb credentials and credibility in producing the most competent, capable and creative graduates.

KVC currently offers 15 vocational programmes which range from vocational certification programmes of two years to vocational diploma programmes of four years. It regularly has an enrollment of approximately 1000 student on a yearly basis with a stable number of 200 staff members which comprises teachers, administrators and clerks. The school has signed agreements with various local agencies in Malaysia and international institutions from Asian countries such as

Indonesia, China and South Korea. The school was formerly renowned for its top academic performance in national standardized examinations known as SPM (an acronym for Sijil Pelajaran Malaysian in Malay which can be translated as Malaysian Education Certificate) before fully transitioning to a diploma college where the students no longer sit for the exam. KVC's percentage of graduate employability is normally within 80% to 95% while a small percentage of its graduates often pursue their study in tertiary education.

Chapter 2: School Development Plan

2.1 School Development Plan

The fundamental mission of the college is to obtain and retain accreditation for each vocational programme that it offers in order to assure the credential and credibility of the students that graduate from the institution as well as the quality of education it provides. Keningau Vocational College targets

that 70% of its graduate to enter workforce upon completion of their study, 20% pursue their study at tertiary education once they earn their diploma and 10% use their skills to become entrepreneurs.

2.2 TVET Curriculum

The college curriculum is based on the standard syllabus and framework introduced to every vocational college in the country. The students learn a combination of vocational subjects and academic subjects, along with several

courses focusing on improving their soft skills. The students need to attain a certain grade in all subjects and fulfill several requirements in order to proceed to the following semester. Students' assessments comprise ongoing assessment and final examination which are administered every semester. Prior to their graduation, they are expected to complete their final year project and a 3-month internship in the industry.

2.3 Partnership with Private Sectors

Keningau Vocational College has consistently formed a network with various agencies specialized in areas that are aligned with its curriculum through notes of understanding (NOU). The college has also formed collaborations with non-governmental associations (NGOs) such as Sabah Techpreneur Association and Ooze Club that allow the students and teachers to receive entrepreneurship training and compete for business grants.

Chapter 3: School Digital Transformation

3.3 Strategy and Plan for Digital Transformation

Keningau Vocational College has implemented a full-fledged digitalized school management system that centralizes, standardizes and connects accessible data which comprise multiple elements mainly mesh Wi-Fi network, specialized room for digital learning, QR attendance system, social media channels, KVC website, online booking system, document automation system, Canva design collab, student portal, staff dashboard, and advanced analytics and reporting tools. This system is known as "KVC Nexus".

Keningau Vocational College has five hybrid classrooms that are equipped with smartboards and some educational equipment that help to improve lesson delivery and classroom interactivity. In addition, the college has a makerspace and an innovation hub that offer training on emerging technology like the application of green screen, 3D printing, drones, programming and robotics. The innovation hub is specifically built for the community.

3.2 School Best Practices and Outcomes

The college has formed collaborations with several organizations and institutions that resulted in continuous virtual real-time learning experience for the students and teachers to actively participate in. These real-time virtual activities encompass masterclasses with teachers who are from other parts of the world, exchange class programme with schools from Southeast Asia, international online conferences as well as roundtables. This practice has impacted over 1500 students from the college and nearly 3000 teachers across Malaysia.

3.3 Challenges or Lessons of School Digital Transformation

It requires a consistent system check in order to prevent system malfunction and there must be a backup or contingency plans in place in case if any malfunction occurs that can be also caused by power disruption.

It is also extremely crucial for students and teachers to receive tutorials and training on how to use virtual platforms such as Zoom and Google Meet particularly the technical aspects to make sure they are well- versed on how to use basic features of such application during actual virtual events such as conferences or masterclasses.

3.4 Experiences and Recommendations for Digital Transformation

Digital transformation can be challenging due to the rapid changes of technology and digital resources. Hence, it is vital for continuing professional development programmes on specific use of certain digital resources or technological tools to be conducted for teachers. It is also vital to form network with government agencies, community clubs, startups and non-government associations to create a dynamic and constant exchange of information as well as skill and technology transfer that can keep the school abreast of new trends and technology.

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TVET Development and Institutional Profile
LIGAO CITY NATIONAL TECHNICAL VOCATIONAL HIGH SCHOOL, PHILIPPINES

Prepared by *Principal II ,Ligao City National Technical Vocational High School*

Chapter 1. Introduction

1.1 Country profile

Philippines is greatly known worldwide with its scenic beauty, natural wonders, warmth and hospitality. A truly remarkable note that distinguishes the country are the human resources. Government proactively makes sound decisions on careful planning and considering all its resources to maximize resources for the benefit of the Filipino people.

Based on the 2020 Census of Population and Housing (2020 CPH), the Philippines had a total population of 109, 035, 343 persons as released by the Philippine Statistics Authority dated August 12, 2022. Measures are undertaken to formulate policies on the increase of population with respect to recognizing the health and provision of basic social services.

1.2 Education Profile

The country's educational system has been aligned to meet the curriculum standards and requirements of all country. Through the establishment of Republic Act 10533 otherwise known as "Enhanced Basic Education Act of 2013," the country is now implementing K - 12 educational system. This program covers the Kindergarten and the 12 years of basic education (6 years primary education, 4 years Junior High School and 2 years Senior High School). The number of years allotted by the learners in the present educational allows learner the full grasp and mastery of content and skills, develop life long learners and the 21st century skills needed to thrive in this continuously changing world. The curriculum exits of secondary education are middle level skills development, employment, entrepreneurship and tertiary education.

The salient features of the present educational system includes: a) Strengthening Early Childhood Education (Universal Kindergarten), b) Making curriculum relevant to learners (Contextualization and Enhancement, c) Ensuring integrated and seamless learning (Spiral Progression), d) Building proficiency through Language (Mother Tongue - Based Multilingual Education), e) Gearing up for the Future (Senior High School) and f) Nurturing the holistically developed Filipino (College, Livelihood Readiness and 21st Century Skills).

The implementation of Philippine educational system has been challenged with the pandemic that struck worldwide. A new learning era was introduced to all schools in the country. The government aggressively implemented innovations to cope up with the fast changing set up. This includes the shift from a usual face to face learning to the different learning modality. This changes the educational landscape.

The government focused on the professional development of teachers, curriculum enhancement, review and refinement leading to the development of Most Essential Learning Competency, capacitating teachers on the use of Information Communication Technology in the new era and provision of resources needed to carry out the challenging task.

Initiatives have been eagerly carried out and implemented by the government, however, there are still learning loss due to various factors that affects the implementation of the teaching-learning process. A significant impact was noted that resulted to a learning loss. In order to address the impact of pandemic to the academic performance of the learners, the new administration led by Department of Education Secretary Sara Z. Duterte, implemented MATATAG Agenda.

On January 30, 2023 as stated in the www.deped.gov.ph website, Department of Education secretary and Vice President Sara Z. Duterte launched MATATAG: Bansang Makabata, Batang Makabansa sets the new direction of the agency and stakeholders in resolving the basic education challenges.

The four critical components of MATATAG Agenda includes the following:

1. **MAk**e the curriculum relevant to produce competent and job - ready, active and responsible citizens;
2. **TAk**e steps to accelerate delivery of basic education facilities and services;

3. **TAk**e good care of learners by promoting learner well - being, inclusive education, and a positive learning environment; and
4. **G**ive support to teachers to teach better.

In order to make education more responsive, the government has institutionalized Technical Education Skills Development Authority (TESDA) by virtue of Republic Act 7796 known as TESDA law. This law grants authority to TESDA to manage TVET in the country. The TESDA has board member in the private and public sector which includes DepED as part of the government sector.

The Philippines TVET System is currently market - driven to develop a competent and adaptable workforce. There is also a changing technological and structural structure to cope up with the demands of international market. The graduate of TVET are competent to enter the 21st century workforce who are innovative, creative, knowledge based with higher order thinking skills and continuously thrive to pursue life - long learning and with developed attitudes, knowledge and skills.

In making TVET graduates more globally competitive, the TVET system has undergone reforms such as Competency Based Education and Training, Quality Assurance, Philippine Qualifications Framework and Skills Recognition Arrangements.

The Glossary of Education Reform stated that Competency-based learning refers to systems of instruction, assessment, grading, and academic reporting that are based on students demonstrating that they have learned the knowledge and skills they are expected to learn as they progress through their education. TVET system ensures that competencies are based on standards for knowledge and skills of a job as prescribed by industry experts. The competency based activities, assessments and training curriculum are quality assured to align with the standards. As a proof of competence, TESDA issues National Certificates to those learners who have demonstrated the necessary competencies in an assessment.

The TVET system has a quality assurance division to check and accredit the training centers and programs being implemented to ensure that standards are met. Certification and accreditation are given for the compliance of minimum requirements set by TESDA.

Every program offered has Training Regulations. This refers to the package of competency standards, training standards and assessment and certification arrangements for a promulgated qualification. This package provides a clear guidelines that required trainers, assessors and training centers to implement quality TVET programs.

The mark of quality standards, process and operating procedures is certified by an international organization. TESDA is ISO 9001:2008 certified in the regulatory programs (Program Registration and Assessment and Certification) and design (Training Regulations Development). This mark is a clear indication that quality products and services are top priority of TESDA. There are also agreements made such as tripartite arrangements by TESDA involving industry, labor and government.

2022 TVET Statistics 4th Quarter Report

NATIONAL OUTPUT	
Enrolled	1, 075, 600
Graduated	1, 024, 266
Assessed	808, 227
Certified	751, 500
REGULATORY PROGRAMS	
Competency Assessor	7, 424
Assessment Center	1, 636
Registered Program	17, 693
TVET Provider	4, 584
TVET PROVIDER BY TYPE OF INSTITUTION	
Public	432
Private	4, 152
PARTNERSHIPS AND LINKAGES	
Total Partnerships Forged	913
TESDA GRADUATES BY TRAINING DELIVERY MODE	

Institutions - Based Programs	499, 190
Enterprise - Based Programs	75, 747
Community - Based Programs	377, 028
SCHOLARSHIP PROGRAM BENEFICIARIES	
Training for Work Scholarship Program	167, 490
Private Education Student Financial Assistance	9, 507
Special Training for Employment Program	53, 461
Universal Access to Quality Tertiary EducationAct	40, 425
Tulong Trabaho Scholarship Program	65, 232
Rice Extension Services Program	64, 427
TOP THREE SECTORS WITH MOST GRADUATES	
1	Agriculture, Forestry and Fishery
2	Tourism (Hotel and Restaurant)
3	Automotive and Land Transportation

Source*: https://www.tesda.gov.ph/Uploads/File/Planning2022/Quarterly%20Report/4th-Quarter- TVET-Statistics-2022.pdf*

The table on 2022 TVET Statistics 4th Quarter Report shows that TVET system continuously geared up to provide quality services and output to its clientele. The government's mandate is upholded to produce life long learners equipped with 21st Century Skills, values and attitudes to show its competence in the world market.

1.3 School Profile

Ligao City National Technical - Vocational High School is established by virtue of Republic Act No. 10984, "An Act Establishing a National Technical-Vocational High School in Barangay Nasisi, Ligao CityProvince of Albay to be known as Ligao City National Technical- Vocational High School and Appropriating Funds Therefor", located in Purok 4, Barangay Nasisi, Ligao City with School ID No. 321701.

The school site is shown in the next picture.

The school enrollment is shown in the table below for three consecutive years:

SCHOOL YEAR	JUNIOR HIGH SCHOOL			SENIOR HIGH SCHOOL		
	MALE	FEMALE	TOTAL	MALE	FEMALE	TOTAL
2020 - 2021	687	598	1288	173	167	341
2021 - 2022	668	559	1227	200	183	383
2022 - 2023	604	498	1102	270	201	471

Based from the data on enrolment, it shows that Junior High School has a decreasing trend while Senior High School

has an increasing trend. This can be attributed to the change of residency of families of learners, experiences in the family and learners earning a living for the family.

The school offers both Junior High School and Senior High School. Junior High School offers Special Program in Technical Vocational Education with specializations in Industrial Arts and Home Economics. Under Industrial Arts, the specializations being offered are Shielded Metal Arc and Welding, Automotive Servicing and Electrical Installation Maintenance. Agricultural Crop Production is under Agriculture, Technical Drafting under Information and Communication Technology and Bread and Pastry Production is an offering under Home Economics.

The data below presents the enrollment per specialization of Technical Vocational Education from Grade 7 to Grade 10.

GRADE LEVEL	ENROLLMENT DATA per SPECIALIZATION IN TVE								
	M	F	T	M	F	T	M	F	T
GRADE 8									
Beauty Care	152	119	271						
				GRADE 9			**GRADE 10**		
Agri Crop Production				17	32	49	19	25	44
Automotive Servicing				32	17	49	39	7	46
Electrical Installation and Maintenance				39	5	44	31	13	44
Shielded Metal Arc Welding				35	7	42	26	12	38
Technical Drafting				20	25	45	15	27	42

Senior High School offering are Academic Track and Technical Vocational Livelihood Track. The school offers Humanities and Social Sciences under Academic Track and Electrical Installation and Maintenance, Shielded Metal Arc and Welding and Automotive Servicing under Academic Track.

Along teacher capacity, the School Report Card shows that teachers continuously pursue graduate studies as shown by the table below:

EDUCATIONAL ATTAINMENT	NUMBER OF TEACHERS		
	MALE	FEMALE	TOTAL
Bachelor's degree	4	6	10
Master's degree units	7	33	40
Master's degree holder	2	3	5
Doctorate degree units	0	2	2
Doctorate degree holder	0	1	1
RECLASSIFICATION			
Reclassified Teacher from I to III	3	5	8

The school advocates the conduct of Focused Group discussion, empowering teachers to become leaders and mentoring teachers to become Curriculum Chairperson, Learning Area Coordinators/ Subject Group Head and Program Projects and Activities Coordinators. The implementation of monthly Focused Group Discussion, School Learning Action Cell, Structured Enhancement for Teachers, In Service Training and capacity building activities enhances teachers' competencies and skills to perform tasks expected of a teacher.

In terms of finances, the school had received from the General Appropriations Act in the form of Monthly Operations and Other Expenses.

MOOE	2021	2022	2023
Junior High School	1, 280, 000	1, 122, 000	1, 175, 000
Senior High School	531, 000	532, 000	648, 000

Along financial and material resources, the inventory of equipment shows that along Automotive Servicing, the school has zero equipment due to change in the Training Regulation of TESDA, Shielded Metal Arc Welding has only 3 welding machine for Junior High School and in Electrical Installation and Maintenance, the school needs to increase the number of plates for 1:1 learner.

MAPEH	54.45	61.63	60.46
TVE	70.63	67.63	61.39
Core Group	66.10	68.03	70.12
Applied Group	72.16	71.01	65.32
Specialized Group		70.72	70.57
Over All PL	63.53	64.08	62.51

Since the advent of the distance learning modality during pandemic, the school has zero National Certificate holders for three consecutive years due to restrictions in the face-to-face training of the learners. In the School Year 2019 - 2020, Shielded Metal Arc Welding and Electrical Installation and Maintenance trainers trained learners for National Certificate, however, lockdown is imposed during the day of scheduled assessment that hinders the implementation of the activity.

Chapter 2. School Development

2.1 School Development Plan

Currently, the school is gearing towards a more responsive, updated and innovative strategies to develop learners proficiency along technical - vocational aspect to meet the demands of the workplace.

2.2 TVET Curriculum

For School Year 2023 - 2024, the school shall offer Special Program in Technical Vocational Education which primarily aims to produce Junior High School graduates equipped with the necessary competency and certification to be assessed by the assessment center of Technical Education and Skills Development Authority. National Certifications marks the competency of a Junior High School completer as well as the Senior High School graduate.

The subjects being offered by the school for the next school year are as follows per grade level.

SUBJECT	GRADE LEVEL			
	7	8	9	10
Exploratory Subjects	/			
Internet Computer Fundamentals	/	/	/	
Technical Drafting	/	/		
Specialization Subjects				
Electrical Installation and Maintenance		/	/	/
Shielded Metal Arc Welding		/	/	/
Technical Drafting		/	/	/
Agri Crop Production		/	/	/
Bread and Pastry Production		/	/	/
Automotive Servicing		/	/	/
Entrepreneurship			/	/

Note: The school plans to add specializations depending on the profile of teachers that will be deployed to the school and the resources / facilities to be obtained.

The school utilizes the Most Essential Learning Competency given by the Department of Education guided with the Training Regulations of TESDA to ensure that the graduates will be equipped with the necessary competency to be ready to join the workforce.

The school's learning facility is continuously being worked out to align with the standards. As of the moment, the school has insufficiency of tools and equipment to be used by the learners because of abrupt increase in the number of students from 2015 to 2023 since its establishment.

2.3 Partnership Between Schools and Private Sector

The school seek partnership with various government and non - government organizations. The Local Government Unit is an active educational partner of the school that supports in terms of school infrastructure, facilities and social services. In order to ensure that our graduates met the curriculum requirements, the school forged partnership with Technical Education and Skills Development Authority Provincial Training Center in Guinobatan, Albay for the upskilling and reskilling of teachers handling technical vocational courses. The partnership is developed due to the difficulty in finding a skilled teacher to handle Industrial Arts subjects. Besides, the insufficient facilities, tools and equipment are addressed with the training provided by the TESDA to the learners along Shielded Metal Arc and Welding, Electrical Installation and Maintenance and Automotive Servicing. This strategy becomes more effective in filling the gaps to provide quality education with learners.

The school continuously look for other partners locally and internationally to learn new insights and ideas, share resources and develop more opportunities for enhancement of learner's potentials.

Chapter 3. School Digital Transformation

3.1 Strategy and Plan for Digital Transformation

A. Records Management

The school is now working to digitalize process and procedures in the school operations and managements.

- Learner Information System
- Use of electronic Basic Education Information System
- Utilization of electronic Class Records
- Electronic analysis and recording of Statistical Reports which is innovated by the Math teacher in the school (Mr. Dondie R. Colle)
- Plan for digital School Based Management records

B. **Teaching and Learning Process / Curriculum Implementation**

The school utilizes the following:

- ✓ Google workspace. This is utilized in storing data, conducting professional development activities in blended modality and instruction and sharing resources with teachers and students
- ✓ STARBOOKS. This is a vast source of information to be utilized by the learners containing all subjects. This is installed in the school system in partnership with Department of Science and Technology
- ✓ Grolier Encyclopedia via Scholastic Learning Zone in electronic mode to be used in teaching learning process.

3.2 Schools Best Practices and Outcomes

BEST PRACTICE	OUTCOMES
Project EASY Implementation	➢ Lesser time in calculating statistical data ➢ Results are automatically displayed ➢ Ample time for analysis of data ➢ Teachers are able to modify strategies in adjusting thegaps per quarter for the least learned competency ➢ Teachers are able to prepare a more responsiveactivities addressing the needs of the students.

3.3 Challenges of Lessons of School Digital Transformation

CHALLENGE	ACTION UNDERTAKEN
Digitalizing the equipment in the following specializations: ➢ Automotive Servicing ➢ Electrical Installation and Maintenance ➢ Shielded Metal Arc Welding ➢ Technical Drafting ➢ Bread and Pastry Production ➢ Agricultural Crop Production	➢ Allocates budget to upgrade tools and equipment ➢ Seek partners to sha ➢ re resources with the school ➢ Continue the educational partnership with TESDA for the continuous upgrading and training of teachers and learners. ➢ Look for donors of tools and equipment through partnership agreements

3.4 Experiences and Recommendations for Digital Transformation

CHALLENGE	ACTION UNDERTAKEN
Teaching - Learning ➢ Implementation of online blended learning during pandemic is challenging with thedata below: 49.91% of the learners have cellphone only, 18.78% television and cellphone, 1.98% cellphone and laptop	➢ 100% of the learners experience Modular Distance Learning ➢ Lessons, worksheets and videos are sent through the social media sites and Googleapps

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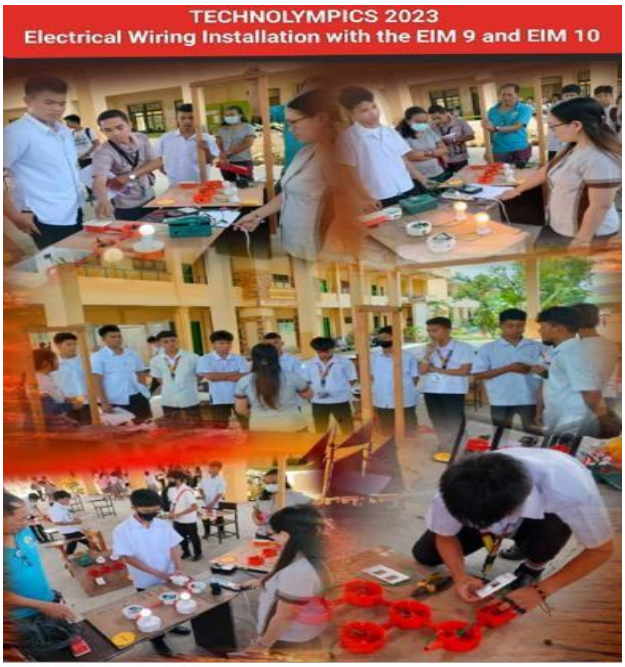
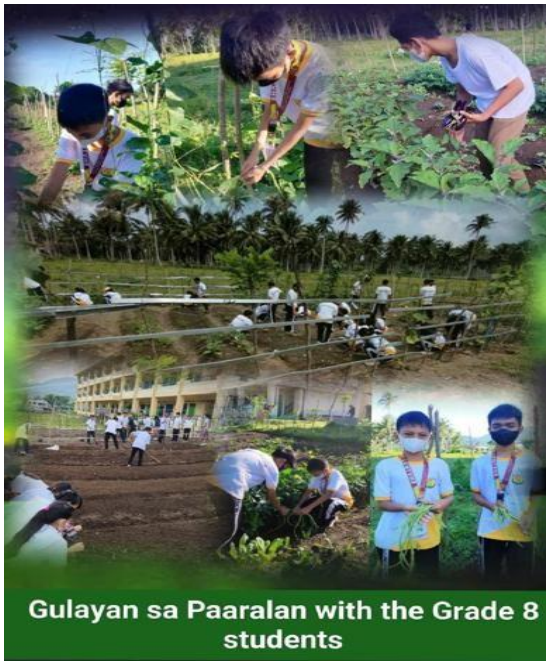
SAMPLE DOCUMENTATION OF TECHNICAL VOCATIONAL EDUCATION ACTIVITIES


WORK IMMERSION
Electrical Installation and Maintenance (EIM 12)


Food Bazaar with Entrepreneurship 9 and 10 Students


TECHNOLYMPICS 2023
Electrical Wiring Installation with the EIM 9 and EIM 10


Gulayan sa Paaralan with the Grade 8 students

Republic of the Philippines
Department of Education
Region V - Bicol
SCHOOLS DIVISION OFFICE LIGAO CITY

TVET Development and Institutional Profile

PALAPAS NATIONAL HIGH SCHOOL, PHILIPPINES

Prepared by *CYNTHIA B. LLACER, Principal I, Palapas National High School Palapas, Ligao City, Philippines*

Chapter 1. Introduction

1.1 Country Profile

The Philippines is a vibrant archipelago located in Southeast Asia. With its breathtaking landscapes, consisting of more than 7,000 tropical islands, the country boasts rich biodiversity, stunning beaches, and diverse marine life. Home to over 100 million people, the Philippines is a melting pot of cultures influenced by its history of Spanish, American, and Asian interactions. The country's official languages are Filipino and English, making it one of the largest English-speaking nations in the world.

Population

The Philippine Statistics Authority (PSA) announced on July 7, 2021 that based on the 2020 Census of Population and Housing (2020 CPH), the total population of the Philippines as of 01 May 2020 is at 109,035,343. This count is declared official for all purposes by the President of the Philippines, pursuant to Proclamation No. 1179 dated 06 July 2021.

