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# Best Practices of Secondary Level Alternative Delivery Modes (ADM) in Southeast Asia



***A Case Study of the  
Multi Entry-Exit System  
in Indonesia***



Best Practices of Secondary Level Alternative  
Delivery Modes (ADMs) in Southeast Asia:

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in Indonesia**

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# Contents

<b>Foreword</b>	<b>v</b>
<b>Acknowledgements</b>	<b>viii</b>
<b>Acronyms</b>	<b>ix</b>
<b>Background of the Study</b>	<b>1</b>
Introduction	1
Objectives	3
Methodology of the Evaluation Study	4
<b>The Multi Entry-Exit System</b>	<b>6</b>
An Overview of Indonesia's Educational System	6
Rationale for the Establishment of the Multi Entry-Exit System	11
The Multi Entry-Exit System	12
Support Policies that Encourage Implementation of the Multi Entry-Exit System	15
Principles of the Multi Entry-Exit System	16
The MEES Process Framework	18
Priority Targets	19
Delivery Strategies	24
Implementation Strategies	29
Curriculum	35
Instructional System	36
Learner Assessment	37

Support Systems	37
Quality Assurance Mechanism	39
Elements of Success	45
Sustainability Mechanisms	50
Strategy for Upscaling	52
<b>Texmaco Karawang Vocational School: A Multiple Exit-Entry System School in West Java</b>	<b>54</b>
School Background	54
School Performance	61
Curriculum and Learning Resources	66
Instructional Strategies and Assessment	69
Other Support Systems	69
Challenges and Issues	70
Success Factors	73
Insights from the Texmaco Karawang Vocational School Experience	77
<b>Conclusion</b>	<b>80</b>
<b>References</b>	<b>82</b>

## List of Figures

<b>FIGURE 1</b>	Distribution of Out-of-School Children by School Exposure Worldwide and Selected Regions, 2014	<b>2</b>
<b>FIGURE 2</b>	Map of Indonesia	<b>8</b>
<b>FIGURE 3</b>	MEES Model for All Streams and Levels of Education	<b>13</b>
<b>FIGURE 4</b>	MEES Model for Secondary Level	<b>14</b>
<b>FIGURE 5</b>	MEES Process Framework	<b>18</