Gross Domestic Product (GDP)

The Philippine Gross Domestic Product (GDP) posted a growth of 6.4 percent in the first quarter of 2023. This was the lowest growth registered after seven quarters when the country started to recover from the pandemic in the second quarter of 2021

Employment Rates

The country’s employment rate in March 2023 was estimated at 95.3 percent. This was higher than the reported employment rate in the same month last year at 94.2 percent and in the previous month at 95.2 percent. In terms of magnitude, the number of employed persons in March 2023 was estimated at 48.58 million, posting an increase of 1.61 million from the 46.98 million employed persons in March 2022.

Litaracy Rates

Literacy rate in the Philippines improves to 97.0 percent. Based on the 2020 Census of Population and Housing (2020 CPH), of the 97,600,336 household population five years old and over, 94,627,566 persons (97.0%) were literate. This translates to a 1.2 percentage point improvement from the 85,953,030 persons (95.8%) that was recorded in 2015. Literacy rate in 2020 was slightly higher among females (97.1%) than among males (96.8%). The same trend was observed in 2015.

Minimum Wages

Minimum wages in the Philippines have varied across regions and sectors, with regular adjustments to ensure fair compensation for workers. As of June 30, 2023, the National Capital Region (NCR) had the highest minimum wage, set at around ₱573.00-₱610.00 Philippine pesos per day, while other regions had their respective rates.

1.2 Education Profile

Education System

The Philippine education system includes Early Childhood Care and Development (ECCD), Basic Education, Technical and Vocational Education and Training (TVET), and Higher Education. The Department of Education (DepEd) is responsible for basic education, ECCD Council for ECCD, the Technical Education and Skills Development Authority (TESDA) for post-secondary, technical and vocational education, and the Commission on Higher Education (CHED) for higher education.

TVET System

The education system in the Philippines embraces formal and non-formal education. It is closely related to the American mode of education but differs in the number of school years as other countries have 12 years basic education. In the country however, elementary education is composed of 6 years and secondary education is 4 years which together with the tertiary education comprise the formal education system. On the other hand, non-formal education includes education opportunities, even outside school premises, that facilitate achievement of specific learning objectives for particular clienteles, especially the out-of-school youths or adult illiterates who cannot avail of formal education. An example is functional literacy programs for non-literate and semi-literate adults which integrate basic literacy with livelihood skills training.

TVET Enrolment and Graduation Rates

For the year 2021, there are 1,240,099 enrollees and 1,157,189 graduates with a 93% completion rate. Compared to the 2020 output, the total number of enrollees and graduates has increased by 4.58% and 1.81%, respectively.

1.3 School Profile

Palapas National High School is a public secondary school located in Palapas, Ligao City, Philippines under the mandate of the Department of Education (DepEd) K-12 Basic Education Program. Its curriculum covers Grades 7 to 10 in Junior High School (JHS) and Grades 11 to 12 in Senior High School (SHS) with government permit no. S-031, series of 2019. Pursuant to the provisions of DepEd Order no. 51, series 2015 and based on the evaluation conducted by the DepEd, Palapas National High School was granted the authority to offer the SENIOR HIGH SCHOOL PROGRAM effective school year 2019-2020. The school offers Academic Track with General Academic Strand (GAS) and Technical-Vocational-Livelihood (TVL) Track with Industrial Arts and Home Economics as its strands. Industrial Arts specializes in Shielded Metal Arc Welding (SMAW) and Motorcycle Small Engine Servicing (MSES) while the Home Economics offers Cookery, and Bread and Pastry Production as specializations.

The school has now 27 competent teachers, three non-teaching personnel including the Principal, and three utility workers.

In school year 2021-2022, the number of enrolled male students dropped from 369 to 360 for the following academic year, 2022–2023, while the number of enrolled female students also fell, from 373 to 363. From the previous SY to the current SY, there were 742 to 723 students enrolled overall respectively. This can be attributable to the varying SHS Strand preferences, moving and changing residences, and transferring to other schools by the students. The graduation rate of Grade 12 Senior High School for 2023 is 100%.

Chapter 2. School Development

2.1 School Development Pla

PRIORITY IMPROVEMENT AREAS	GENERAL OBJECTIVE/S	ROOT CAUSE/S	TIME FRAME		
			SY 2022-2023	SY 2023-2024	SY 2024-2025
1. Struggling Readers	To reduce the number of 47 identified students with low reading capability to at least 10% or 5 students per school year.	Lack of proper supervision from parents and teachers Inappropriate teaching strategies in reading	5 students	10 students	15 students
2. Learners with Learning Difficulty	To increase the 75% performance level (PL) by 2% every school year of 60 academically challenged learners to overcome the least mastered skills and to develop mastery of competencies	Students' poor mental, social, emotional health, and well-being due to the effects of pandemic.	77% PL	79% PL	81% PL
	To decrease the number of 11 learners with learning difficulties by 25% or 3 learners every school year	Poor academic performance of learners with learning difficulties	25% decrease or 3 learners	50% decrease or 6 learners	75% decrease or 9 students
	To increase by 5% the performance level of the students in Math and Science from 33% and 41% to 38% and 46% respectively, for the school year 2022-2023	Students' poor study habit, lots of distraction, teaching and learning is not engaging, lessons are fast-paced due to the limited time in class discussions and hands-on activities.	5% increase in Math and Science PL		
	To increase the 75% PL of learned competencies in Cookery of 26 Grade 12 students for at least 15% to enhance their technical knowledge and skills.	Lack of hands-on activities and exposure in the work field under TVL Home economics	90% PL		
3. Lack of Classrooms	To provide classrooms to 100% of the students every school year	No newly constructed school building	1 classroom	2 classrooms	3 classrooms
4. Lack of Armchairs	To increase the number of chairs by 75 pieces every school year	Improper use, old/worn out, damaged due to continuous use, no additional supply from the government	75 chairs	150 chairs	225 chairs
5. Improvement of School Facilities and Equipment	To repair, improve and restructure the School Library for a conducive reading environment.	Poor library structures and facilities	√	√	√
	To repair, improve and restructure the ICT Room for a conducive teaching and learning environment.	Poor electrical installation, unstable and broken computer tables, and non-well-structured set up of computers units.	√	√	√
6. Lack of safety and Security Personnel	To employ 1 additional Security Personnel to ensure the safety and security of the school	Incidence of delinquency in the school The school cannot hire a school guard, Lack of fund.	1 school guard		

2.2 TVET Curriculum

SENIOR HIGH SCHOOL CURRICULUM

Track : Technical-Vocational-Livelihood (TVL)
Strand : Home Economics
Specialization : Bread and Pastry Production NC II

GRADE 11	
1st Semester	**2nd Semester**
Core subject	**Core subject**
Oral Communication in Context	Reading and Writing
Komunikasyon at Pananaliksik sa Wika at Kulturang Pilipino	Pagbasa at Pagsusuri ng Iba't ibang Teksto Tungo sa Pananaliksik
General Mathematics	21st Century Literature from the Philippines and the World
Personal Development/ Pansariling Kaunlaran	Understanding Culture, Society, and Politics
Physical Education and Health 1	Physical Education and Health 2
	Statistics and Probability
Applied Subjects	**Applied Subjects**
English for Academic Professional Purposes	Practical Research 1
Filipino sa Piling Larang (Tech-Voc)	
Specialized Subjects	**Specialized Subjects**
Bread and Pastry Production NC II	Food and Beverage Services

Track : Technical-Vocational-Livelihood (TVL)
Strand : Home Economics
Specialization: Cookery NC II

GRADE 12	
1st Semester	**2nd Semester**
Core subject	**Core subject**
Introduction to the Philosophy of the Human Person	Physical Science
Earth and Life Science	Physical Education and Health 4
Contemporary Philippine Arts from the Regions	**Applied Subjects**
Media and Information Literacy	Empowerment Technologies
Physical Education and Health 3	Entrepreneurship
Applied Subject	Inquiry, Investigation, and Immersion
Practical Research 2	**Specialized Subjects**
Specialized Subjects	Cookery NC II
Cookery NC II	

Track : Technical-Vocational-Livelihood (TVL)
Strand : Industrial Arts
Specialization : Shielded Metal Arc Welding

GRADE 11	
1st Semester	**2nd Semester**
Core subject	**Core subject**
Oral Communication in Context	Reading and Writing
Komunikasyon at Pananaliksik sa Wika at Kulturang Pilipino	Pagbasa at Pagsusuri ng Iba't ibang Teksto Tungo sa Pananaliksik
General Mathematics	21st Century Literature from the Philippines and the World
Personal Development/ Pansariling Kaunlaran	Understanding Culture, Society, and Politics
Physical Education and Health 1	Physical Education and Health 2
Applied Subjects	Statistics and Probability
English for Academic Professional Purposes	**Applied Subjects**
Filipino sa Piling Larang (Tech-Voc)	Practical Research 1
Specialized Subjects	**Specialized Subjects**
Shielded Metal Arc Welding	Shielded Metal Arc Welding

Track : Technical-Vocational-Livelihood (TVL)
Strand : Industrial Arts
Specialization : Motorcycle/Small Engine Servicing NC II

GRADE 12	
1st Semester	**2nd Semester**
Core subject	**Core subject**
Introduction to the Philosophy of the Human Person	Physical Science
Earth and Life Science	Physical Education and Health 4
Contemporary Philippine Arts from the Regions	**Applied Subjects**
Media and Information Literacy	Empowerment Technologies
Physical Education and Health 3	Entrepreneurship
Applied Subject	Inquiry, Investigation, and Immersion
Practical Research 2	**Specialized Subjects**
Specialized Subjects	Motorcycle/Small Engine Servicing NC II
Motorcycle/Small Engine Servicing NC II	

2.3 Partnership Between Schools and Private Sector

- Strengthening Community Linkages and Networking among stakeholders from public and private sectors seeking collaboration for academic, curriculum, and facilities development implementation and for continuous improvement

When schools collaborate with the different stakeholders, they create strong connections and networks that lead to valuable improvements in education. The private sector offers expertise, resources, and funding, allowing schools to enhance academic programs, develop innovative curricula, and improve facilities. Students benefit from practical experiences and mentorship opportunities, making them more employable. Additionally, partnerships encourage schools to continuously improve their practices and stay relevant to the changing job market. Strengthening community linkages further enhances these collaborations, leading to a more effective and relevant educational experience for students.

Chapter 3. School Digital Transformation

3.1 Strategy and Plan for Digital Transformation

- **Rationale**

The development of technology has significantly changed how we learn, work, and live. It has completely changed how education is currently practiced in terms of teaching and learning. It may be difficult and daunting for students to quickly process a large amount of material in a classroom setting, but thanks to technology, individual study and research are supported by a range of online resources. Additionally, by making concepts easier to understand, such as through instructional videos, it promotes learning.

The time of remembering information from a blackboard and sitting through lectures is long past. Modern students are digital natives who were raised in a technologically advanced society and are accustomed to dynamic, interactive learning environments. Thanks to technology, they have access to a wide range of creative and inventive opportunities. They have access to a wide range of information and resources, which allows them to experiment, look into, and implement their ideas.

Technology has also dramatically altered how administrators and instructors interact and communicate. Using social media and online platforms, they can communicate with one another, work together on projects, and share ideas. Additionally, they can work on projects with coworkers from various institutions or countries, overcoming barriers and fostering a feeling of community inside the curriculum.

Varied learning opportunities provide the learners acquire the desired knowledge, skills, and attitude (KSA) towards work especially in the 21st century. Considerably, the fast and dramatically changing world requires soft skills including critical thinking and problem-solving, creativity and innovation, communication and collaboration, initiative, responsibility and self-regulation, social and cross-cultural adaptation, and information and communication technology skills that are essential factors in the holistic development of the learners.

Collaboration through partnership and networking can be the key forerunners for problem identification and learning opportunities.

Southeast Asian Vocational Schools Network aims to strengthen and expand collaborations for mutual benefits between vocational-technical high schools through online student-teachers exchange programs, internships, intensive training programs, skill contests, and study visits regionally.

In conclusion, technology has significantly influenced education and altered our way of thinking. It has promoted personalized learning, improved communication and teamwork, created new possibilities for creativity and innovation, and equipped students, teachers, and administrators for the future. It will be intriguing to see how technology advances the educational system.

- **General Objectives:**

One of the K to 12 Basic Education Program goals is to develop in learners the competencies, work ethics, and values relevant to pursuing further education and/or joining the world of work. To achieve greater congruence between basic education and the nation's development targets, creating a Technology Plan is a great help to achieve a more established learning proficiency.

This technology plan aims to:

1. Develop a comprehensive strategy that aligns technology initiatives with the overall goals and objectives of an organization;
2. Give the school tools it needs to use technology wisely in order to increase productivity, efficiency, and competitiveness while also increasing learners experience and ensuring the security and integrity of data and systems;
3. Provide linkages between Southeast Asian Countries in terms of educational assistance through meaningful online learning instructions and innovations.

AREA	OBJECTIVES	LINES OF ACTION	PERSON/S IN-CHARGE	TIME LINE
CURRICULUM AND INSTRUCTION	1. To expose teachers to practicum activities enhancing their content, pedagogical, and technological knowledge; 2. To promote cross-cultural understanding of a variety of instructional models from different countries; 3. To benchmark best practices of school management and instructional approaches; and 4. To create a sustainable collaboration and partnership among South East Asian-TVL School Network members.	Online **S**tudent-**T**eachers **E**xchange **P**rogram (STEP): THINK Local, LINK Global 1. Virtual Meeting and consultation with the collaborating SEA Schools and SEAMEO 2. Online enrolment of student-participants and teacher-lecturers 3. Finalization of schedule 4. Virtual Student-Teacher classes 5. Closing Program Monitoring and Evaluation	Principal School STEP Coordinators ICT coordinator Student Participants Teacher-lecturers	Year 1: April – June 2023 Year 2: March - May 2024 Year 3: February – April 2025
FACULTY DEVELOPMENT	2. To introduce Google Workspace for Education and it's benefits in teaching and learning process. 2. To capacitate teachers in using Google Apps for Education. 3. To apply the use of Google Apps in a meaningful teaching and learning experience. 4. To work collaboratively with teachers in developing instructional materials, lesson exemplars, and other teaching related resources using Google Apps for Education.	Project **E.T.A.C** (**E**cho.**T**each.**A**pply.**C**ollaborate) using Google Apps for Education: A School-Based Training Workshop for Teachers - Discuss the purpose of Google Workspace for education - Identify the different Google tools, its features and how it is being use in different school. ide/walkthrough the participants in the tep-by-step procedure of using the different features of Google Tools for Education. o complete and submit the workbook task for each Googles Apps through Google Classroom assigned to each group of participants. Use any google app/tool as an instructional material in teaching Present different task done using google app/tool to increase productivity in paper works. Work with group (per subject area) in making lesson exemplars, IM's and other teaching related resources using Google Apps/Tools - Present the teaching or teaching-related materials to gain best practices or make suggestions on how to improve the work of others.	Principal ICT Coordinator Teachers	May 2023 – June 2025

3.2 School Best Practices and Outcome

The school regularly evaluates digital tools and strategies for improvement, seeking feedback from all involved. Successful digital transformation has significant positive impacts on the school's technology. Students become more engaged and motivated through interactive and dynamic learning experiences, leading to better academic performance. Teachers benefit from enhanced efficiency as technology simplifies administrative tasks, allowing them to focus on teaching and supporting students. Digital transformation fosters global collaboration, connecting students and educators worldwide. Data-driven decision-making helps optimize curriculum, resources, and student support.

Using digital tools, schools offer accessible education, breaking barriers for students with disabilities and in remote areas. Parents get involved in their child's education through easy access to academic progress and school activities on digital platforms. Most importantly, students gain essential digital literacy skills, preparing them for a technology-driven future and future job opportunities. Overall, digital transformation creates a dynamic, inclusive, and effective learning environment, shaping confident, adaptable, and well-prepared students for the challenges of the 21st century.

3.3 Challenges or Lessons of School Digital Transformation

Using technology in schools has been challenging as educators and institutions work to make the most of its benefits. One big issue is ensuring that schools have the right infrastructure and reliable internet for digital tools to work well. But upgrading networks and providing devices have been expensive, putting a strain on the school budgets. Allocation of funds for such expenditures has been the priority of the school administration. Also, teachers have faced difficulties in adopting digital tools that they were not familiar with. So, the school has invested also in training programs to help teachers use technology confidently in their classrooms.

3.4 Experiences and Recommendations for Digital transformation

Based from the school’s experiences stated in the previous items, it is recommended for schools starting their digital transformation journey that they should create a clear digital strategy that aligns with the school's educational goals, involving all stakeholders in the planning process. Investing in professional development for teachers to improve their digital skills and integrate technology effectively in their teaching can also be considered. It is also a priority to upgrade the school's digital infrastructure, ensuring reliable internet and enough devices for seamless use of digital tools in learning.

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TVET Development and Institutional Profile
INSTITUTE OF TECHNICAL EDUCATION, SINGAPORE

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Chapter 1. Introduction

Country Profile

Singapore, officially known as the Republic of Singapore, is Southeast Asia's sovereign city- state and island country. It is situated at the southern tip of the Malay Peninsula, separated from the Indonesian Riau Islands by the Singapore Strait to the south and bordered by Malaysia to the north. The nation has one main island, often called Singapore Island, and 62 smaller islets. Despite its modest land area of approximately 719 square kilometres (278 square miles), Singapore has emerged as a global economic powerhouse and a leading financial centre.

The country operates under a parliamentary representative democratic system, with a stable government that has played a vital role in its remarkable progress.

Known for its clean streets, green spaces, and modern architecture, Singapore has earned the nickname "The Lion City" due to the legendary founder Sang Nila Utama's sighting of a lion on the island. The country's strategic location has become a crucial hub for international trade and a significant maritime centre.

Population

Singapore had an estimated population of around 5.6 million. Despite being one of the smallest countries in the world, its population is incredibly diverse and comprises various ethnic groups, including Chinese, Malay, Indian, and others. The country embraces a multicultural society where different languages, religions, and traditions coexist harmoniously.

Gross Domestic Product (GDP)

Singapore boasts a robust and prosperous economy, known for its open market policies and strategic location that fosters international trade. As of the last data gathered, Singapore's Gross Domestic Product (GDP) is $643 Bil for 2022.

Key pillars of Singapore's economy include manufacturing, financial services, tourism, and technology. The country's well-developed infrastructure, pro-business environment, and skilled workforce have significantly contributed to its economic success. The government's commitment to innovation and research and development has further strengthened Singapore's position as a knowledge-based economy.

Employment Rates:

Low unemployment rates and strong demand for skilled workers characterise Singapore's labour market. The government's emphasis on education and vocational training programs has contributed to a highly skilled and adaptable workforce. As of June 2023, Singapore's employment rate is 98.1%

Literacy Rates:

Singapore places great importance on education, and as a result, the country enjoys high literacy rates. The comprehensive education system has successfully provided quality education to its citizens. Singapore's literacy rate is 97.6% (15 years & older), reflecting the effectiveness of its education system in equipping its people with essential skills and knowledge.

Minimum Wages:

Unlike other countries, Singapore has no legislated minimum wage policy. Instead, wages are generally determined through market forces and collective bargaining between employers and employees. The government closely monitors labour market conditions and promotes fair wages through various means, including the progressive wage model and guidelines set by the tripartite partners, which include the government, employers, and trade unions. Based on the statistics for 2023, the minimum wage gathered is SGD 1400 per month.

Education Profile

Education System:

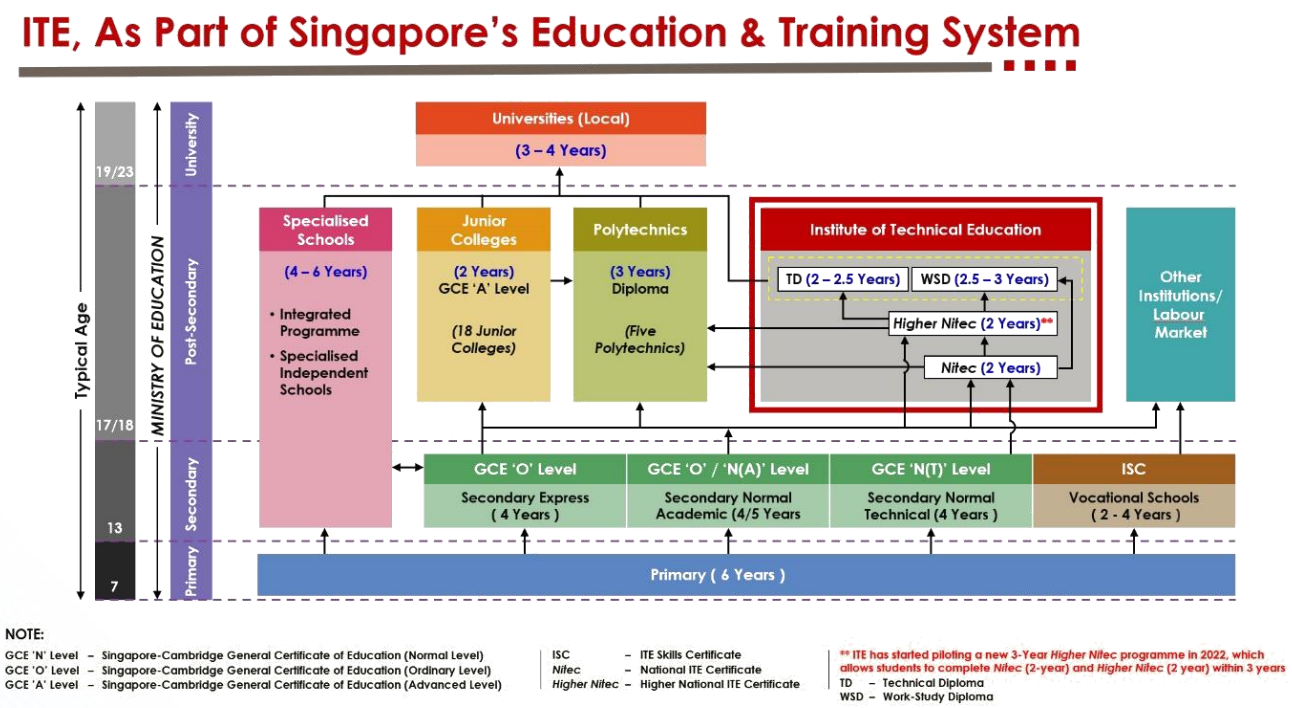
Singapore's education system is widely recognised for its excellence and has driven economic success. The system encompasses primary, secondary, and tertiary education levels. Education is compulsory for children aged 6 to 15 years and is provided at a minimal cost in government-funded schools.

The curriculum emphasises core subjects like Mathematics, Science, Languages, and Social Studies while incorporating holistic development through sports, arts, and character education. Students are encouraged to pursue academic excellence, and standardised tests are crucial in assessing their progress.

TVET System:

Singapore significantly emphasises Technical and Vocational Education and Training (TVET) to meet its economy's and industries' demands. TVET programs are designed to equip students with practical skills and knowledge directly relevant to the job market. These programs are offered through institutes of higher learning, polytechnics, and specialised vocational training centres.

The TVET system focuses on producing a skilled workforce for various sectors, including manufacturing, engineering, hospitality, and information technology. It offers pathways for academic and non-academic students, allowing them to pursue technical qualifications and certifications that align with their career aspirations.



Singapore's education system and progression pathway.

Chapter 2: School Profile

There are 5 Polytechnics and the Institute of Technical Education (ITE) providing TEVT education in Singapore.

ITE is a prominent post-secondary institution in Singapore, playing a crucial role in the country's education landscape. Established in 1992, ITE aims to equip students with practical skills and knowledge, preparing them for the workforce and enabling them to contribute meaningfully to Singapore's economy and society.

i. Vocational and Skills-Based Education: ITE offers various technical and vocational education programs, focusing on hands-on training and practical experience. The curriculum is designed to meet the demands of various industries, including info-comm, health science engineering, hospitality, design, business, and more.
ii. Multiple Pathways: ITE recognises that students have different learning styles and aspirations. Hence, it offers multiple pathways for students to pursue their interests and goals. After secondary education, students can choose from various ITE courses catering to academic and technical pursuits.

iii. Nitec and Higher Nitec Courses: ITE's National ITE Certificate (Nitec) and Higher Nitec courses provide students with foundational and intermediate-level skills. These programs emphasise technical competency, including internships or work attachments to provide real-world exposure.

iv. Work-Study Diplomas: ITE collaborates with industries to offer Work-Study programs, where students can gain work experience while pursuing their studies. These programs enable students to apply theoretical knowledge in real work settings and foster a seamless transition to the job market.

v. Lifelong Learning Opportunities: ITE is not limited to young school leavers; it also caters to adult learners seeking to upgrade their skills or embark on a new career path. Lifelong learning courses and programs are available for individuals who wish to enhance their employability and adapt to changing industry needs.

2. School Development

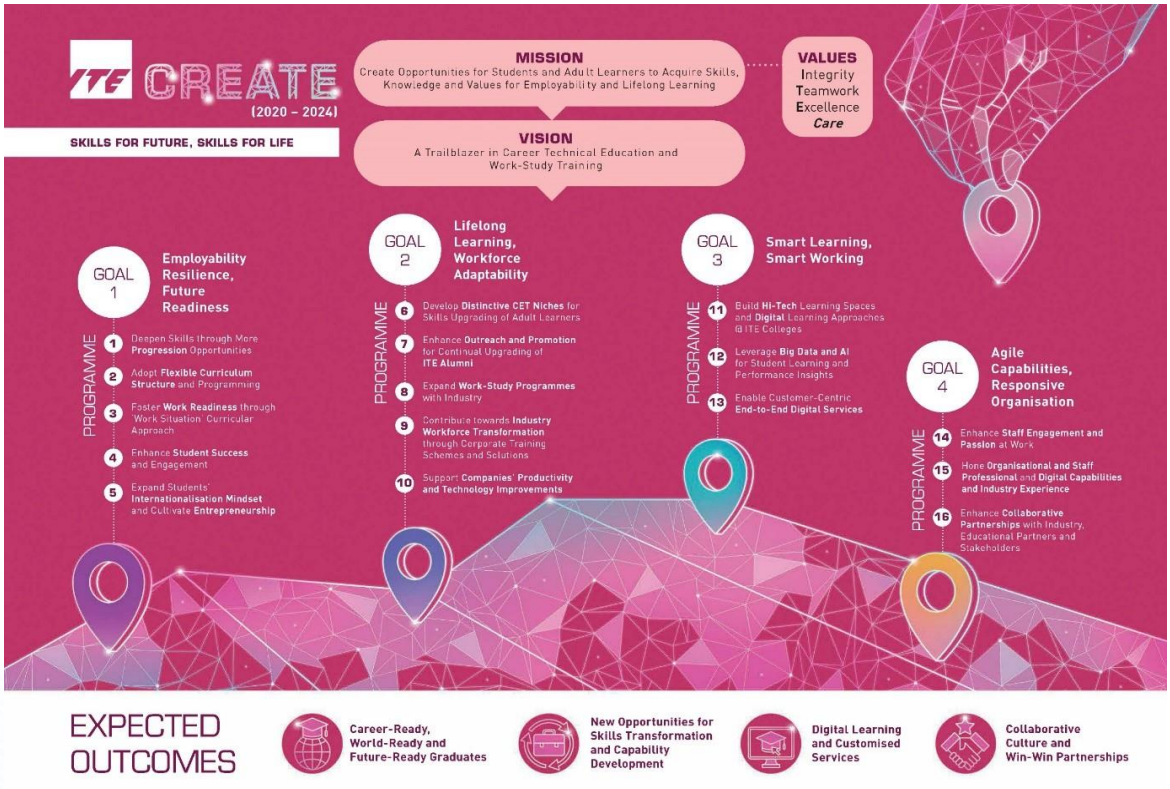
2.1. School Development Plan

ITE has rolled out 5-year strategic plans to chart the organisation's direction since 1995.

ITE Create (2020 - 2024) was launched in 2020 in the midst of changing job and skills demands. Aptly tagline '***Skills for Future, Skills for Life'***, *ITE Create* aims to make a difference in the lives of students through the following 4 Goals:

- Employability Resilience, Future Readiness
- Lifelong Learning, Workforce Adaptability
- Smart Learning, Smart Working
- Agile Capabilities, Responsive Organisation

ITE CREATE Strategic Plan



2.2. TVET Curriculum

ITE is progressively combining the two certificate courses (*Nitec* & *Higher Nitec*) into a 3-Yr programme. Streamlining the current *Nitec* and *Higher Nitec* curricula, this new option will enable students to attain a *Higher Nitec* qualification directly in only three years instead of the current four years. The School of Electronics and Info-Comm Technology (SEIT) pioneered this new programme structure in 2022.

Overview of the revised 3-Yr Higher Nitec Curriculum structure

2.3. Partnership Between Schools and Private Sector

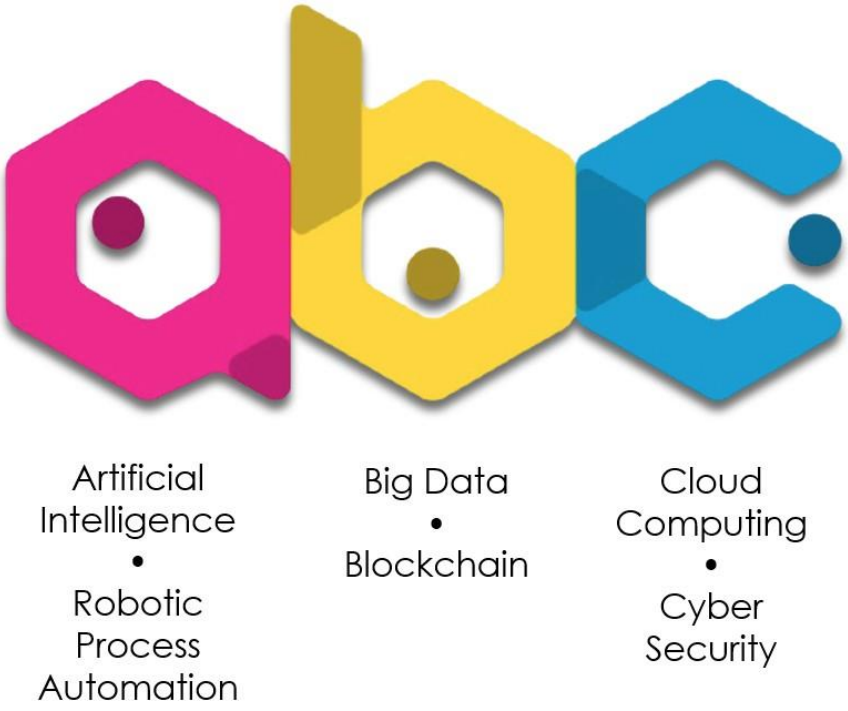
As a TVET institution, we actively engage with industry partners to ensure course relevancy and staff competency. The core of MOU and LOC are technology transfer and internship opportunities for staff and students.

- The following are MOU partners that seal collaborations with SEIT:
- Adobe Inc.
- Aruba
- Intel
- Softbank Telecom
- CISCO
- NEC
- National Supercomputing Centre
- UBTech

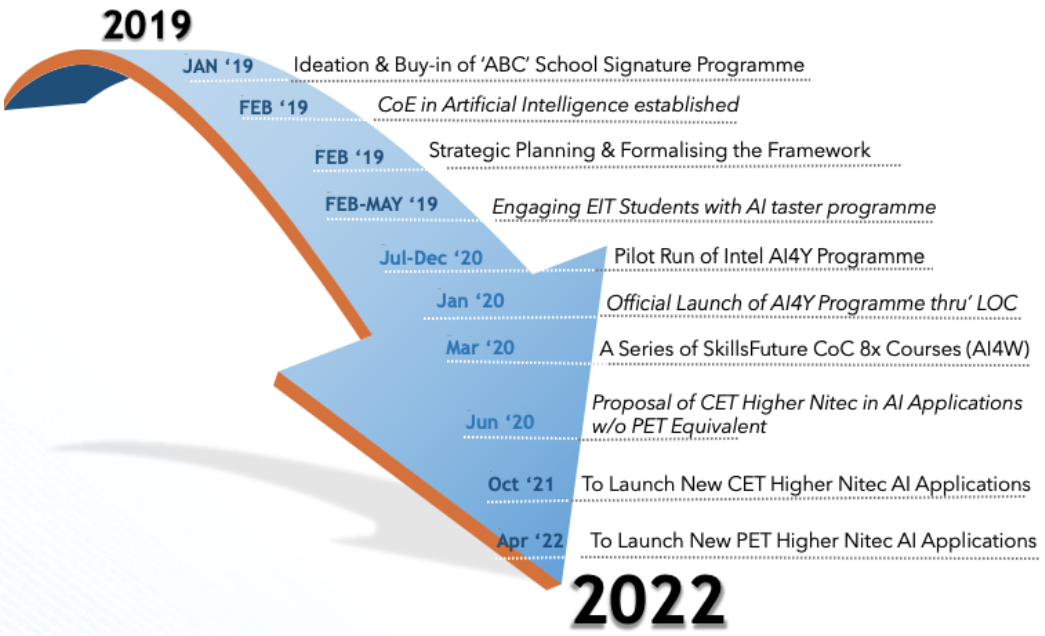
3. School Digital Transformation

3.1 Strategy and Plan for Digital Transformation

The School of Electronics & Info-Comm Technology (SEIT) at ITE College West (CW) has implemented the ABC strategic roadmap since 2019. The staff and students are equipped to align with the Industry Transformation Map for the ICT sector through the Strategic Plan of ABC (AI & Automation, Big Data & Cloud Computing & Cyber Security).



The ABC Strategic Technology Roadmap (ITE College West SEIT)



SEIT/CW's journey towards AI Ready.

Entering its fifth year, the SEIT proudly declares its readiness for AI with the designation of AIRI Ready.

AIRI, which stands for AI Readiness Index, is a framework developed by AI Singapore (AISG) that focuses on assessing the readiness of industries for AI implementation. This framework encapsulates the essential factors for successful AI adoption, derived from AISG's extensive engagement with companies of varying industries, sizes, and AI readiness levels.

3.2. School Best Practices and Outcomes

Speak, Share, Serve

In addition to technical skills and competencies, Singapore's SkillsFramework has identified Critical Core Skills (CCS), which are soft skills that can be applied across various job roles. These skills enhance an individual's employability and career mobility while facilitating the acquisition of Technical Skills and Competencies (TSCs) specific to their job sector. CCS assists individuals in adapting to new job demands and effectively transferring relevant skills between different positions.

The Critical Core Skills (CCS) encompass a total of sixteen (16) competencies, categorised into three (3) clusters of essential soft skills that employers highly value.

ITE College West focuses on three core competencies (CSC) that are considered essential regardless of the student's courses or trades. These are "Communications," "Collaboration," and "Customer Orientation." These three Cs are represented by the concepts of Speak, Share, and Serve. The college organises activities that allow students to practice and develop these critical skills.

Internship Preparatory Programme

We believe that a positive internship experience will lead students to advance in their chosen trades, whether they pursue employment opportunities or further studies.

We have initiated the Internship Preparatory Programme (IPP) to ensure students are well- prepared before their internship placement. This program focuses on enhancing their technical competencies, taking into account their academic performance from the previous semester. Additionally, it covers essential aspects such as workplace ethics, presentation skills, personal grooming, mindset, and managing expectations, among others.

3.3. Challenges or Lessons of School Digital Transformation

Educational institutions in Singapore face several challenges. Here are some of the key challenges:

i. Digital Transformation: Embracing technology and integrating it effectively into the education system is a constant challenge. This includes providing infrastructure for online learning, training teachers to use technology effectively, and ensuring access to digital resources for all students.

ii. Evolving Curriculum: Keeping the curriculum relevant and up-to-date to meet the changing needs of the job market and society is an ongoing challenge. This involves identifying and incorporating new fields of study, such as artificial intelligence, data science, and sustainable development while maintaining a solid foundation in traditional subjects.

iii. Workforce Development: Aligning the skills taught in educational institutions with the demands of the job market can be challenging. Ensuring that graduates have the necessary skills and knowledge to succeed in their careers and contribute to the economy is crucial.

iv. Equity and Inclusivity: Addressing the diverse needs of students and ensuring equal access to quality education for all is an ongoing challenge. While Singapore places emphasis on meritocracy, the education system is opening up to provide support and equal opportunities for students from disadvantaged and diverse backgrounds.

v. Global Competition: As Singapore continues to position itself as a global education hub, it faces increasing competition from other countries. Ensuring that Singapore's education system remains attractive to local and international students is challenging.

vi. Mental Health and Well-being: The post-pandemic challenges, the pressure to excel academically and the competitive nature of the education system can take a toll on students' mental health. Balancing academic performance with students' well-being and fostering a supportive environment is crucial.

vii. Teacher Recruitment and Retention: Attracting and retaining qualified and motivated educators is vital for the quality of education. Addressing workload, professional development, and career advancement issues can help in this regard.

viii. Lifelong Learning: Encouraging a culture of lifelong learning and upskilling is essential in a rapidly changing world. Educational institutions must cater to the learning needs of individuals at different stages of life and career.

ix. Research and Innovation: Promoting research and innovation in educational practices is essential for continuous improvement. Encouraging educators to engage in research and implementing evidence-based teaching methodologies can be a challenge.

3.4. Experiences and Recommendations for Digital Transformation

i. Encourage Online Collaboration: Facilitate online collaboration and communication among students and educators. Virtual classrooms, discussion forums, and collaborative projects can enhance engagement and foster a sense of community in remote or hybrid learning environments.

ii. Implement Data Analytics: Use data analytics to gather insights into student performance, engagement, and learning patterns. Analysing this data can help identify areas for improvement and inform data-driven decision-making.

iii. Cybersecurity and Data Privacy: Prioritise cybersecurity measures to protect sensitive student data and ensure data privacy compliance. Establish clear protocols for handling and safeguarding student information.

iv. Provide Professional Development: Offer comprehensive training and professional development programs for educators to help them become proficient in using technology effectively in the classroom. Training should cover technical skills and pedagogical strategies for integrating technology into teaching practices.

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https://www.ite.edu.sg https://www.singstat.gov.sg/ https://www.moe.gov.sg/ https://www.skillsfuture.gov.sg/

https://wagecentre.com/work/work-in-asia-and-oceania/salary-in-singapore

TVET Development and Institutional Profile
SAMUTPRAKAN COLLEGE OF COMMERCE AND TECHNOLOGY, THAILAND
วิทยาลัยเทคโนโลยีบริหารธุรกิจสมุทรปราการ

Prepared by :

- *Ms.Thirada Triamvithaya, Assistant Director of Samutprakan College of Commerce and Technology*
- *Ms.Paninee Saenghiran, Manager and Vice Director of Samutprakan College of Commerce and Technology*

CHAPTER 1: INTRODUCTION

1.1 COUNTRY PROFILE THAILAND

The current population of Thailand in 2023 will be 71,801,279, a 0.15% increase from 2022, which was 71,697,030, a 0.13% increase from 2021.

In term of GDP, Thailand's economy expanded 1.9% qoq in Q1 of 2023, exceeding market consensus of 1.7% and shifting from a downwardly revised 1.1% fall in Q4 A pick-up in private consumption (2.0% vs.01% in Q1) supported the upturn, with fixed investment also bouncing back (1.6% vs -0.3%) At the same time, net trade contributed positively, as exports (4.5% vs. -3.6%) rose faster than imports (2.6% vs. -11.2%) Introduction

PROJECTION FOR GROWTH AND INFLATION

Percentage Per Year	2022*	2023	2024
GDP Growth	2.6	3.6	3.8
	-	(3.7)	(3.9)
Headline Inflation	6.1	2.9	2.4
	-	(3.0)	(2.1)
Core Inflation	2.5	2.4	2.0
	-	(2.5)	(2.0)

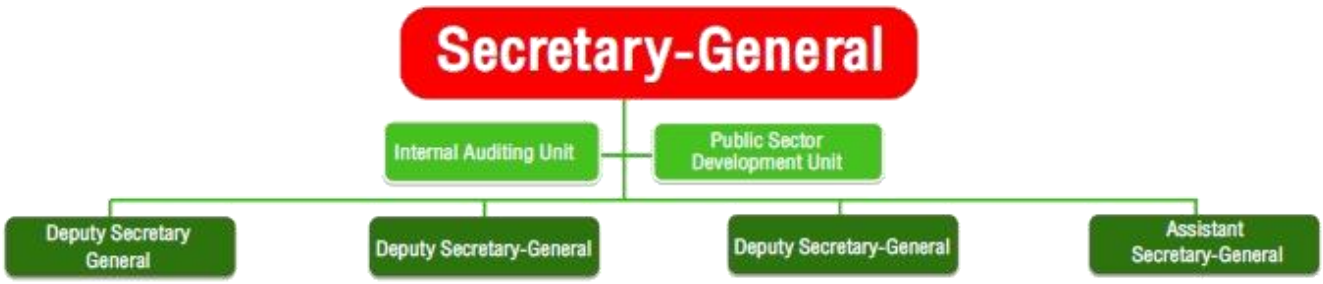
Meanwhile government spending was weak, down for the fifth straight quarter (-1.2% vs. -0.5%). On the production side, the non-agricultural sector rebounded (1.7% Vs. -1.3%) buoyed by rising output in both industrials and services In addition, activity in agriculture accelerated (4.6% vs. 3.7%). The economy last year 2.6% above a 1.5% growth rate in 2021, lifted by firm domestic demand Thailand last year beat its tourism target with11.15 million foreign visitors, compared to pre-pandemic 2019 with a record of almost 40 million This year, the economy is projected to grow between 2.7 and 3.7% In Thailand, employed persons are individuals with a minimum age requirement who work during a certain time for a business.

The number of employed people in Thailand increased to 39629.21 Thousand in the first quarter of 2023 from 39591.71 Thousand in the fourth quarter of 2022

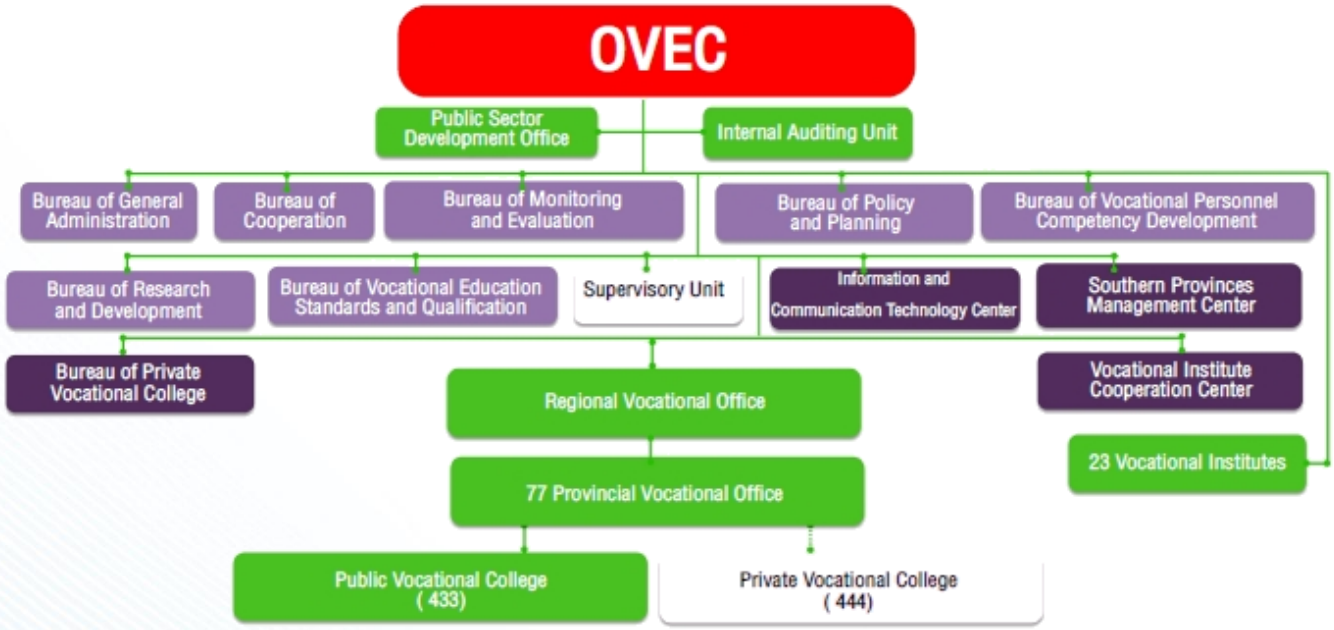
According to our estimates, 54,622,099 people. or 96.66% of the adult population (aged 15 years and above) in Thailand, are able to read and write. Accordingly, about 1,884,589 adults are illiterate. The literacy rate for the adult male population is 96.65%(26,746,169 persons). 927,626 are illiterate. The literacy rate for the adult female population is 96.68% (27,875,929 person)956,964 are illiterate. Youth literacy rates are 98.3% and 98.17% for males and females, respectively. The overall youth literacy rate is 98.24%. The definition of youth literacy rate definition covers the population between the ages of 15 and 24 years.

Lastly, minimum wagrs in Thailand remained unchanged at 353 THB/DAY (214.985 USD/Month) in 2023. The maximum rate of minimum wage for employees was 336 THB/ day, and the minimum was 12 THB/Day

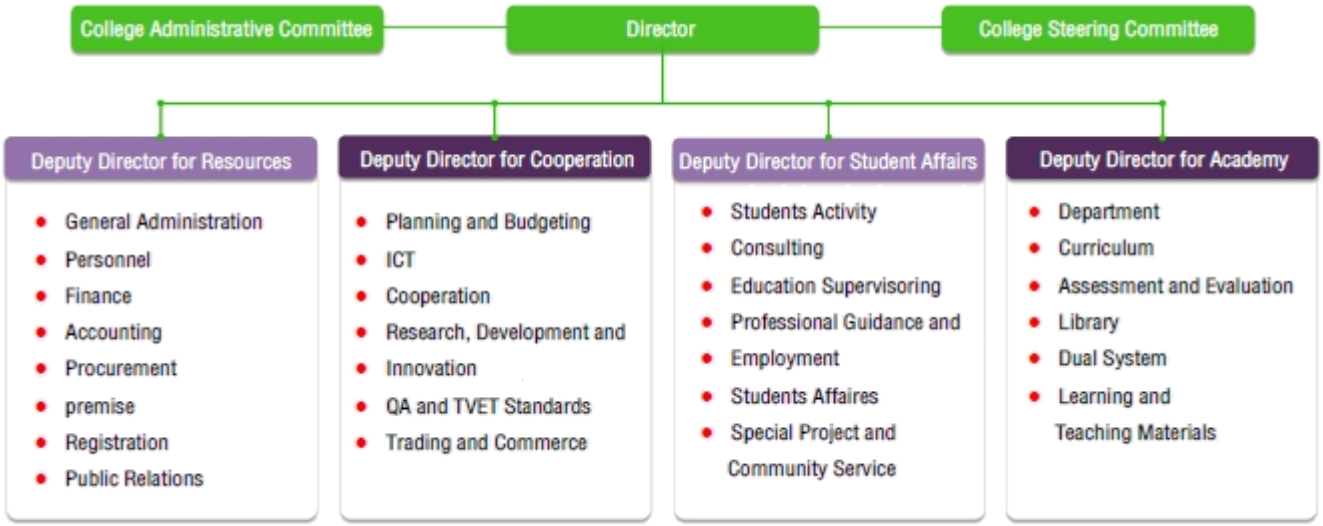
1.2 EDUCATION PROFILE



Organization Chart

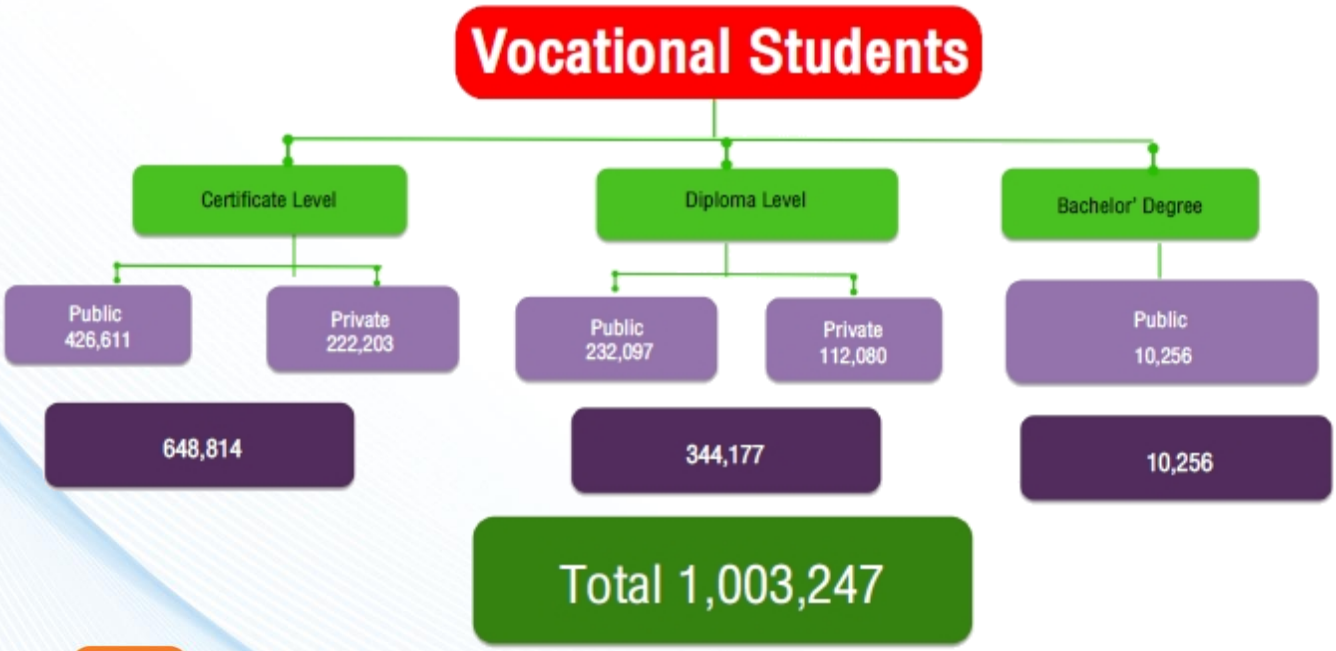


College Organization Chart



Vocational Education Institute Organization Chart

Number of Students



Colleges under the supervision of OVEC

Public Colleges 433 Colleges

1. Technical College 154 Colleges
2. Vocational College 50 Colleges
3. Industrial and Community Colleges 145 Colleges
4. Polytechnic Colleges 35 Colleges
5. Agriculture and Technology College 48 Colleges
6. Science based Technology College 1 College

Private Vocational College 444 Colleges

Total 877 Colleges

Programs of Education

Certificate in Vocational Education (3 yrs.)

1) Agriculture
2) Home Economy
3) ICT
4) Fishery
5) Commerce and Business Administration
6) Arts and Craft
7) Industry
8) Hotel and Tourism Industry
9) Entertainment and Music Industry
10) Garment Industry

Diploma in Vocational Education (2 yrs.)

1) Agriculture
2) Home Economy
3) ICT
4) Fishery
5) Commerce and Business Administration
6) Arts and Craft
7) Industry
8) Hotel and Tourism Industry
9) Entertainment and Music Industry
10) Garment Industry
11) Merchant Marine

Bachelor in Technology or Practical Engineer (2 yrs.)

1) Agriculture
2) Home Economy
3) ICT
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5) Commerce and Business Administration
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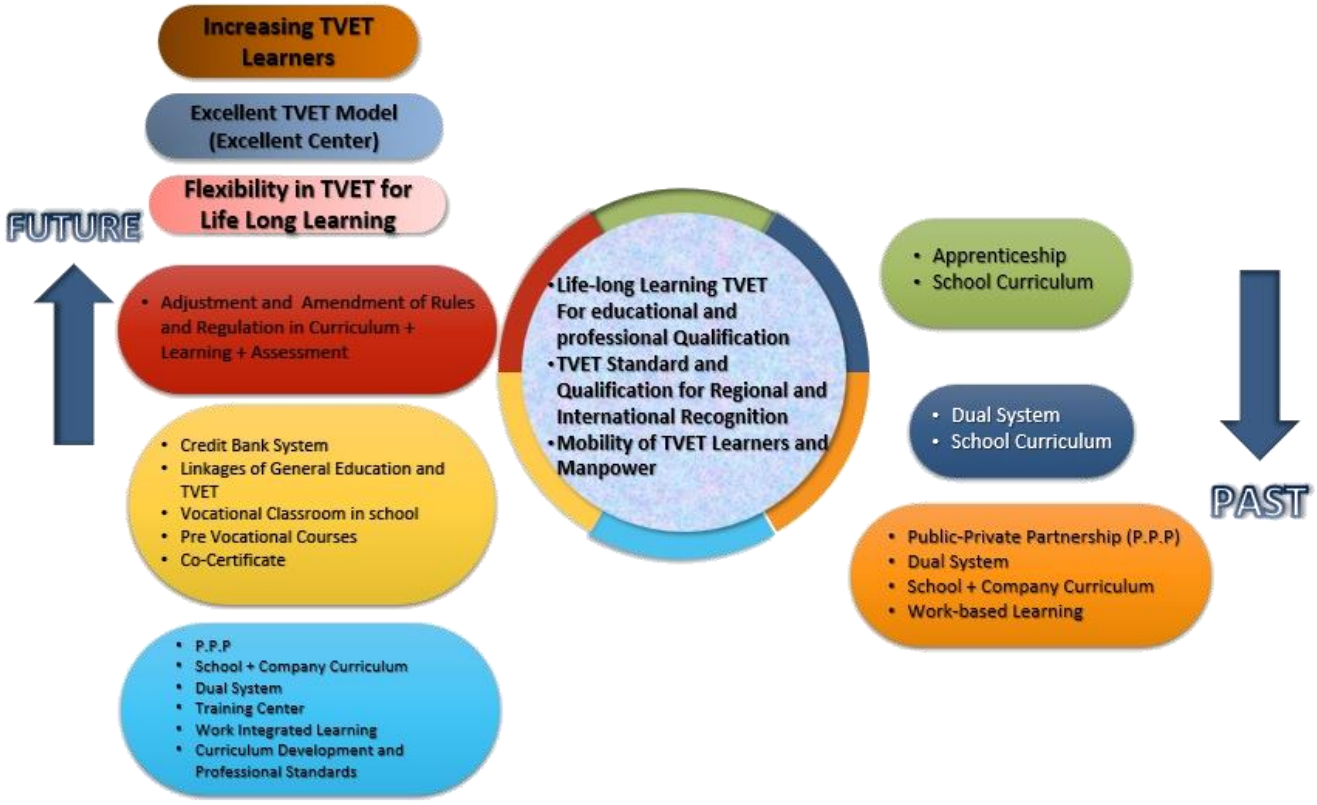
8) Hotel and Tourism Industry

Modernizing TVET for Thailand



1.3 SCHOOL PROFILE

School location

Samut Prakan College of Commerce and Technology
6/9 Moo 3 Teparak KM.9 Rd. Bangpli - Yal, Bangpli, Samutprakan 10540 Thailand

Number of students and teacher

Academic Year 2023

- Vocational Student 902 people
- High Vocational Student 528 people

Total Students 1,430 people

Board of Directors

- College Leaders 8 people
- Teachers 47 people
- Staff 12 people

Total 67 people

Trade and School Specialization

The college provides various of commerce/business administration curriculums in vocational education (3 years) and high vocational education (2 years) with dual vocational education in all curriculums which are Accounting, Marketing, Business computer, Hotel Studies, Tourism Studies, Logistics and Supply Chain, Information technology, and Digital Business. In this academic year, we provide MP Program (Multilingual Program) which aims to develop students in commerce/business administration skills with English and Chinese communication skills. Particularly, we have signed MOU with faculty of business administration, Thai education institutes, foreign and international standard organizations.

Graduation Rates

Number of graduates in Academic Year 2020, 2021

- Vocational Student 523 people
- High Vocational Student 618 people

Total Student 1,141 people

Number of graduates in Academic Year 2022

- Vocational Student 226 people
- High Vocational Student 273 people

Total Student 499 people

CHAPTER 2: SCHOOL DEVELOPMENT

2.1 School Development Plan

Directions and Guidelines for The Development of The Educational Management of The College

By studying and analyzing the educational standards and the educational situation both internally and externally in the college, it is possible to identify the following directions and guidelines for the development of the educational management of the college:

VISION

Samutprakan College of Commerce and Technology builds the potential of learning technologies for academic and professional excellence, full internationalization, volunteerism of learners and meeting the needs of the labor market and the community.

MISSION

1. Aim to develop learning management and enhance the academic and professional potential of learners.

2. Organize teaching activities that promote the concept of a self-sufficient economy

and student volunteerism.

3. Encourage the participation of persons from within and outside educational institutions in the management of education in order to meet the needs of the labor market and the community.

4. Promote the development of teachers and personnel in the college fo effective teaching and learning.

5. Aim to encourage learners to acquire foreign language learning skills.

6. Build learners' behaviors to act in accordance with the roles and obligations of global citizenship.

2.2 TVET Curriculum

2019 Vocational Certificate Curriculum

1. Commerce Courses, which is including the following courses: Accounting, Marketing, Logistics, and Computer Business.

2. Tourism & Hospitality Courses, which is including the following courses: Hotel Management and Tourism Management.

2020 High Vocational Certificate Curriculum

1. Business Administration Courses, which is including the following courses : Accounting, Marketing, Digital Business Technology, and Logistics

and Supply Chain Management.

2. Tourism & Hospitality Courses, which is including the following courses : Hotel Management and Tourism Management.

3. Information Technology and Communication in Majoring Software (ICT) Courses, which is including the following courses : Information Technology and Communication Software Developer.

2.3 Partnership Between Schools and Private Sector

Business Sectors

Thai education institutes, foreign and international standard organizations

CHAPTER 3: SCHOOL DIGITAL TRANSFORMATION

3.1 Strategy and Plan for Digital Transformation

Technology has been rampant during the pandemic and until now in terms of innovating it accessible to everyone. Our school, Samutprakan College of Commerce and Technology immersed in a digital platform that makes everything easy to access from student data, teacher's records, and facilities, to parents monitoring the progress of t heir children.

School Bright is a digital platform we use to manage our school system. It provides strong support to our school as it becomes the core bone of the academic industry. Due to this platform, everything in our school management system becomes easy, gives parents peace of mind, and reduces the workload of teachers with modern technology.

Below are descriptions of each advantage of using School Bright as our partner in providing our students a better education and giving our teachers stress-free duties.

What We Offer

SAM'TECH digital E-learning

- Software System

  The software used to support teaching and learning by media lessons and worksheets that encourage student to study effectively.

- Easy to use

  Collection of Information knowledge resources and complete online activities that are easy to use for both teachers and students

- Support all platform

  Works effectively on all platforms and browsers in both Windows and Linux operating system.

- Quiz

  Import pretest-posttest, multiple-choice examinations with timing system and automatic answer checker.

- Assignment

  Assigning coursework in group or individual with alerts and notifications to students

3.2 School Best Practices and Outcomes in Academic

Year	Lists	Level	Issued by
2011	Permanently received Royal Awarded Schools for Vocational Education	National level	Ministry of Education from Her Royal Highness Princess Maha Chakri Sirindhorn and Her Royal Highness Princess Bajrakitiyabha
2018	MOE Safety School under Digital based Management	National level	Department of Labor Protection and Welfare, Ministry of Labor
2019	MOE Safety School under Digital based Management (2 consecutive years)	National level	Department of Labor Protection and Welfare, Ministry of Labor
	A low-carbon model school	Province level	Samutprakan Provincial Natural Resources and Environment Office
	Cheer force Cheerleading Championship 2019	National level	Cheer force Cheerleading Championship
2020	MOE Safety School under Digital based Management (3 consecutive years)	National level	Department of Labor Protection and Welfare, Ministry of Labor
	Educational Institutions Royal Award vocational level	National level	Ministry of Education
2021	MOE Safety School under Digital based Management (4 consecutive years)	National level	Department of Labor Protection and Welfare, Ministry of Labor
	Certificate of achievement in the performance of assessing the organization 2021	Province level	National Moral Promotion Committee
2022	MOE Safety School under Digital based Management (5 consecutive years)	National level	Department of Labor Protection and Welfare, Ministry of Labor

3.3 Challenges or Lessons of School Digital Transformation

The COVID-19 pandemic was one of last year's most significant issues. The pandemic gave us a lot of challenges in our era, especially in our educational system. Many institutions and companies were closed, and many students were affected. There have been many changes in the learning modalities of students in recent times. The changes in methods of learning have advised us to move to methods that have never been before which is online class.

The educational system faces various issues in managing learning activities and engaging the students. The students and the teachers are not ready for the sudden transition from classroom learning to online classes. Online platforms like Google Meet, Zoom, and Line are not adequate for engaging students in interactive learning. Where the colleges are focusing on hands-on learning, perhaps they have online classes. Unfortunately, most of the amenities and laboratories were not used. In terms of online classes, the main problem is that the facilitators cannot assist the learners' capability (hands-on). The learners had the opportunity to gather information through any platform in terms of theoretical knowledge.

The agony of the students in terms of education was, that they couldn't go to their face-to-face classes, and however, the Ministry of Education allows the learners to study at home either through online or modular classes. Nowadays, school offers blended learning modalities. The relationship between learners and facilitators is strong and they are always available to answer any concerns at their convenience.

To ensure the health, safety, and well-being of the teachers, learners, and other stakeholders in times of pandemic. The school has adopted different strategies and methodologies for continuous learning. In line with this, the learning modalities the school implemented different styles of teaching. However, traditional teachers are having a hard time bridging to modern technology.

In conclusion, Samutprakan Institute of Commerce and Technology has it called School Bright Application to embrace the world of blended classes for colleagues.

3.4 Experience and Recommendations for Digital Transformation

For Students

Promote students to engage in independent learning and improve the efficiency of learning. Compared with traditional learning, independent learning is to take students as the main body, through students' independent analysis, exploration, practice and other ways to achieve the learning goals, it strengthens students' exploration and study of knowledge, which is very important in modern teaching. The characteristics of the network teaching platform precisely promote the realization of students' independent learning.

Widening students' horizons and making their learning more flexible. In the past, students' knowledge learning was mostly limited to textbooks and classrooms, and the depth and width of their learning were restricted to a great extent. Most of the students can only achieve the learning purpose by listening to lectures in class and reviewing the classroom knowledge after class. After using the online teaching platform, on the one hand, students can learn and understand more relevant knowledge from the teaching materials on the online teaching platform; on the other hand, the online teaching platform can also provide web links to relevant knowledge, and the vast amount of shareable online resources can broaden students' horizons. In addition, the use of network teaching platform can make students more flexible in the choice of time, space and content of learning. In terms of time, students can study on the network teaching platform at any time and can communicate with teachers; in terms of space, students can choose to study in dormitories, libraries, information centers and other places; in terms of content, students can study selectively according to their own actual situation.

For Teachers

Realize after-class tutoring for students and enhance the teaching effect. Generally speaking, subject to a variety of constraints, college teachers in the classroom is difficult and seldom again to students for counseling, students for the classroom knowledge of the actual mastery of varying degrees of teachers also do not know the effect of teaching. The online teaching platform overcomes this disadvantage to a large extent. Teachers in the network teaching platform uploaded relevant information (such as courseware, literature, etc.) for the students, itself is a kind of counseling materials, and the use of the network teaching platform in the course assignments, online tests and other boards, can make the students further counseling. At the same time, teachers can gain insight into students' mastery of knowledge through these. The Q&A and discussion board provides a platform for teachers to help students answer questions after class. In this way, teaching effectiveness has been improved to a great extent as compared to the past.

Reducing the heavy burden of teaching and relieving work pressure. The teaching contents of different subjects are different, and some subjects involve not only complicated teaching contents but also a wide range of areas, making it difficult for teachers to explain all the knowledge in a limited time. As far as these subjects are concerned, teachers bear a heavy teaching load and face great work pressure. The auxiliary use of online teaching platforms has effectively solved this problem. Teachers do not need to explain all the knowledge points with great effort, but only need to explain the main content in place, and the rest of the content can be uploaded to the online teaching platform through PPT or other forms for students to learn independently after class. In addition, course assignments and online tests replace traditional after-class assignments, and teachers can save a lot of time in assigning and correcting assignments. This not only reduces the burden of teaching and relieves work pressure, so that teachers have more energy and time to devote to other work (such as scientific research), but also has a motivational effect on students' independent learning.

For Teaching

Integrate various teaching resources and improve the utilization rate of network resources. The network teaching platform is applied to the teaching of courses of various disciplines, and day by day, various teaching resources are getting richer and richer, and various teaching materials are getting more and more complete. Teaching materials of different disciplines, different teachers and other teaching materials can be integrated into the network teaching platform, and all kinds of problems in the learning process of students can be collected in the network teaching platform. In addition, the questionnaires on the online teaching platform can collect all kinds of feedback information and relevant suggestions from students. The integration of these resources and information allows teachers to have more experience to draw on in the future teaching process, teaching has a stronger focus, and the teaching outcome is getting more and more effective.

It provides an interactive platform for teachers and students and students and students. In the process of teaching, teachers and students usually communicate in the classroom, and there are few opportunities to contact each other after class, so the communication and exchange are naturally less. The application of online teaching platform not only makes teachers and students have more interaction, but also increases the communication between students and students. Students and teachers can communicate and discuss all kinds of problems through the teaching mailbox, and they can also initiate the discussion of related problems in the Q&A section. Similarly, students can learn and communicate with each other in the same way. In this way, more communication between teachers and students, and students and students, not only makes the relationship between them more harmonious, but also makes the learning atmosphere of the class stronger, which is of positive significance for teaching as well as for the development of students themselves.

TVET Development and Institutional Profile

CHONBURI TECHNOLOGICAL COLLEGE, THAILAND

Chapter 1: INTRODUCTION

COUNTRY PROFILE

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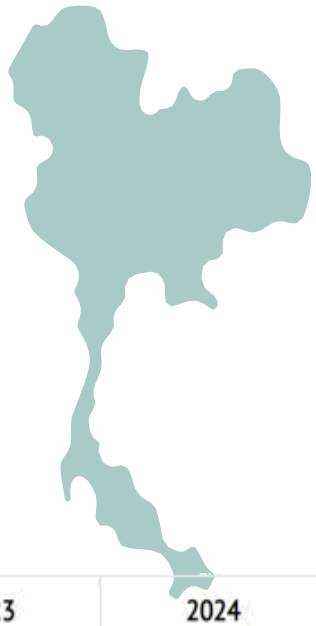

Projection for Growth and Inflation

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Meanwhile, government spending was weak, down for the fifth straight quarter (-1.2% vs. -0.5%). On the production side, the non-agricultural sector rebounded (1.7% vs. -1.3%), buoyed by rising output in both industrials and services. In addition, activity in agriculture accelerated (4.6% vs. 3.7%). The economy last year grew 2.6%, above a 1.5% growth rate in 2021, lifted by firm domestic demand. Thailand last year beat its tourism target with 11.15 million foreign visitors, compared to pre-pandemic 2019 with a record of almost 40 million. This year, the economy is projected to grow between 2.7 and 3.7%. In Thailand, employed persons are individuals with a minimum age requirement who work during a certain time for a business.

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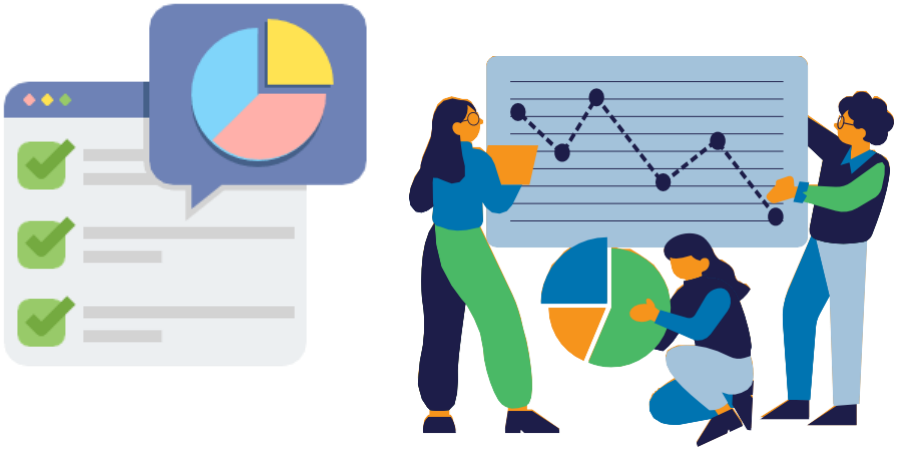

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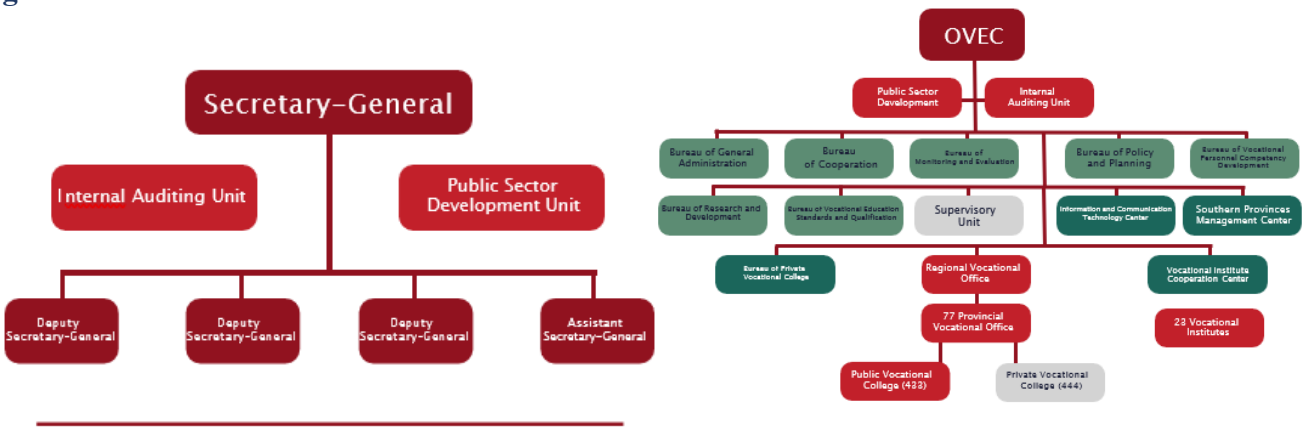
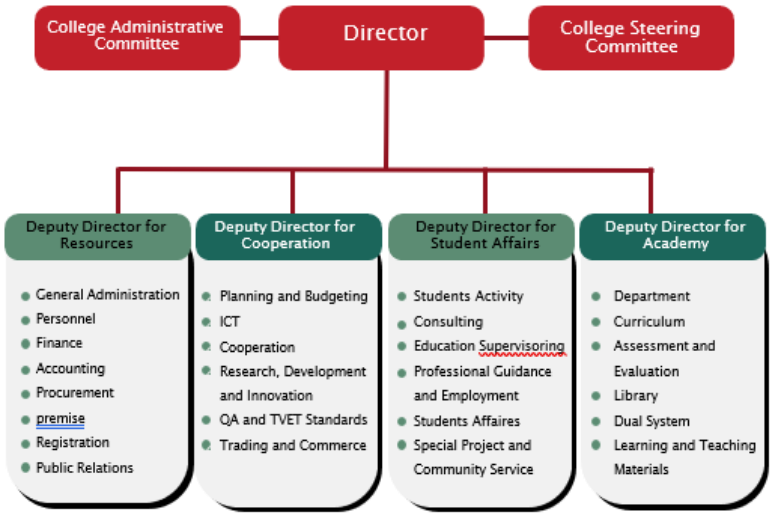
Lastly, minimum wages in Thailand remained unchanged at 353 THB/Day (214.985 USD/Month) in 2023. The maximum rate of minimum wage for employees was 336 THB/day, and the minimum was 12 THB/Day.

EDUCATION PROFILE

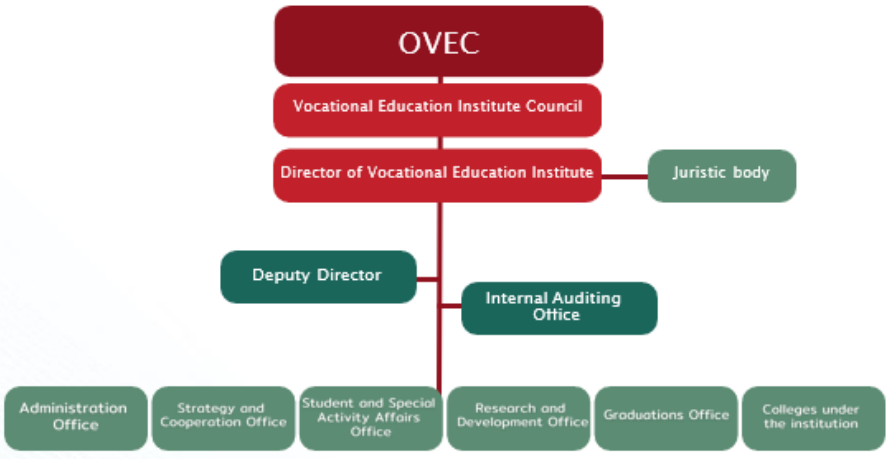
Organization Chart



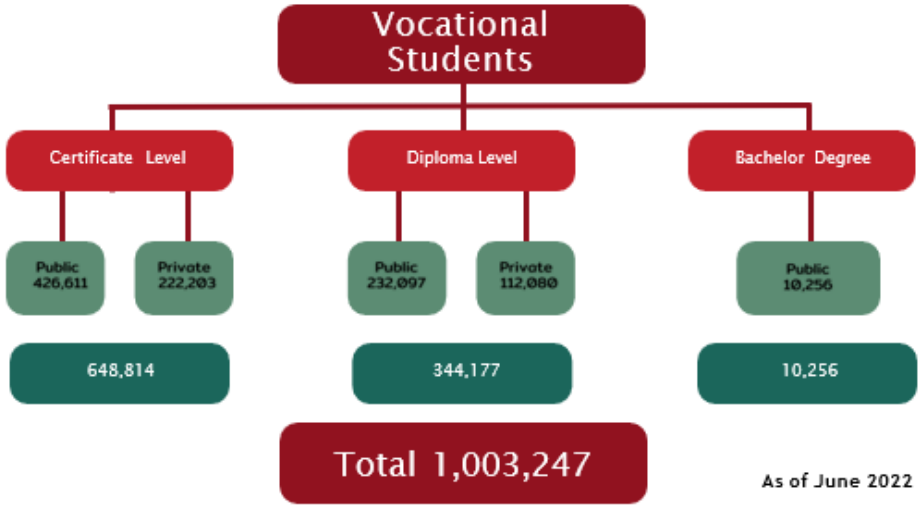
College Organization Chart



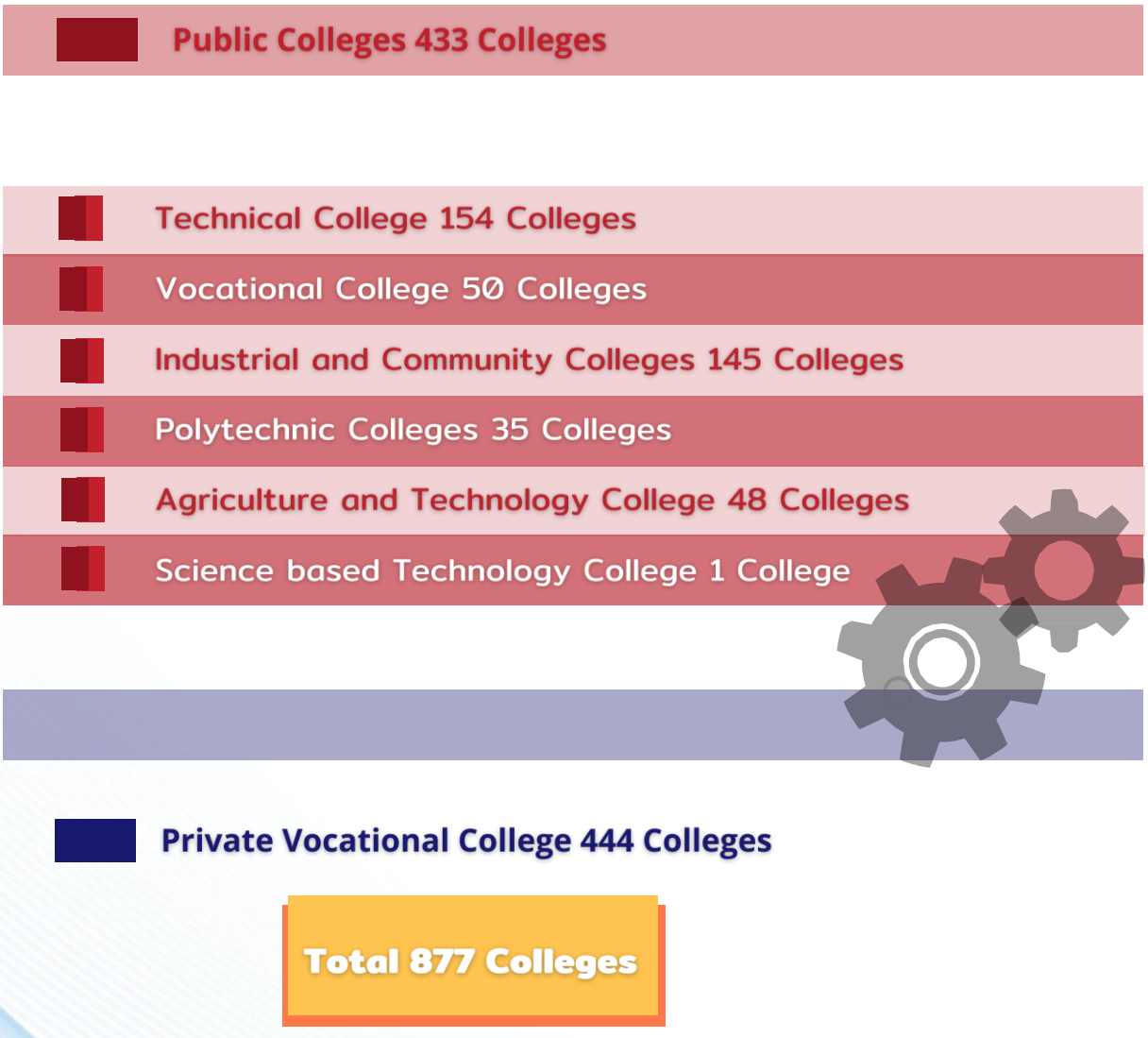
Vocational Education Institute Organization Chart



Number of Students



Colleges under the supervision of OVEC



Programs of Education

Certificate in Vocational Education (3 yrs.)

1) Agriculture
2) Home Economy
3) ICT
4) Fishery
5) Commerce and Business Administration
6) Arts and Craft
7) Industry
8) Hotel and Tourism Industry
9) Entertainment and Music Industry
10) Garment Industry

Diploma in Vocational Education (2 yrs.)

1) Agriculture
2) Home Economy
3) ICT
4) Fishery
5) Commerce and Business Administration
6) Arts and Craft
7) Industry
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Bachelor in Technology or Practical Engineer (2 yrs.)

1) Agriculture
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7) Industry
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Modernizing TVET for Thailand

Increasing TVET Learners

Excellent TVET Model (Excellent Center)

Flexibility in TVET for Life Long Learning

- Life-long Learning TVET For educational and professional Qualification
- TVET Standard and Qualification for Regional and International Recognition
- Mobility of TVET Learners and Manpower

Future

Adjustment and Amendment of Rules and Regulation in Curriculum • Learning • Assessment

- Credit Bank System
- Linkages of General Education and TVET
- Vocational Classroom in school
- Pre Vocational Courses
- Co-Certificate

- PPP
- School • Company Curriculum
- Dual System
- Training Center
- Work Integrated Learning
- Curriculum Development and Professional Standards

Past

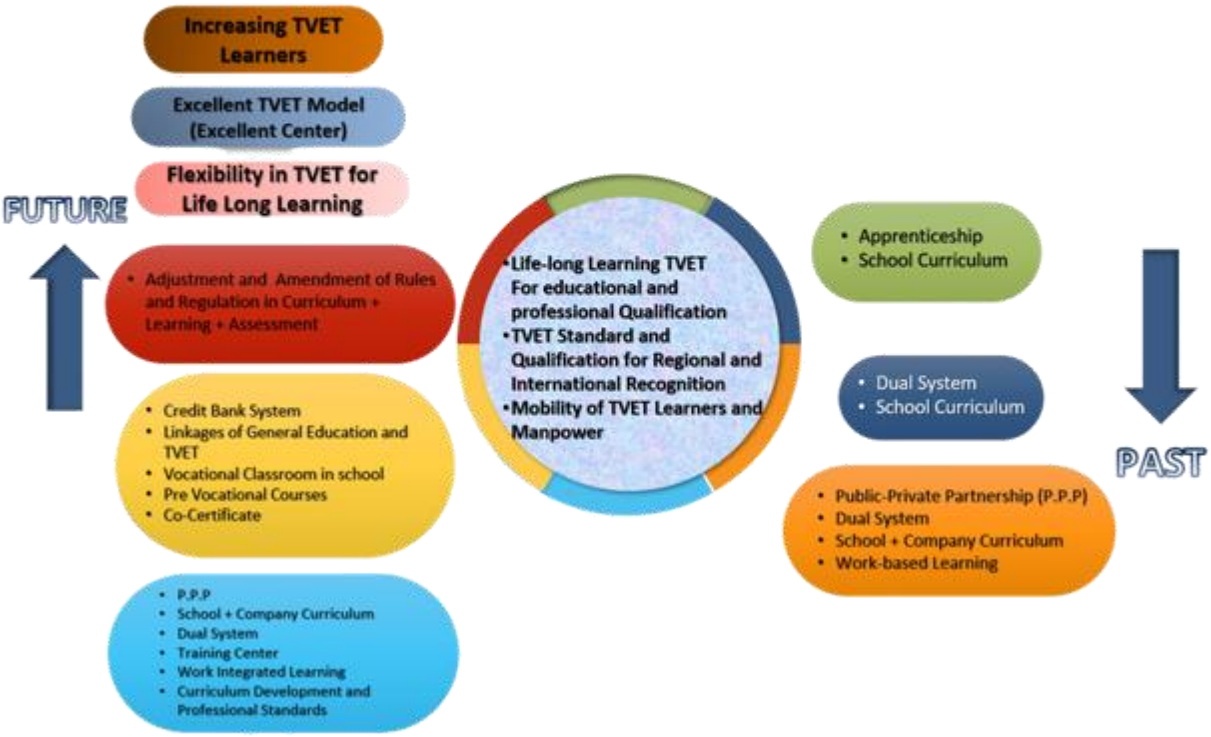
- Apprenticeship
- School Curriculum

- Dual System
- School Curriculum

- Public-Private Partnership (PPP)
- Dual System

- School • Company Curriculum
- Work-based Learning

Modernizing TVET for Thailand



SCHOOL PROFILE

38 years ABOUT US

TECHNOCHON in 1968

Dr. Uraiwan Tanpraphat

The founder, establish Prabhassorn Vidhataya School (PBS.), The first private school to admit students in Chonburi province. PBS provided kindergarten; primary and secondary programs which have been offered for the past 43 years. From the experience dedication and farsightedness of the board of committee who realized the future human development's of the eastern seaboard industrial zone.

Therefore, in 1983

Chonburi Technological College (CTC.) was founded as an affiliation of Prabhasorn Vidhataya School.

The Chonburi Technological College

has been exclusively responsible for vocational education in Business Administration. Tourism and Industrial Trade sectors both in the Thai Curriculum and Bilingual Program.

It has provided a vocational study from vocational certificate level to high vocationalcertificate level in order to serve regular full time and part time students as well as a specialprogram for students who have already taken up a career.

The Pride of Journey

Royal Awards Honored

3 Royal Awards were received from Her Highness Princess Maha Chakri Sirindhorn 2010 as well as 2014. This demonstrates that the college has been recognized for its outstanding level of Education and 10 years of maintaining the best education for performance, The College has achieved permanent academic outstanding honors and recognition status.

The Evaluation of Academy for Royal Award School, Vocational Degree

In 2006

In 2010

In 2014

The College has achieved permanent academic outstanding honors and recognition status

Award List: One School One Innovation

One School One Innovation is innovation that has been regarded as a model of quality nationally. The recongration shows that it has academic value and is beneficial to educational and professional development by the Secretariat of the Teachers Council of Thailand for outstanding innovation in one of the five areas :

- Learning management
- Media and technology for learning
- Administration and management of educational institutions
- Promotion and development of learners to their full potential; and
- Measurement and Assessment

Academic Year 2019

Curriculum development and teaching at the level of continuing basic education linking vocational education to support the Eastern Special Development Zone

Academic Year 2018

Form of development of vocational courses for dual-qualification on the rail transportation system for the Eastern Special Development Zone, Chonburi Province

Academic Year 2017

Vocational education management model for the Eastern Economic Corridor, Chonburi Province: Chonburi College of Technology

Academic Year 2016

CTC MODAL, Educational Management Model for Employment Promotion

Excellence in International Vocational Education

Mr. Wongchayut Kongthanachirapanya, Foreign Language Professional Diploma student received an award of "Excellence in International Vocational Education" in 2020

Ms.Supparat Saesee, International Trading Diploma student received an award of "Excellence in International Vocational Education" in 2019

The 4th Academic Year 2021 from Somdej Phra Kanitthathirat Chao Krom Somdet Phra Thep Rattana Rajasuda Siam Borom Rajakumari

International Awards

3rd Runner-Up Prize and Popular Vote Award:: Chinese Speech Contest and International Chinese Cultural Show.. Organized by East China Normal University, Ronghuai Group:: Zhuji RongHuai School, and Super Chinese

International Gold Medal Award Competition:: Chinese Speech Contest at Vocational Level from the Office of Vocational Education Commission.. In collaboration with the Association of Private Technological and Vocational Colleges of Thailand under the royal patronage of Krom Somdet Phra Thep Rattana Rajasuda Siam Borom Rajakumari

1st Runner-up Prize:: The 4th Global Chinese Speech Contest 2021 Honorable **Mention ::** Chinese Speech and Singing Contest, Hua Li Cup 2021

Chapter 2: SCHOOL DEVELOPMENT

Systematic competency-based curriculum

Analysis of professional groups in each field's relevant occupational ability. Next, we took a crucial performance. Assigned teachers for each subject so that teachers can improve course descriptions to be current and consistent with changes by analyzing competency, and assigned modules to tasks (jobs) for further learning management plans. Each subject was first set as a module, then it was synthesized and grouped to lead the preparation of study plans. The College creates instructional management in four different approaches, including:

- Online learning Hybrid learning.
- Learning in the establishment
- Learning in higher education institutions and quality organizations, as well as evaluating the quality of students by developing professional standards at the school level in accordance with the National Qualifications Framework (NQF), are all relevant examples of higher education.

Additionally, teachers have been trained to manage the acquisition of New skills as well as Upskilling and reskilling. So that they are prepared to manage teaching and evaluation in accordance with the subjects for which they are responsible.

SCHOOL DEVELOPMENT PLAN

Implementation of Further Original Affiliation Policies into Practice

"**Organization of vocational classrooms alongside institutions of basic education.**" The college has established a network of partnerships with institutions of elementary education




Inbound and Out Bound Collaboration

Collaboration between educational institutions to establish a virtual classroom for vocationaltraining, suchas GSCClassroom in partnership with Global Service Center Public Company Limited, True Classroom in partnership with True Wire and Wireless, and other classrooms.

Inbound and Out Bound Collaboration

Enhancing students' knowledge of both Chinese and English as part of the project promoting the assessment of students' proficiency in Chinese (HSK) and English as well as the eight branches of the National Skill Standards.

Through collaboration with educational institutions abroad in a variety of ways, in the form of Online, Onsite, short-term, and long-term, including the Dual Degree Program (graduated in Thailand and abroad at the same time).



TVET CURRICULUM

Full-Time Program

Vocational Training Program

Collaborates with more than 300 establishments to gain professional experience before graduating, considered to be significant for the preparation of vocational learners to be ready for work immediately after graduation. For the Vocational Certificate, students must complete a period of 4 months of internship, and for the High Vocational Certificate, students must complete a period of 6 months of internship.

"Bilateral" Curriculum

Teaching and learning management that focuses on offering students with additional opportunity to practice in establishments than a regular program. At this point, the college collaborates with multiple of well-known establishments.

Short courses with personnel in the workplace

Personnel development establishments in various professional fields collaborate with the institution to enhance knowledge and skills in a variety of fields. For example, Wire and Wireless Co., Ltd. (True affiliates) sends employees to be training in the building electrician course level 1. More than

100 companies promote the development of English skills through college training and the TOEIC standard test to raise the international standards of personnel.

TVET CURRICULUM

TVET Curriculum

- Open Branches
- Vocational Certificate Levels High Vocational Certificate Levels

Branch	Regular Program		Bilateral Program		Part–Time Course		Bilingual Program	
	Voc. Cert.	High Voc. Cert.	Voc. Cert.	High Voc. Cert.	Voc. Cert.	High Voc. Cert.	Voc. Cert.	High Voc. Cert.
Commerce/Business Administration								
Accounting	✓	✓					✓	
Marketing	✓	✓					✓	
Business Computer	✓				✓	✓	✓	
Hospital Business	✓	✓						
Retail Business/Retail Business Management			✓	✓				
Logistics and Supply Chain Management		✓		✓				✓
Foreign Language (Major English)							✓	✓
Foreign Language (Major Chinese)							✓	✓
International Trade Business								✓
Digital Business Technology						✓		
Management						✓		
Industry								
Mechanic/Mechanical Technician	✓	✓				✓		
Power Electrician	✓	✓		✓		✓		
Mechatronics and Robotics	✓	✓		✓				
Automotive Service Technology		✓		✓				
Industrial Techniques						✓		
Electric Vehicle	✓	✓						
Tourism Industry								
Tourism and Hospitality	✓	✓					✓	
Hotel and Hospitality	✓	✓						
Organization of Conferences and Exhibitions		✓						
Information and Communication Technology								
Information Technology		✓						

PARTNERSHIP BETWEEN SCHOOLS AND PRIVATE SECTOR

Driven Workforce to Meet the Future Demand in the EEC Area

Building a network of establishments is the most important aspect of vocational education and the arrangement of the curriculum to be consistent with the needs of the workforce in the area that must be adapted to meet demand immediately.

It is the heart of working at Technochon.

100% | internship system with leading enterprises

There are more than 300 establishments in the EEC area that are networked with students to gain experiences before graduating, such companies are:

- Amata Spring Country Club
- Pattana Golf Club and Resort Company
- The Leela Resort & Spa Pattaya
- Mazda Chonburi
- Chonburi Isuzu Sales Co., Ltd.
- Sumeth Garage Company Limited
- TBKK (Thailand) Co., Ltd.
- Mitsu Chonburi Co., Ltd.
- LLIT (Thailand) Co., Ltd.
- PRS Sivanat Company Limited
- Castello Di Bellagio Pattaya Company
- STMS Company Limited

  (Building Management Company Limited)

The Center of Stimulation Training Global Service Center Public Company Limited, a leading company in the business sector, Let's join hands to develop vocational learners as professional owners. Global Service Center Public Company Limited has more than 12 years of tele-sales business information service center experience. There are customers from leading companies in various groups in the country, For example, Online Shop groups such as Watsons, Wongnai and True shopping.

Communication Network groups such as Ais, Dtac. Banking and Finance groups, such as Kasikorn Bank and Bangkok Bank. Government groups such as NHSO, Royal Thai Police, etc.

By establishing a virtual vocational training classroom,

The Center of Stimulation Training has raised the model of real work. Both office workers and supervisors, employees who actually work and actually come to work by giving students a chance to work in all fields. They focus on practicing communication skills with customers according to the problems received. Immediate troubleshooting and the use of technology equipment. All of these are basic working skills in workplace.

Cooperation with organizations

Faculty of Business Administration

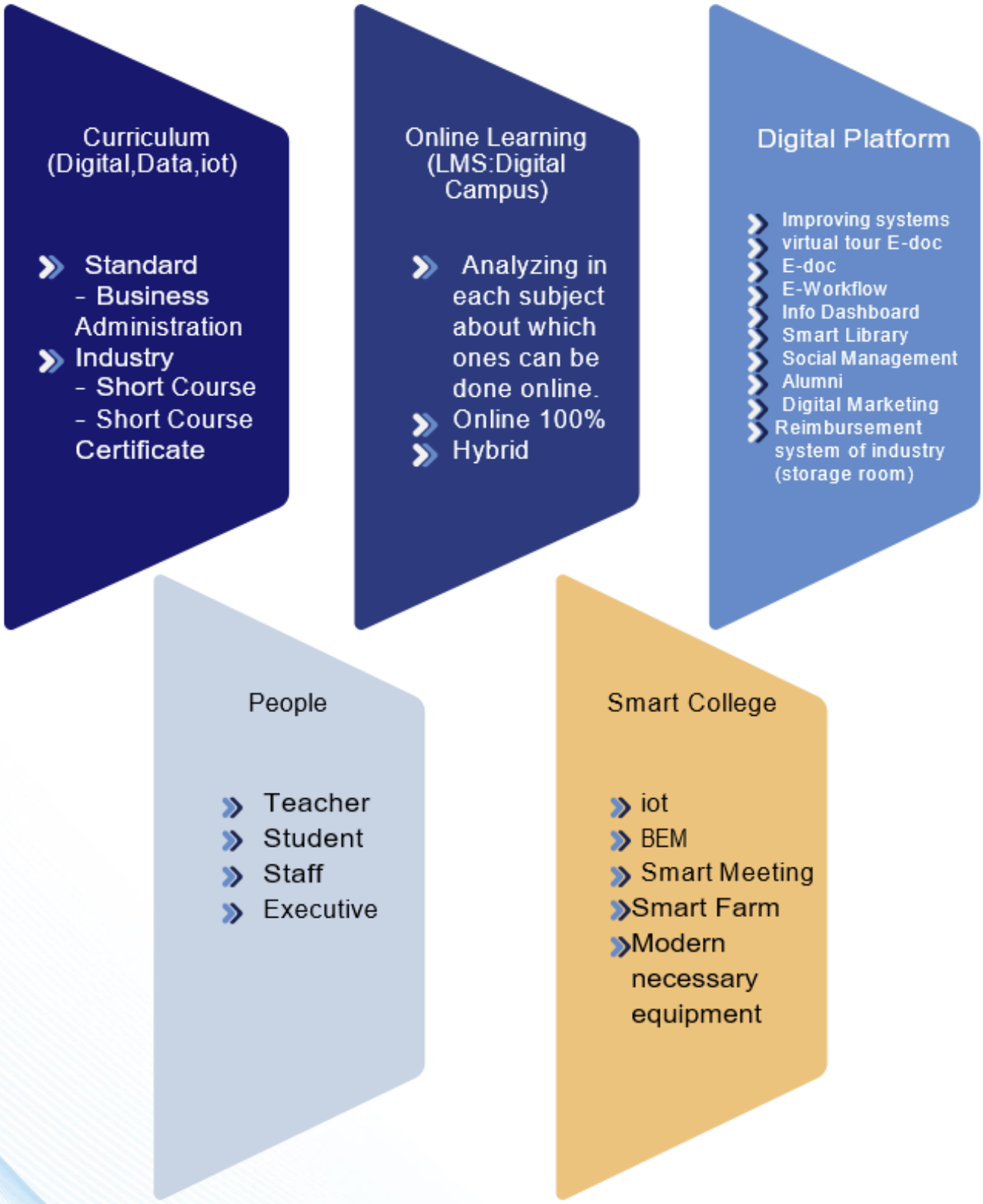
Faculty of Industrial Technicians

Thai educational institutes, foreign and international standard organizations

Chapter 3: SCHOOL DIGITAL TRANSFORMATION

STRATEGY AND PLAN FOR DIGITAL TRANSFORMATION

Digital College/Campus



SCHOOL BEST PRACTICES AND OUTCOMES

The World Assessment Test Center

One of the college's main policies is to develop the potential of learners to enter the workplace according to international standards. Therefore, it is necessary to adjust the teaching and learning curriculum to be in line with international standards in every aspect. This will provide graduates with more career opportunities and create more value. In particular, the needs of enterprises in the EEC area who require vocational learners with individual skills and ability to communicate in a foreign language is our main goal.

In addition, TECHNO CHON is also a center for personnel development in various enterprises, both in terms of developing foreign language skills and testing international standards in various fields.

A new step in the development of international language level assessment

BRITISH COUNCIL

ENGLISH SCORE
(The global test and certificate of English for employment)

Mobile test and certificate of English for employment is a new stepping stone for techno-learners and active outsiders. They are able to take international language tests in a convenient and cost-effective mobile test format, Thus, in 2022, the college has adopted the English Score Assess the development of English language skills each year in order to see the development of learners in all fields. Upon graduation they will receive a certificate for further study or work at the next level.

ETS TOEIC

TOEIC
(Test of English for international Communication)

This test is an International standardized test of English Language Proficiency for non-native speakers. Students undergo TOEIC tutorials starting from the second year until they finally take the actual test in their third year, 2nd semester. They undergo rigid TOEIC reviews and drills before actually being tested.

CEFR
COMMON EUROPEAN FRAMEWORK

CEFR
(Common European Framework of Reference for Languages)

This test is administered to the incoming students to determine their levels in English so that they can be placed in classes that are suitable to their level. Through this, we can know what we need to work on to improve their skills.

The World Assessment Test Center

One of the college's main policies is to develop the potential of learners to enter the workplace according to international standards. Therefore, it is necessary to adjust the teaching and learning curriculum to be in line with international standards in every aspect. This will provide graduates ith more career opportunities and create more value. In particular, the needs of enterprises in the EEC area who require vocational learners with individual skills and ability to communicate in a foreign language is our main goal.

In addition, TECHNO CHON is also a center for personnel development in various enterprises, both in terms of developing foreign language skills and testing international standards in various fields.

HSK
(Hanyu Shuiping Kaoshi)

This test is a Chinese Proficiency test used in China. It is a standardized test of standard Chinese (a type of Mandarin Chinese) language proficiency of China for non-native speakers. Our students are given Chinese lessons by Chinese native-speakers to prepare them for this test beginning from their second year until they are ready to take the exam.

Also, we are an official partner and Testing Center for HSK in Thailand.

Regular Course

Vocational students

Vocational students 2 Both technicians and administrators must have a HSK level 1 or higher, otherwise they will not be able to do an internship.

High Vocational students

High Vocational 1 students Must have an HSK level 1 or higher, otherwise the internship will not be granted.

Bilingual Course

Vocational students

- Vocational Certificate 2 students must have a score of HSK level 2 or higher, otherwise they will not get an internship.

High Vocational students

- High Vocational Certificate 1 students must have a score of HSK level 2 or higher, otherwise they will not get an internship.

Bilingual Program in Chinese Language (BP.HCN)

Students with Chinese language background

- Must have a passing result of HSK level 5, otherwise the qualification will not be obtained.

Students without Chinese language background

- Must have a passing result of HSK level 5, otherwise the qualification will not be obtained.

The First Vocational Bilingual Program

The First Private Vocational Institute in EEC with English-Chinese Global Standard Test

- **Digital Learning Platform (iPAD)**
  Using iPAD as an educational device for being Digital College.
- **English Communication Focused**
  Emphasizing on English Communication based, Train them systematic with creative ways for outstanding performance.
- **Trilingual: English Chinese and Japanese (additional)**
  Adding Japanese language as a third language both grammatical and Cultural.
- **Experienced Instructor Team**
  Hiring professional teachers in related field and train Reskill & UpSkill for exceptional performance.
- **The World Assessment Test Center**
  Authorizing the Center of Language Assessment Test (TOEIC/HSK/CEFR/IELTS/English Scores).

- **BP Study Abroad**
  Providing short term and long term Overseas study to widen perspectives.
- **BP Global Partnership**
  Linking education alliances to widen opportunities for better future such as China, India, Australia, Malaysia and Japan.
- **School Excursions or Field Trip**
  Conducting Outside classroom Learning, plus.
- **Co-curricular Activities**
  Arranging various extracurricular activities to inspire career path.
- **E-learning Program**
  Hosting online study program to enhance language skills and unlimited learning.

The First Vocational Bilingual Program

How is BP different?

from other Vocational College

- BP, even if you are not good at languages, you can study!
- BP, is more than just a systematic study!
- BP, continues to expand internationally in both studying and working!

BP HIGHLIGHT

Bilingual Program : English-Chinese

- Conduct classroom as a playground
- Create creative and enthusiastic classroom
- Integrate new innovation in coursework

Hybrid Learning (iPAD)

- Use Digital Learning Platform
- Transform to Digital College
- Design Educational Contents

English Camp

- Boost Activity Based Learning
- Reinforce Co-curricular Activities
- Leadership Skill

Inbound & Outbound Field Trip

- Conduct Experiential Learning
- Expand Worldview
- Build up Confidence

Guest Speaker

- Motivate students and widen new perspectives
- Share Experiences by Specialist
- Career Workshop

International Teachers & Thai Inter Team

- Recruit experienced and skillful personnel
- Train Re skill & Up skill for serving best quality
- Provide Personalized Learning Feedback

The Center of Standardized Language Proficiency Test

- Host the Center of TOEIC & HSK Test in Chonburi
- Facilitate the workforce in EEC
- Provide TOEIC Tutoring for Intensive Course

Congratulations Day

- Plan for further education both domestic and overseas
- Grasp Global Educational Alliances
- Access Workplace Collaboration in EEC

iPad Hybrid Learning

Teaching Development Project

The first digital format in Thailand

BP iPad Hybrid Learning Program

Free of Charge

Turning an ordinary textbook into a full E-Textbook.

- There is no need to carry a heavy backpack anymore.
- Convenient in searching that is used for studying
- No need printer's ink. No need papers.

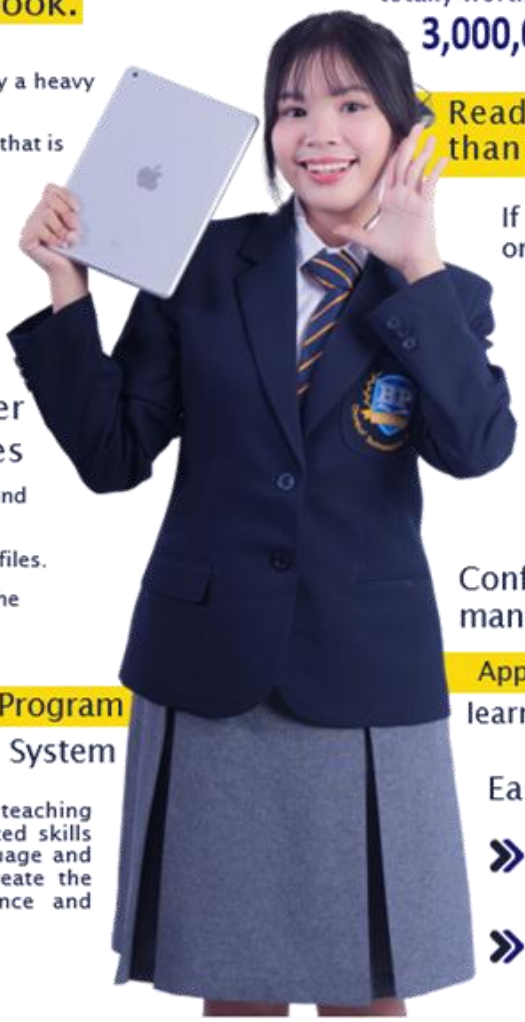
From notebook paper to Electronic Notes

- There is no need to carry around colorful highlights.
- Easy and convenient editing files.
- Recording teaching audio in the same time as taking notes.

Application Module Program Learning System

"A new Era of teaching which integrated skills between language and working to create the work of science and art together"

"One on One"
1 person per 1 device.
After students graduated, we give them away.
There is no need to return which totally worth more than **3,000,000** baht.



Ready to learn through more than 200,000 Applications.

If you couldn't catch up on your teacher's notes.

Bring the iPad up and take the pictures.

Take pictures of the lesson slides instead of taking notes. There is no need to be worry about not being able to make a quick note after the teacher. You can also add some notes on to the pictures.

Confidence in the management of the Apple School Management learning system.

Easy to forward to others

- Use AirDrop to share short notes with your friends right away. Never miss any lesson slides.
- There is no need to use the copy machine anymore.

Challenges Or Lessons Of School Digital Transformation

Lack of expertise

Enhancing students' knowledge of both Chinese and English as part of the project promoting the assessment of students' proficiency in Chinese (HSK) and English as well as the eight branches of the National Skill Standards.

By the way, we will start out by looking for outsourcing, specialized hiring experience, and partner industries to enable us share some digital knowledge.

CHALLENGES OR LESSONS OF SCHOOL DIGITAL TRANSFORMATION

Budget constraints

The significant expenses associated with digital transformation present another difficulty. since it is a substantial investment. The college must carefully prepare its budget and develop a plan of action to deal with it.

For instance, six years ago, we set a goal to use an iPad to convert paper textbooks to digital textbooks, even though the cost was expensive for the family's budget. Therefore, the college must look for financing to purchase it, while also attempting to demonstrate how much less expensive the paperless project is.

Motivate, inspire, and transform

Now that the human factor's significance has been pointed out. "Mind Set," the secret to academic success in the digital age, calls for beginning the reform process with people rather than technology. Colleges need to work on shifting cultural perspectives.

EXPERIENCES AND RECOMMENDATIONS FOR DIGITAL TRANSFORMATION

Think Different Timeline

"**Think different**" has been one of the most recognized marketing slogans in 21st century marketing, created by none other than Apple. At the Bilingual Program, Chonburi Technological College, we believe that being different also means being the first, in areas that put the benefits of our students first. This belief is what sparked our collaboration with SPVI, who provided us with not only the iPads for the students, but also the learning opportunity that comes with its technology, such as student-centric activity ideas, and teacher training on how to design and execute the most impactful learning experience from this device. The collaboration between SPVI and the Bilingual Program of Chonburi Technological College has come a long way, and here is the timeline of how it all began;

The First Bilingual Vocational College in Thailand has been established at Chonburi Technological College

2019

The trend of borderless learning and more individualized learning design which brings out the unique potential of each and every student is on the rise. Along with the trend that teachers will become more of a knowledge facilitator, rather than a knowledge provider.

2020

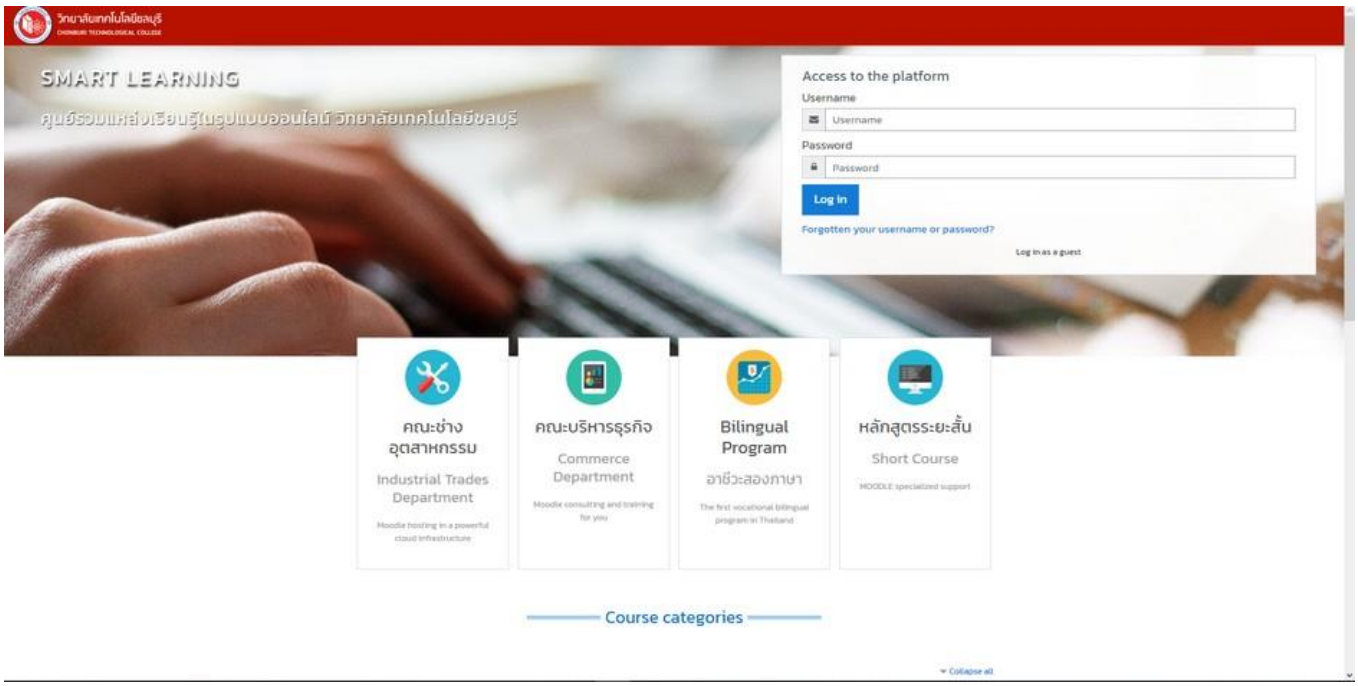
The new learning momentum which changes how we believe learning should be, had been accelerated by COVID-19 pandemic, which had forced both students and teachers to adapt, with technological literacy at the heart of this adaptation.

2022

Being aware of the possibilities this could mean for the students today, and the workforce they will be tomorrow, SPVI and the Bilingual Program of Chonburi Technological College had formed a partnership which enabled the students free access to their own iPad.

Our LMS Platform

We start to use this platform during the COVID situation in 2020, so at that time it will be easy to adapt when we are studying at home.



Main Function of LMS

Video Streaming format for course content.

The source of the e-textbook in all subjects for the students

Pre-learning test, During-Learning test, After-Learning test, Knowledge Test, Assessment Various statistical analysis reports collect student information in real time. Maintain a record of students' academic achievement and submit the test results.

TVET Development and Institutional Profile
THAI – TECH GROUP, THAILAND

Prepared by *Ms.Puttachard, Advisor of Thai Tech Group, Thailand*

Chapter 1.Introduction

Country Profile

Thailand is located in the heart of mainland Southeast Asia, Thailand is a country of mountains, hills, plains and along the coastline , Gulf of Thailand and the Andaman Sea, not include the costline of some 400 islands Most of them in the Andaman Sea. Its continental co-ordinates are latitudes 20° 28' N and 5° 36' S and longitudes 105° 38' E and 97° 22' W.To the north Thailand borders the Lao PDR and Myanmar; to the east the Lao PDR and Cambodia; to the south Malaysia; and to the west Myanmar. The country's land-based maximum north-south extent is approximately 1,600 km, and its maximum east-west extent measures approximately 870 km. The land area amounts to approximately 514,000 sq. km. The maritime economic zones cover 72,200 sq. km. in the Andaman Sea and 140,000 sq. km. in the Gulf of Thailand, totaling 212,200 sq. km.

Thailand's climate ranges from the sub-tropical to the tropical zones, with three distinct seasons: a hot and dry season from February to May, a monsoon season from June to October, and a cooler, dry season from November to January. Average seasonal temperatures vary between a low of 23.0 °C and a high of 32.2 °C.

Thai is the national and official language. It is a tonal language with different dialects. Its script was created in 1283 by King Ramkhamhaeng the Great of the Sukhothai Kingdom. Other languages spoken include Chinese and Malay. English, a compulsory subject of secondary school curricula, is widely spoken and understood throughout the country. Thailand is a multi-ethnic nation with a population of 64.1 million.

Thailand 's National Strategy proposes the Development of high quality infrastructure to connect Thailand to the world, solidifying its position as an economic hub of ASEAN and a major connecting point in Asia.The GDP is USD 501.79 billion, Upper Middle Income (World Income Status). The minimum wages are 300- 400 bath /day. The employment rate, after graduation 90% of graduation student can find a job, however the turning over is quite high .

Education Profile

Education in Thailand is provided mainly by the Thai government through the Ministry of Education from pre-school to senior high school. A free basic education of fifteen years is guaranteed by the Thai constitution.Education in Thailand mandates nine years of "basic education" (six years of elementary school and three years of lower secondary school). Education at public schools is free until grade 9. The government provides, in addition, three years of free pre-school and three years of free upper-secondary education. Basic education in Thailand is free .Neither is mandatory. Children are enrolled in elementary school from the age of six and attend for six years, Prathom 1 to Prathom 6. Elementary school classes is at least 7 hours per day, with a maximum learning time of 1,000 hours per year. Secondary education starts at age 12.

Homeschooling is legal in Thailand. Thailand's constitution and education law explicitly recognize alternative education and considers the family to be an educational institution. A homeschool law passed in 2004, Ministerial Regulation No. 3 on the right to basic education by the family, governs homeschooling. Families must submit an application to homeschool and students are assessed annually. The Human Rights Measurement Initiative finds that Thailand fulfills 86.7% of what they should be able to fulfill for the right to education, based on their level of income.

Ninety-nine percent of students complete primary education. Only 85 percent complete lower secondary About 75 percent move on to upper secondary (ages 16–18). For every 100 students in primary schools, 85.6 students will continue studies in M1, 79.6 students will continue until M3, and only 54.8 will go on to M6 or occupational schools.

There are academic upper secondary schools, vocational upper secondary schools, and comprehensive schools offering academic and vocational tracks. Students who choose the academic stream usually intend to enter a university. Vocational schools offer programs that prepare students for employment or further studies.

Admission to an upper secondary school is through an entrance exam. On the completion of each level, students need to pass the NET (National Educational Test) to graduate. Children are required to attend six years of elementary school and at least the first three years of high school. Those who graduate from the sixth year of high school are candidates for two tests: O-NET (Ordinary National Educational Test) and A-NET (Advanced National Educational Test).

Public schools are administered by the government. The private sector includes schools run for profit and fee-paying non-profit schools which are often run by charitable organizations especially by Catholic diocesan and religious orders that operate over 143 large elementary/secondary schools throughout the country Village and sub-district schools usually provide pre-school kindergarten and elementary classes, while in the district towns, schools will serve their areas with comprehensive schools with all the classes from kindergarten to age 15 and separate secondary schools for ages 13 through 18.

The Office of the Vocational Education Commission , Ministry of Education is responsible for Public and Private Vocational Education. There are more than 800 colleges across the country. The area of Vocational Education provided by the colleges are Trade and Industry, Information Engineering , Information Business Technology, Business Administration, Food and Nutrition, Tourism Industry and Hospitality, Marine Maritime, Agriculture and Technology ect.

<table>
<tr><th>Typical age</th><th colspan="2">Stage</th><th colspan="2">Level/Grade</th><th>Notes</th></tr>
<tr><td>3</td><td rowspan="16">Basic education</td><td rowspan="3">Early childhood (Kindergarten)</td><td colspan="2" rowspan="3">Variable
(Typically Anuban 1–3)</td><td rowspan="3"></td></tr>
<tr><td>4</td></tr>
<tr><td>5</td></tr>
<tr><td>6</td><td rowspan="6">Elementary</td><td colspan="2">Prathom 1</td><td rowspan="14"></td></tr>
<tr><td>7</td><td colspan="2">Prathom 2</td></tr>
<tr><td>8</td><td colspan="2">Prathom 3</td></tr>
<tr><td>9</td><td colspan="2">Prathom 4</td></tr>
<tr><td>10</td><td colspan="2">Prathom 5</td></tr>
<tr><td>11</td><td colspan="2">Prathom 6</td></tr>
<tr><td>12</td><td rowspan="3">Lower-secondary</td><td colspan="2">Matthayom 1</td></tr>
<tr><td>13</td><td colspan="2">Matthayom 2</td></tr>
<tr><td>14</td><td colspan="2">Matthayom 3</td></tr>
<tr><td rowspan="2"></td><td rowspan="3">Upper-secondary</td><td>General</td><td>Vocational</td></tr>
<tr><td>15</td><td>Matthayom 4</td><td rowspan="2">Vocational Certificate (3 years)</td></tr>
<tr><td>16</td><td>Matthayom 5</td></tr>
</table>

Typical age	Stage		Level/Grade	Notes
17	University	Higher Vocational Education 2 yrs.	Diploma of Vocational Education	Notes
18				Notes
19		Degree Level for TVET/	Dual Vocational Education System	Notes
20				Notes

School Profile

Thai – Tech Group is a group private schools and colleges under the supervision of the Office of the Vocational Education Commission, Ministry of Education , Thailand. The
Vocational Colleges consist of Thaksina Business Technological College and Thai Ayothaya Business Administration Technological College

Thaksina Business Technological College- TSN is one of the largest vocational college in Bangkok and was established since 1967. Founded with the aspiration of Dr. Suk Pookayaphon, He aimed to see Thailand to have students who will be professionally developed in order to become a key human resource of the country.

Thai Ayothaya Business Administration Technological College- TAB is a Private Vocational college, located at 91/1 Rojana Road, Thanu Subdistrict, Uthai District, Phra Nakhon Si Ayutthaya Province 13000 under the supervision of the Office of the Vocational Education Commission Ministry of Education. The college was found since 1996 and was approved to open in May 1st, 1997. The license number was 10/2540 dated August 5, 1997. The college provide a 3 years Certificate of Vocational Education and 2 years Diploma of Vocational Education which equivalent to university level. Course offered by the college are Business Administration (Accounting, Marketing, Business Computer), Tourism Industry including Hospitality, Digital Business Technology and Computer Game Annimation. Currently,

Chapter 2 School Development

School Development Plan

TSN is one of the colleges under Thai-Tech Group, Quality and Integrity have always been our main focus. In order to create learners who are competent in both common and professional skills as well as having discipline and responsibility for themselves and in the society,. Under the international cooperation, the colleges work closely with many TVET institutes from ASEAN countries, such as China Anhui Business College and Yangzhou Polytechnic College), Indonesia, Philippines, Laos, Vietnam and Myanmar, which aims to provide the opportunities for Thai students to learn other languages and cultures, to improve skills and to promote friendship among them.

TAB,is also one of the college under Thai – Tech Group, the college aims to promote an international cooperation, then the college has many close relationship with institution from abroad such as China (Anhui Business College and Yangzhou Polytechnic College) , Indonesia, Finland and other countries under SEAMEO School Network. The college also got the Royal Student Awards for 3 Years, the Award was selected by the Office of the Vocational Education Commission

TVET Curriculum

The TSN and TAB provide vocational education at both 3 years Certificate level and 2 years Diploma Level in Commerce and Business Administration and offers a wide range of courses for students to choose from as follows:, Accounting, Marketing, Information Technology, Tourism and Hospitality and Logistics, offering certificate and diploma of vocational education. In addition, there are special short programs in those areas, such as Hair cutting, Massage and Cooking. There are many extracurricular activities and many facilities to give students experience and create business opportunities to expand the business opportunity and enhance student's specialized skills

Partnership Between School and Private sector

The colleges work closely with private sectors which cover the area of educational provided by the colleges such as accounting company, IT Company, Retailing in order to sending the students do a practical training and dual vocational training.

There are 90 companies which sign the agreement with the colleges both in Bangkok and remote area. Before sending the student to the company, the colleges and the partner company have to select the subject which match the job description and discuss on the the content under the selecting subjects. To confident that the students will receive experiences and knowledge properly while they do a practical training at the company.

Chapter 3 School Digital Transformation

The strategic of the colleges under Thai – Tech Group is not only to upgrade the equipment and new program on Information Technology but to cooperate with foreign countries , learning and sharing the expertize among students and teachers. Promote the collaboration with foreign country and foreign company in order to upskill and reskill of students ready for new technology before graduation.

Best Practices and Outcomes

TSN and TAB TSN and TAB established the collaboration with foreign schools, colleges and universities from abroad such as Indonesia, China and Philippines. The area of collaboration focus on Digital Literacy together with languages. One of the Best practices is to develop the Metaverse classroom and Games with students from colleges and university from Indonesia. Providing the platform for students from both country working together. To promote the exchange students for 1 – 2 months, learning and practicing on Digital literacy. After graduation 80% of students find a good job and become entrepreneur.

Challenges and lesson of School Digital Transformation

The challenge of Digital Literacy change very fast, it's not easy to develop the equipment and program as fast as the need of industry. To promote the collaboration with partner colleges from ASEAN and Non ASEAN Country is the challenges. The big problem is the budgeting constraint while the colleges face the situation of COVID 19. However, the colleges promoted distance learning instead of on site learning and we found that learning through online is effective, before that the colleges trained our teachers how to develop the teaching methods through online.

Experiences and Recommendations for Digital Transformation

The result we found while we face an effect of the COVID 19 and after the pandemic, the colleges prepared the teaching method integrated into 3 categories ;

- the online program 30%
- the onsite program 30%
- the Dual Vocational System 40%

The students will have the experiences on digital literacy while they study online program and they well have knowledge while they study onsite. The dual vocational training will provide them the real experiences for the workplace and generate income while they are at the workplace. The students confident that after practicing at the workplace , they can find a good job and good salary due to the experiences they gained

TVET Development and Institutional Profile
BECORA TECHNICAL-VOCATIONAL SECONDARY SCHOOL, TIMOR-LESTE

Prepared By *Mr. Domingos LOPES LEMOS,Estate Secretary for Secondary and Technical- Vocational Education and Training, Ministry of Education,Timor-Leste*

Chapter 1: Introduction

1.1. Country Profile

Timor-Leste, officially the Democratic Republic of Timor-Leste, is one of the youngest countries in the world and occupies the eastern part of the island of Timor in Southeast Asia.

Timor-Leste is the smallest and easternmost of the islands in the Malay Archipelago. Timor- Leste also includes the coastal enclave of Oecussi-Ambeno in West Timor and the islands of Atauro, north of Dili, and Jaco, off the island's eastern tip. The country's only land borders are with Indonesia, but it also has a maritime border with Australia in the Timor Sea to the south.

It has a land area of about 15 000 km². Its capital is Dili, located on the north coast.

It is the only independent country in Asia with the Portuguese Language as its official Language, along with Tetum. At the same time, Indonesian and English are considered working languages by the current constitution of Timor-Leste.

The island is characterised by a central mountainous ridge with an east-west orientation, which divides the country into the warmer and more rugged north coast and the south coast with alluvial plains and a more moderate climate. The highest point in the country, Mount Ramelau, is 2 963 meters above sea level.

Timor-Leste has a tropical climate with distinct wet and dry seasons. The rainy season runs from November to April and is influenced by the extremely wet northern monsoon, which often causes flooding. Most of the rainfall occurs in the mountainous regions and on the southern coast. Temperatures range between 28 and 32 °C all year round. Even in the dry season, from May to October, they drop slightly, by about 2°C. Humidity is low throughout the country, and precipitation is rare.

The country has about 1 360 000 inhabitants, with one of the youngest populations in the Asia Pacific region (average age 18.9 years). Over half of the current population is below 18 years old, with an estimated population growth rate currently at 1.54%.

The minimum wage was set at USD 115 per month. The unemployment rate in 2022 was 5.1% and was quite volatile. The Gross Domestic Product (GDP) at the end of 2022 was USD 3,163,324,631.

1.2. Education Profile

In Timor-Leste, the education system has a structure, in terms of levels, consisting of nine years of compulsory education corresponding to the 1st, 2nd and 3rd Cycles of basic education. Education in Timor-Leste provides nine years of basic education, with the 1st cycle being four years, the 2nd cycle two years and the 3rd cycle three years. In addition, the government offers three years of pre-school education.

Secondary education is divided into General Secondary and Technical-Vocational Secondary and lasts three years. Higher education comprises Bachelor, Licentiate, Postgraduate, Master and Doctorate degrees.

Education in Timor-Leste is divided into the Ministry of Education and the Ministry of Higher Education.

The Ministry of Education oversees education from pre-school to completion of secondary education, including technical-vocational education.

There are 51 vocational schools in Timor-Leste, 32 public and 19 private, operating under the Ministry of Education. Technical-vocational education has a training offer of 19 courses. Technical- vocational schools provide a three-year education, require the completion of an apprenticeship as a prerequisite for graduation, and award the student a diploma at the end of the course.

1.3. School Profile

Becora Technical-Vocational Secondary School was restructured in 2000 under the supervision of the Office of the Directorate of Technical-Vocational Education of the Ministry of Education. It aims to raise the level of education and prepare its students to enter the labour market by providing them with practical skills and competencies in construction, production mechanics, auto mechanics, electricity, electronics and computer science.

Every year, around 400 students enter this school, currently with 1 576 students distributed in the various training areas, 52 teachers in the productive area, 42 in the scientific and cultural area, and 5 employees.

At the end of the three years, students complete their studies and are awarded a Diploma that gives them access to higher education or entry into the labour market. Currently, the Ministry of Education is in the certification process with the National Institute for Development and Manpower. Currently, the graduates of this school correspond to 15%, whereas the remaining portion continues their studies in higher education. This school is considered a reference school for infrastructure and practical equipment.

Chapter 2: School Development Plan

2.1. School Development Plan

The school's main mission is to qualify students in professional and human skills, with professional responsibility and commitment to society. Within the scope of international cooperation, we have been developing an exchange programme with the Community of Portuguese-Speaking Countries (CPLP) countries, of which Timor-Leste is a member; it is also part of our development plan to start cooperation programs with ASIAN countries.

It is also a fundamental mission to obtain certification to guarantee credibility to students who complete their technical-vocational courses.

We signify to get a higher percentage of graduates recognised by the private sector, make them more entrepreneurial, and create jobs.

2.2. TVET Curriculum

The Technical-Vocational Secondary Education curriculum has a disciplinary and non- disciplinary curriculum plan. The disciplinary curricular plan contains three programmes: i.e. Socio- Cultural, Scientific, and Productive. The non-disciplinary curricular plan has two programs, i.e., Training in Work Context (FCT) and Professional Aptitude Test (PAP).

Training in Work Context (FCT) is a set of professional activities developed under the coordination and monitoring of the school, aimed at the acquisition or development of technical, relational and organisational skills relevant to the performance profile at the end of the course attended by the student (internship).

Professional Aptitude Test (PAP) consists of the presentation and defence, before a jury, of a project, embodied in a product, material or intellectual, in an intervention or in a performance,

depending on the nature of the courses, as well as the respective final report of realisation and critical appreciation, demonstrating professional knowledge and skills acquired throughout the training and structuring the professional future of the young person.

2.3. Partnership Between School and Private Sector

The school works in collaboration with local companies, where young people undertake work- based training for 3 months, as well as professional internships.

Chapter 3: School Digital Transformation

3.1. Strategy and Plan for Digital Transformation

The Digital Transformation Plan consists of updating equipment and new information technology programs, cooperating with foreign countries, and learning and sharing experiences among students and teachers. In this light, we aim to improve skills and prepare students for new technologies whilst promoting collaboration and foreign countries.

3.2. School Best Practices and Outcomes

The school is implementing a pilot project to establish collaborations with institutions. This is expected to result in a continuous virtual learning experience in which students and teachers can actively participate.

These include real-time virtual activities with students and teachers from other parts of the world, exchange programs with schools, international online conferences and round tables with the Community of Portuguese Speaking Countries (Angola, Brazil, Cape Verde, Guinea-Bissau, Equatorial Guinea, Portugal, Mozambique, São Tomé and Príncipe and Timor-Leste).

3.3. Challenges or Lessons of Schools Digital Transformation

It is extremely important to raise awareness of school management for teachers and school managers so that they are not uncomfortable implementing more digital education at school. Therefore, it is necessary to invest in training and show the advantages of combining education with technology so that students and teachers receive tutorials and training on the use of virtual platforms, especially

regarding the technical aspects, to make sure they know how to use the basic functionalities of these applications during real virtual events.

There is also a lack of capacity building for teachers and tackling resistance to embracing technology. However, it is necessary to assess the school structure and financial resources to adopt such measures and to do so gradually so that everyone adapts to the new learning formats.

There is difficulty in adopting active methodologies and interdisciplinary subjects. Active methodologies such as hybrid teaching are innovative proposals that can leverage the possibilities of digital transformation in schools.

In addition, adopting interdisciplinary subjects in the curriculum matrix, such as robotics and programming, also provide new experiences that enhance digital education. Another major challenge is digital inequalities, as technologies are not available to everyone in the same way.

3.4. Experiences and Recommendations for Digital Transformation

Digital transformation can be challenging due to the rapid changes in technology and digital resources. It is critical that teachers develop continuous professional development programs on the use of digital resources or technological tools. Networking with government agencies, community associations, and non-governmental associations is vital to create a dynamic and persevering exchange of information, skills and technology transfer to keep the school updated on new technologies.

The COVID-19 pandemic has reinforced the importance of digital assets, during which time various means have been used to keep young people active.

Notwithstanding, it should be done more to broaden the range of digital and make them increasingly efficient, inclusive, safe and intuitive to improve interaction with the world easily. In corporate education, digital transformation makes it possible to create a training and development program that matches the needs and profile of employees. Such a solution enhances the prospects of knowledge/talent retention and the interest of professionals in the content presented.

PARTICIPANTS PROFILE

Lim Kian Boon is currently the Acting Director at Politeknik Brunei (PB), Brunei Darussalam. He has vast experience in the area of technical and vocational education and has previously served the Ministry of Education at the Department of Technical Education for 14 years and in the Institute of Brunei Technical Education (IBTE) for 12 years. He graduated with a MSc in Process Systems Engineering at Cranfield University, United Kingdom. He currently holds several responsibilities including as a member of the Brunei Manpower Industry Steering Committee (MISC) in Construction, a member of Brunei Manpower Localisation Taskforce as well as a Board Member of the SEAMEO Regional Centre of Technical Education Development(TED).

LIM KIAN BOON

Bahit Hamid is the Head of Information Technology (IT) Division, Politeknik Brunei and is also a teaching staff at the School of Information Communication & Technology (ICT) specialising in Web Development including SysOps and DevOps. He has a Master in Teaching from Universiti Brunei Darussalam and a Master in Advanced Web Engineering from University of Essex, United Kingdom. He mainly specialises in all thing's web and Internet related technology from cloud, servers and web application development both frontend and backend.

BAHIT HAMID

Kok Lam Wai, Aaron

Aaron accumulated almost ten years of experience in the design and media industry before transitioning to the field of education. He began his journey at ITE as a lecturer, playing a crucial role in establishing the first-ever design and media course. Due to his dedication and expertise, Aaron quickly advanced to a leadership position, initially overseeing the department and later assuming the role of Course Manager for the Multimedia Technology cluster within the School of Electronics & Info-Comm Technology at ITE College West. In recognition of his innovative teaching methods incorporating Apple technology, he received the esteemed title of Apple Distinguished Educator in 2015.

Aaron actively supports the school's strategic Digital Transformation roadmap, ensuring that the team is well-prepared to embrace AI, maintain course relevance, and promote the professional development of the staff in line with the objectives of the Smart Nation Initiative.

Aaron now serves as the deputy director, leading the ICT sector of the school.

MARJORIE R. PLAZO, a forty (40) year old resident of Bonga, Ligao City, Albay, Philippines. She finished her baccalaureate degree with Bachelor of Secondary Education major in Physics in Bicol University College of Education, Legazpi City. She thenpursued to graduate post graduate course in**Master of Arts in Education** (M.A. Ed.) major in**Administration and Supervision in Republic Colleges,** Inc. Guinobatan Albay. She graduated **Doctor of Philosophy (Ph. D.) major in Educational Management** inUniversity of Saint Anthony, Iriga City, Camarines Sur.

She started serving public secondary school as locally funded teacher in 2004 – 2008 teaching Chemistry and Physics. Aregular permanent Teacher I position was given to her in June 2, 2008 to June 2015. The journey of being a school leader started in 2015 when she was designated Teacher – In – Charge of Oma – Oma National High School. She was promotedto Head Teacher I position from Teacher I in the same school. Her passion, dedication and commitment to serve has been ignited more with her series ofpromotion from Principal I to Principal II in Ligao City National Technical – Vocational High School.

As a school leader, she continually inspires herself to further improve through attendance in various training and workshop such as the LEADExCELSand SUPEREXCELS sponsored by SEAMEO INNOTECH and recently upgraded herself with the Coaching Program facilitated by the National Teachers College.

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BIONOTE MARJORIE R. PLAZO

CYNTHIA B. LLACER

CYNTHIA BABAGAY-LLACER is a resident of Tinago, Ligao City, Albay, Philippines. She finished her baccalaureate degree with Bachelor of Secondary Education major in English. Her post graduate study is **Master of Arts in Education** (M.A. Ed.) major in **Administration and Supervision**. At present, she is a new scholar under the Linking Standards for Quality Practices (LiSQuP) of Philippine Normal University taking up **Doctor of Philosophy (Ph. D.) major in Educational Leadership and Management (EdLM).**

She has been a public school teacher from July, 1998 to July, 2019 then became a Secondary School Principal I up to now. It was because of her passion in her work that she won multiple awards when she was still a teacher. To name a few, she has been awarded as an **Outstanding School Paper Adviser of the Philippines** in 2016, Pambansang Ulirang Guro or **National Outstanding Teacher in Filipino** in 2014, **Outstanding Teacher of Albay** 2014, and **5th Place in Opinion Writing for School Paper Advisers Category** during the **National Schools Press Conference** in 2014 outwitting almost a hundred of her competitors.

She was also able to officially **publish three (3) news feature articles** in Rappler.com, an international online news platform when she was tasked to cover the Palarong Pambansa, a national sports event in 2016 along with other international and national journalists.

As a school head, she never ceased to continue her quest for excellence. Her written work was awarded as one of the Regional Level **Best Application Projects** among the rest of the outputs presented by her fellow school heads. It happened when she was still designated as a Teacher-In-Charge or TIC of Maonon High School in Ligao City Division. She was also able to publish her research entitled, **"Factors Affecting the Career Choices of Graduating Public Secondary Students in Ligao City Division, Ligao City, Philippines** in 2021, in **Indonesian Journal of Teaching in Science**.

In January 5, 2022 she transferred and assumed Office as the new Secondary School Principal I of Palapas National High School in Palapas, Ligao City.

She had been given an opportunity as a **Speaker in an International Workshop** organized by **Southeast Asia Ministry of Education Technical Education Development** (SEAMEO TED) with the theme, "The Labor Market Needs in IR 4.0 Era between the Private Sector and Technical Education Teachers in the ASEAN Region" in Preah Sihanouk Ville, Kingdom of Cambodia, on July 14-15, 2022

Just recently, she was awarded with **Leadership Award for Outstanding Employee in Partnership** by the Department of Education Region V. She passed the **Career Executive Service Written Examination** (CESWE) held last June 18, 2023.

Aside from her leadership and management skills, she also knows a little about dancing, singing, hosting, and playing a guitar.

In spite of all her accomplishments, she still yearns to achieve more because she believes that, "It is when you are at your limit that you learn to discover your true strength."

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Jessica Nebres-Ibarrientos

Passionate educator with a tech-savvy twist! **Jessica Nebres-Ibarrientos** is a Teacher III at Palapas National High School, Ligao City, Philippines. She has been with the Department of Education for more than seven years. Her bachelor's degree is a Bachelor of Science in Computer Science. Her calling was really teaching, so she took Methods of Teaching and later passed the board examination for Professional Teachers. She recently finished her Master of Arts in Education with a major in Technology and Livelihood Education Teaching (MAED-TLE). She is a National Certificate holder in Computer System Servicing and TEFL certified. She was one of the teacher exchange participants in the Batch 1 Online Student and Teacher Exchange Program, a project or program of SEAMEO-TED. She has been a great believer that technology will never replace great teachers, but technology in the hands of great teachers will be transformational. Jessica has always been up for great opportunities that can greatly boost her competence in educational pedagogy and help her adapt to the innovations in technology in education and livelihood.

CHRISTINE STANISLAUS

Christine Stanislaus Kinsik is the Director of Keningau Vocational College (KVC), Sabah, Malaysia. She started teaching in 1993 as a Malay Language and History teacher before she began her career as a college director in 2016. She first led a vocational college in West Malaysia before returning to Sabah and finally KVC that she has served for over 15 years prior to her transfer. She earned her bachelor's degree and master's degree from Universiti Sains Malaysia (UMS) and Universiti Malaysia Sarawak (UNIMAS) respectively in 1993 and 2000. Through her role as the administrator of the college since 2005, she is credited for the rapid transformation of the college that was once known as Keningau Technical School to become one of the most accomplished institutions in Sabah in various fields particularly academics, sports and arts. In 2023, she successfully spearheaded the college's internationalization activities to its new height when the whole-school practice received recognition from SEAMEO VOCTECH as a part of the region's collection of TVET best practices. In the same year, she represented the college at the inaugural Sabah Science Awards organized by the state government when KVC was nominated for the innovation secondary school award. While maintaining the college's performance in innovation and internationalization activities, she successfully expanded the college's scope in these ventures with the launch of innovation and design space known as Ruang Daya Cipta (RDC) located at the college. The hub, which was built in collaboration the Ministry of Science, Technology and Innovation, is meant for the public as a means to assist the community in their social, innovative and entrepreneurial projects.

ANITA MD YASIN

Anita Md. Yasin is the Head of Hospitality Department, Keningau Vocational College (KVC), Sabah, Malaysia. She started teaching in 1994 as a Home Science teacher before she began her career as a head of Hospitality Department in 2014. She earned her bachelor's degree in Open Universiti (OUM) and master's degree from Universiti Selangor (UNISEL) respectively in 2007 and 2010. In 2022, she became the first vocational college teacher to be shortlisted as a top 10 finalist for Malaysia Teacher Prize which was launched in the same year. She has won gold medals at in-person innovation contests held in South Korea and Japan in 2019. She has also led her students and colleagues to take part in innovation contests, skill competitions and conference presentation in Malaysia and in other Southeast Asian countries. She initiated her community project known as "Sprout" which aims to help the marginalized community especially women from low-income background by equipping them with basic vocational skills as well as entrepreneurial strategies to help them generate income. Many of her students and colleagues have become volunteers for the project. Under her leadership as the head of hospitality department, many of the students graduated with excellent results with numerous types of achievements including some prestigious awards and recognition like being a finalist for Global Student Prize and a guest speaker at an-in person international symposium.

Professor
Dr. Ramlee Mustapha
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Dr. Ramlee Mustapha is a Professor of Technical and Vocational Education at the Faculty of Technical and Vocational Education, Universiti Pendidikan Sultan Idris (UPSI) [the Sultan Idris Education University]. In 2010, he was appointed as the Dean for Post-Graduate Studies at UPSI. A year later, he is appointed as the Dean of the Faculty of Technical and Vocational Education at UPSI. In 2017, he was appointed as the 5th President of the Asian Academic Society for Vocational Education and Training (AASVET).

In 2022, he was as appointed as the Head of TVET and Industry Cluster in National Professor Council. He is an expert in vocational education and training and human resource development especially in the Pacific Rim and East Asian region. In addition, Dr. Ramlee Mustapha was invited as main speaker at several International Conferences such as in Thailand (2001), Singapore (2002), Taiwan (2002), Indonesia (2002), Kuwait (2002), Saudi Arabia (2002), Finland (2003), Thailand (2004), Costa Rica (2006), Saudi Arabia (2006), Hawaii (2007) and Taiwan (2007), Indonesia (2008), China (2008), Japan (2009), Indonesia and Taiwan (2010), New Zealand, Thailand, China, Singapore and Vietnam (2011), Japan (2013), Germany and Taiwan (2016), Indonesia and China (2017), Vietnam (2018), Iran and Russia (2019), United Kingdom (2020), China (2021), Pakistan, Cambodia and UK (2022), China, Indonesia and France (2023). He has written over 150 articles and 10 books in Technical-Vocational

Education and Human Resource Development. Dr. Ramlee Mustapha holds a Bachelor degree in Chemical Engineering (BSChE) from University of Alabama, USA. His first Masters degree in Educational Administration (M.Ed) from Eastern New Mexico University, USA and his second Masters degree in Industrial Technology (M.Sc) from Purdue University, USA. He earned a doctoral degree in Technical and Vocational Education (Ph.D) also from Purdue University, USA.

Mr. Sam kamsann

Mr. Sam kamsann studied chemistry at bachelor's level from RUPP and has a teaching pedagogy certificate before studying masters in law and public administration from CUS . After graduating from RUPP , he worked as a teacher of chemistry in Preah Sisowath High School in Phnom Penh from 1996 to 2009. Afterwards he was promoted to be Vice principal of Preah Sisowath high school . From 2014 onwards, he has been working as Deputy School principal at Preah Sisowath high school, which is one of New Generation Schools (NGS) operated by The Ministry of Education, Youth and Sport (MoEYS),Cambodia.

Principal, Saint Francois General Knowledge and Private Technical high School (SFT)

Mr. Yun Samath studied at Regional Teacher Training Center, Takeo provincial town. He got a teaching pedagogy certificate, associate's degree in farming system from Saint Francois professional institute and Royal University of Agriculture and bachelor degree in agronomy from Saint Paul Institute and Royal University of agriculture.

He got a social enterprise for economic development certificate in the Philippines in 2016. He worked as a teacher of Khmer literature in Chheuteal Chroum Secondary School from 2001 to 2004 and he worked as a teacher of Khmer literature at Saint Francois professional High School and Angroneap High School from 2004 to 2017. Afterward, he was promoted to be principal of Saint Francois General Knowledge and Technical high School from 2017 onward.

Mr. Yun Samath

Mr. Pol Savuth

Mr. Pol Savuth is the school principal of Bavet General and Technical High School (BGTHS), Bavet town, Svay Rieng, Cambodia. He was born on September 20, 1979. From 1986-1992,he started the primary school named Svay Prohuot, Kouk Pring commune, Svay Chrum District, and from 1992-1999, he continued his high school which is in the same location. Through his hard working, he successfully passed the teacher entrance exam and started learning at Provincial Teacher training College, Svay Rieng from 1999-2001. Later, he was training at Regional Teacher Training Centre, Prey Veng (RTTC) and successfully completed it in 2007. Furthermore, he was holding his Bachelor's degree in Educational Management at Institution of Social Science and Technology (IST) from 2007-2009. Meanwhile, he was also pursuing his Master's degree in the major of management at Svay Rieng University (SRU) from 2009-2012. More importantly, he has had a strong, qualified background of work experiences both teaching and managing. For instance, he worked as a primary school teacher at Chantrea district, Svay Rieng, from 2001-2006, and then he was appointed as Director of Baty Junior High School from 2006-2011. One Year later, he was appointed as Vice Director of Bavet High School from 2011-2012. Later, he was also promoted as Director of Bavet High School from 2012-2016. After This school had been upgraded to Bavet General and Technical High School, he also has been kept working as the school principal until the recent time. Based on his educational background and work experiences, it has reflected that he is a qualified manager and potential leader. Also, he has a strong commitment in his career and building up a closely bond with his staff, community supporters, and other private sectors.

Mr. Pen Vuthy

Mr. Pen Vuthy is the teacher of English with higher education Degree at Bavet General and Technical High School (BGTHS), Bavet town, Svay Rieng, Cambodia. He was born on March 15, 1989. From 1995-2001, he started the primary school named Russei Prey, Kompong Chamlang commune, Svay Chrum District, and from 2001-2007, he continued his high school which is in Svay Rieg Town. Through his hard working, he successfully passed the teacher entrance exam and started learning at Regional Teacher Training Centre, Prey Veng (RTTC) and successfully completed it in 2009. Furthermore, he was holding his Bachelor's degree in English Literature at Institution of Social Science and Technology (IST) from 2009-2011. From 2018-2019, he was being trained as higher education teacher (Bachelor+1) at National Institute of Education (NIE), Phnom Penh, Cambodia. Meanwhile, he was also pursuing his Master's degree in the major of English and Education (MEE) at Norton University (NU) from 2018-2021. More importantly, he has had a strong, qualified background of work experiences both teaching and managing. For instance, he worked as a Secondary school teacher at Kampong Ro district, Svay Rieng, from 2009-2011, and then he was transferred to work at Hun Sen Tachey Junior High School from 2011-2018. Later, he was also promoted as a teacher of English with higher education Degree at Bavet General and technical High School from 2019 until the present time. Based on his educational background and work experiences, it has reflected that he is a qualified teacher and potential facilitators. For example, he has helped and motivated the poor learners to be active by grouping and assigning the tasks based on their abilities. Also, he has a strong commitment in his career and building up a closely relations with his colleagues, student- parents, and other community supporters.

Mr. Ry Sarom

Mr. Ry Sarom studied Bachelor of Physics at the Royal University of Phnom Penh (RUPP), holds a Master's Degree in Educational Science from CUS, and went on to study for a Master's Degree in Physics at the National Institute of Education (NIE). He worked as a physics teacher at Samdech Chea Sim Angkor Chey High School from 2006 to 2016. He was then appointed Deputy Director of Preah Norodom Sihamoni General Education and Technical High School in 2016. He proposed to expand from General Education High School to General Education and Technical High School by 2017 through the Ministry of Education, Youth and Sports.

Mr. Heng Socheth

Heng Socheth is currently school principal of Norodom Sihamoni General and Technical High School (NHGTHS) in Kampong Chhnang Province, Cambodia. He received his bachelor's degree in Geography Studies at the Royal University of Phnom Penh in 1998 and master's degree in Business Administration from Cambodia University of Specialists in 2007.

He started his teacher career after he graduated from the Institute of Pedagogy in 1999. Since then, he has become a high school teacher at Kapong Tralach High School in Kampong Chhnang Province for 9 years before he was appointed as Vice Principal of Kampong Tralach High School in 2008. In 2013, he was appointed as Vice Prinncipal of Norodom Sihamoni General and Technical High School for two years before he got promoted as School Principal of Norodom Sihamoni General and Technical High School since 2015.

In his work, Mr. Socheth always determines to maintain his supervising and leadership skills with his colleagues, and good working with community, and private companies. Socheth has received various school leadership and management award in his school management career. He was awarded a good management school principal and Hygiene school with the first rank in Kampong Chhnang in 2020 by the MoEYS. He was also awarded a good school principal with the 4th rank in Cambodia in 2020 and a Hygiene School Environment with the 4th rank in Cambodia in 2020. He was also awarded the Environmental Bronze Medal of Child-Friendly School Cluster from the Ministry of Environment in 2021.

In 1998 I finished bachelor's degree in major of Philosophy in Phumin Phnom Penh University. And I have been trained to be a high school teacher in major of Philosophy in National Institute of Education. As the same time, I also finished master's degree in major of Science in Education from Cambodian University for Specialties. After I ended the training, I started working as a morality subject teacher in Pouk High School in Siem Reap province until 2007. Moreover, in 2008 I was highly recommended and selected to be a principal in Pouk High School. Since the late of 2015 and the early of 2016 Pouk High School has been changed the name to Puok General and Technical High School, which is teaching electrical and electronic until the present time.

An LimKheng

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Dr. Indra Muis is officiating as Rector of Bina Insani University. Bina Insani University abbreviated as BIU is a private university located in Bekasi Municipality, West Java Province, Indonesia. It takes one and half hour drive from Jakarta, the Capital City of Indonesia, to Bekasi Municipality. Bekasi is also surrounded by large industrial areas. It has become his challenge to manage the campus link and match with industrial needs and innovation has become a powerful tool to deal with job-education mismatch.

He holds a Doctoral degree in Marketing Management from Pasundan University. It is a private university located in Bandung, West Java Province Indonesia. For him to study marketing is an important thing to do. It is because marketing principles can be applied in most job positions and career paths.

His areas of interest include Strategic Management, Strategic Marketing and Entrepreneurship. During his career as a faculty member, he published 3 (three) books in Strategic Management, Marketing, and entrepreneurship that have become references for business department students, owners, and managers of Small Medium Enterprises (SME). He has also published 23 (twenty-three) research papers nationally accredited journals and international conferences. And he has 7 (seven) Intellectual Property Rights.

He serves as a journal manager in some national accredited journal and a reviewer of several business and social science proceedings in national dan international conferences. He also actively participated in some national and international events conducted reputable national and international education and research organizations like Asia Pacific Consortium of Researchers and Educators (APCORE), Indonesian Researcher Association, and Indonesian Private Higher Education Institution Association.

Rita Wahyuni Arifin, M.Kom
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Rita Wahyuni Arifin, M.Kom currently holds the position of Dean of the Faculty of Informatics since February 15, 2022, at Bina Insani University, located in East Bekasi, precisely at Jl. Siliwangi No 6 Rawa Panjang, East Bekasi. She completed her Master's degree in Computer Science at STMIK Nusa Mandiri Jakarta, specializing in e-commerce.

Based on her educational background, she has gained valuable work experience as a Computer Instructor, Permanent Lecturer at Universitas Bina Sarana Informatika, Permanent Lecturer at Bina Insani University, Online Tutor at Universitas Terbuka, Head of the Department of Software Engineering for undergraduate and Informatics Management for diploma three programs, Manager of Administration and Finance & Promotion at LSP Bina Insani University, Reviewer for the Journal of Communication Technology (e-Journal) managed by LPPM Politeknik LP3I Bandung, and Editor in Chief for Jurnal IMBI.

In her academic activities, she teaches subjects such as logic and algorithms, professional ethics, database management systems, and mobile programming. In the field of research, she has published 55 articles in accredited national and international journals. And She has 4 (Four) Intellectual Property Rights. Rita's research interests are focused on the areas of Programming, Multimedia, and Algorithms In terms of community service, she has been a speaker for the Government Transformation Academy (GTA) offline activities in Kabupaten Buleleng, providing training on Junior Office Operator for participants from Civil Servants (ASN)/Non-ASN working within the local government of Kabupaten Buleleng. She is a certified BNSP Competency Assessor, qualified to conduct Competency Assessments for Asesi, and holds a BNSP Competency Certificate with Lead Programmer scheme, recognizing her expertise in Lead Programming.

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Kristiana Widiawati, S.Pd., M.M., CMA is the Dean of the Faculty of Economics and Business, Bina Insani University located in Bekasi City, West Java Province. She was completing the Doctoral Program in Strategic Management Program at Brawijaya University, one of top ten Best Universities in Indonesia, with a concentration in Strategic Management Doctoral Program. The focus of the fields studied is strategic for Marketing, Resources, Finance, Operations and Entrepreneurship, which is the basis for every Organization to determine Business Strategy for the Organization.

Previously, She has also attended and has an International Certification, namely Certified Marketing Analyst (CMA) and attended the Digital Leadership Program at Cernell University.

He has published about 34 (thirty-four) national and international, has 2 (two) Intellectual Property Rights (HKI) and published Books on Entrepreneurship. To support his career and position, he has become a member of the Indonesian Management Forum (FMI).

The experience he has in the field of Education in addition to teaching also has experience several times in structural positions, as heads of departments or work units. His last structural position is currently as Dean of the Faculty of Business, which oversees 5 Study Programs, namely: S-1 Accounting Study Program, S-1 Management Study Program, D-3 Accounting Study Program, D-3 Administration Management Study Program and D-3 Secretarial Study Program.

DR.Drs. SYAHRIR MM

Dr. Drs. Syahrir, MM is the Director of Vocational High School 5 Banjarmasin, South of Kalimantan Province, Indonesia. He started teaching in 1992 as Electrical Teacher. Various positions before as Director of Vocational High School tht is as Vice principal in the field of Curriculum and public relations.

He earned his Administrative Science Doctoral Study Program from University 17 Agustus 1945 Surabaya, Indonesia in 2019

From 2007 to 2009 Studing in Germany about International Leadership and International Competency Management at the University Magderburg Germany.

Now, he has held several organizational positions as Chair of the South Kalimantan MGMP IGVIM and Coordinator for foreign cooperation relations, MKKS, South Kalimantan province. He also Depiuty Chairman of The Indonesian Doktoral Gathering Forum (FORSILADI) for the South Kalimantan Region. He also the Nasional Facilitator of The Project to Strengthen Pancasila Student Profile (P5) and has asisted 87 SMKs throughout Indonesia. He also collaborated with several overseas schools/college in Southeast Asia in education developing to Thaiand, Malaysia, Singapore, Philipine, Cambodia etc. Forms of activity programs are student or teacher exchanges, training programs, student internships, curriculum studies, TVET webinars, Symposium etc.

During his leadership he brought rapid transformation in the schools and achievements. He succeeded in bringing about school transformation from a Center Of Excellence Vocational School to be SMK Center of Excellence Advanced Scheme.

Many more school achievements during his leadership. In 2017, The school won the Great School Award from the Minister of Education and Culture, Muhadjir Effendy. In 2022, The category Innovation Vocational School of Heavy Equipment Enginnering, SMKN 5 Banjarmasin won 1st place in the National Winner of the SOBAT Competition. " No day without Achievment".

Now, He succesfull develop a Digital School program in his school. Digital technology platforms are used as platforms in learning to achieve learning efficiency and effectiveness. The other, A digital technology platform for measuring teacher performance. The Principal can control all the activities and performance of the Teachers and Education Staff through Digital technology Aplication.

Drs. Amran Ali, M.M.
Headmaster SMKN 1 Simpang Empat

Drs. Amran Ali, M.M. was born in Makassar on December 21, 1967. He was educated at Complex Bara- Baraya 2 in 1980, he had to continued his junior high schoolat Ujung Pandang 2 in 1983. He took Mechanical Engineering major in state vocational high school 2 ujung pandang in 1986. Then he accomplished his bachelor degree Technology Education in 1992. He received his Masters in Management at the Pancasetia High Schoolof Economics Study Program in 2010.

His career experience as a teacher began in 1994 to 2002 at Andinding 4 Junior High School, Enrekang District, South Sulawesi Province. He was vice chairman of public relation at SMK Negeri 1 Batulicin (2002 – 2006). For the first time in his career, he was appointed headmaster at SMK Negeri 1 Satui, Tanah Bumbu Regency (2006 - 2012). Then in 2012 he has continued to serve as headof SMK Negeri 1 Simpang Empat untilnow.

During his headship he brought about rapid transformations in the school. He succeeded in making the Vocational School a Center Of Excellence in 2020. He was acknowledge to make SMK Negeri 1 Simpang Empat into a Center of Excellence Vocational School from 2021 to 2023. With the Featured Program, namely the Industrial Class collaboration with PT. Bukit Makmur Mandiri Utama, PT. United Tractors and PT. Educa Sisfomedia Indonesia.

Furthermore, he develop the schools by using digital technology in learning, monitoring, and evaluating both teachers and education staff. So their working can be more effective andmore efficient.

Miss Puncharasm Tanpraphat (Ajarn A.)

Miss Puncharasm Tanpraphat is the person who has experiences in education, particularly vocational education. With all of the professional experiences, knowledge, and accomplishments that she has accrued from the past to the present.

Miss Puncharasm's educational background includes a bachelor's degree in Faculty of Business Administration, Accounting from Assumption University. She also holds a master's degree from the Faculty of Business Administration. She is now studying for a doctoral degree in industrial business administration at King Mongkut's University of Technology in North Bangkok.

With Miss Puncharasm's work experiences, she is currently working as a chief executive at Chonburi Technological College and Prapatsorn Wittaya School. She has launched a number of initiatives, including academic collaboration projects with international institutions such as the People's Republic of China, India, Australia, England, and others. She has also been working on several projects aimed at improving our school and college. The first bilingual vocational school in Thailand was founded by her in 2012, and she has also developed a number of other projects, including the Student One-on-One iPad Project, which offers scholarships for educational equipment (iPads) to BP students, one device per person, with no additional cost, for the purpose of studying. She also requires the pupils to take the language test in both English and Chinese. Using the TOEIC test as an English assessment and the HSK as a Chinese language measure. Prior to graduation, all students must meet the criteria established by the College.

At the moment, Miss Puncharasm is emphasizing the value of language in assisting diverse organizations achieve worldwide levels. As a result, the CIC International Center was established with the goal of acting as the center for developing many organizations in Thailand's eastern region to the international level by organizing language assessments such as TOEIC, HSK, and English Score by the British Council.

Mortimer J.Adler

"True Freedom is impossible without a mind made free by discipline"

DR.PANINEE AENGHIRAN

PANINEE SAENGHIRAN received her Ph.D. in Educational Administrationand Leadership, St.John's University, Bangkok in 2019 and MSc in Marketing, Brunel University, London in 2008 after she obtained her Bechelor Degree in Business Administration majoring in International Business Management, Assumption University, Bangkok in 2006.

Dr. PANINEE SAENGHIRAN has served various key managerial position in Samutprakan College of Commerce and Technology. She was as a manager and Vice Director since May 2012. She also used to serve as Vice Director of Academic Department from three years (2010 - 2013). as Vice Director of Planning and Development Department for five years (2005 – 2010) and as Assistant Manager and English Teacher for two years. (2003-2005).

PANINEE used to served in Bangkok College of Technology as Vice Director since May 2012
And at Poonleardhiran Company Limited as Founder and CEO since 2008

Ms.Tankamol Chimme

Educator, senior professional level, Bureau of Private Vocational Education Administration

Office of Vocational Education Commission, Ministry of Education, Thailand

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Domingos Lopes Lemos

Domingos Lopes Lemos, was born in Ermera, in 1975, having done his schooling from Primary to Secondary Education in Ermera.
In 2007, he completed a degree in Education at the Faculty of Education Sciences of the National University of Timor-Leste. In the following years, she completed the short courses, Socialist Political Training, in the People's Republic of China, Effective Leadership For Manager and Supervisor, Administrative Decentralization and Local Government, in Timor-Leste, Joint Training on the role of the Ombudsman for Human Rights and Justice, Basic Principles, Violence, Good Governance, the Role of the State Inspectorate General and the importance of Internal Control, Performance, Dedication, Integrity and Ethical and Professional Code.
Intensive Course of the National Training of Teachers of Pre-school Education, Basic Education, Secondary Education and Technical-Vocational Education; General Context and the role of the Curriculum, the use of Books, Teaching Materials, and in General Knowledge. Participated in the International Education Conference "Nine years of Development of the quality of the Education System".
In 2007, he was Coordinator of the Youth Organization, of the political party, National Congress of Timorese Reconstruction, of the Municipality of Ermera, having become in 2009, Executive Secretary of the same, in 2012 was elected Political Coordinator, of the party for in the municipality of Ermera. From 2009 to 2013, he was Director of the General Secondary School, Nino Conis Santana. From 2013 to 2016 he was District Director of Education, from 2016 to 2018 he was Municipal Superintendent of Education.
In 2018, he was elected Member of the National Parliament of the National Republic of Timor-Leste, in the V Legislature for the constituency of Ermera, in the Committee on Education, Health and Social Capital.
Secretary of State for General Secondary Education and Technical-Vocational Education, of the IX Constitutional Government.

Mr. Olandino Godinho Cerqueira

Olandino Godinho Cerqueira, 36 years Old, resident in Taibesy, Dili City, Timor-Leste, he finished her study in University Nacional Timor Leste, Faculty of Education Art and Humanity, Department of Biology. He started teaching in Public Secondary School for 6 month in 2009, has worked as a research on women's participation in the struggle for independence in a book entitled "Buibere Hamrik Ukun Rasik An", on 2009, Conducting research in television programs on culture that focus on helping young people to preserve the culture of each tribe and region on 2011. as a official govermenmt in the Ministry of Education, especially in the cabinet of protocol, communication and cooperation on 2012.

Simao do Rosario
Senior Staff of Ministry of Education Timor-Leste

A 39 Years Old Resident in Dili, Timor-Leste, Having graduated from the Institute of Business University of Timor-Leste in Public Management and attained a Master of Applied Science from Deakin University Australia.

I am a professional Manager and Administrator with 18 years of experience in the Timorese public service. Over this, I have held various leadership and management roles in the Ministry of Education. I have extensive experience leading projects with stakeholders, including various Timorese Ministries, civil society organizations, development partners, and school communities.

In 2021 I was promoted as National Director for Protocol, Public Relations, and Cooperation in the Ministry of Education, be the focal point for all official correspondence, and represented the Ministry of Education to participate in high-level meetings at national and international levels.

As a Public-Private Dialogue Specialist in USAID- Trade Governance Activity Timor-Leste. During this time, my responsibilities are to develop networks and partnerships which encourage collaboration and engagement between stakeholder organizations and develop new strategies, procedures, policies, or outreach materials designed to encourage and advance collaboration between stakeholder organizations.

From 2008-2016 As Head of Education Management Information System (EMIS) in the Ministry of Education Timor-Leste. My day-to-day task was to Lead responsibility for statistical data collection, entry, analysis, and presentation of data to senior Ministry officials, Other Government Agencies (OGAs), development partners, and schools across Timor-Leste.

Mr. Fernando Mouzinho Gama

Fernando Mouzinho Gama, born in Iuto, Lospalos, East Timor in 1978. He completed his studies from Basic Education to Secondary Education in Lospalos. He finished his university higher education study in Portugal. He has a degree in Mathematics from the University of Beira Interior (UBI) Covilhã-Portugal.

Assumed the position of Head of the Department of Pedagogical Affairs at the National Directorate of General Secondary Education in 2012.

He took office as National Director of Curriculum and School Assessment of the Ministry of Education, Youth and Sport from 2013 to 2020.

He attended the Portuguese language course level 2 and 3 at the University of Beira Interior (UBI), Covilhã – Portugal.

In 2008 he was invited as a speaker in the debate "The Teaching of Mathematics in the World" by the President of the Executive Council of Campos Melo Secondary School, Covilhã-Portugal.

In 2009 he organized the Lecture "The Educational System in the Community of Portuguese Speaking Countries (CPLP) at Escola Básica Integrada de São Domingos, Covilhã-Portugal (Certificate)

In 2011 he was appointed as head of delegation at the First Mathematical Olympiads of Lusophony at the University of Coimbra, Portugal. He was appointed as head of delegation at the Second Mathematical Olympiad of Lusophony at Federal University of Bahia, Salvador- Brazil

In 2015 he was appointed by the East Timor minister of education as a speaker "Timorense Educational System in its development and challenges" in the rotating presidency of the CPLP in Dili- East Timor.

I was born on 15 July 1996, in Ermera District of Timor Leste, I graduated from elementary school in 2007, high school in 2011 and graduated from secondary school in 2013. after graduating from high school I continued at one of the state universities "National University of Timor Leste" at the faculty of law and politics and graduated in 2018. worked in the cabinet of the Minister of Education, Youth and Sports in 2018 as an Administrative Assistant, and now works as an Administration in the cabinet of the Estate Secretary for Secondary and Technical Vocational Education Training Ministry of Education.

Mr. Carmono Julino

Adérito Lourenço Mateus Ximenes

Adérito Lourenço Mateus Ximenes, 24 years Old, resident in Becora, Dili City, Timor-Leste, finalist in University Nacional Timor Leste, Faculty of Philosophy Human Sciences, Department of Philosophy. He started was working in the Television Education Timor (TVE-T) as Journalist during one years in 2019. on 2021, countinue work in the Grupu Media Nasional (GMN TV) until now, as Journalist.

Program Facilitators

Dr. Songheang Ai received the doctor of philosophy from South Korea in human resources development (HRD) from Korea University of Technology and Education (KOREATECH). His professional interests focus on technical and vocational education and training (TVET), migration, secondary education, curriculum development, and soft skills, and his current research projects include assessing the distance learning delivery quality for technical and vocational education students during the Covid-19 outbreak in Cambodia, and assessing the curriculum implementation effectiveness at technical and vocational education institutes. Dr. Sonheang has published some journal research articles, international conference papers, book chapters, and web blogs. He served as a deputy director of Vocational Orientation Department from 2018 to 2020. He was recently honored with the Best Paper Award for his contributions to the international conference on June 22-23, 2019 in Bali, Indonesia. Currently, he has been the Director of SEAMEO TED since 2020

Dr. Songheang Ai

Mr. Suong Saruon

Mr. Suong Saruon, received Master Degree in Saemaul/ Community Economic Development and Leadership from Yeungnam University of South Korea in 2017, and Master Degree in Business Administration from Royal University of Law and Economics in Cambodia in 2012.

He used to serve as the Head of Academy and the lecture of Economics at Asian Institute of Cambodia for 3 years and served the Department of Information and ASEAN Affairs, MoEYS for three years. Saruon has also been a pat-time lecturer of Economics at some universities in Cambodia since 2013. He also has served as the Academic and University Relations Manager for the East Asia Management University for two years.

He also used be a Green Growth Think-Tank Coordinator for the International Institute of Scientific Research (IISR) and a research consultant in Research Project lead by Deakin University, Australia.

Saruon has involved in various research projects. His research interests are industrial policy, TVET education, TVET Teacher Need Assessment, Youth Engagement in democracy and Ant-Corruption and Good Governance

Saruon is currently, Manager of Public Relations and Partnership Division of SEAMEO Regional Centre for Technical Education Development. He also used to manage multiple works in the field of training management, operation and research and international relation since the center's establishment for three years.

Mr. Khiev Mean holds a Bachelor's Degree in Finance and Banking and a Master's Degree in Finance from the National University of Management, Cambodia. During 2016 and 2017, he worked as a project finance staff of UNICEF at the Department of Finance (DoF), Ministry of Education, Youth and Sport (MoEYS). Afterward, he became a government official working at the DoF, MoEYS. As a team member of the Education Financial Management System (EFMS), he has been contributing to consulting relevant financial procedures for the IT team to update the system to suit requirement in recording the financial statements to improve the budget implementation of MoEYS. In 2021, he was promoted to Vice Chief of Office in charge of the Youth and Sport sector, DoF, MoEYS.

Mr. Khiev Mean

TVET LEADERSHIP AND MANAGEMENT BENCHMARKING PROGRAMME BEIJING, CHINA, 14-20 AUGUST 2023

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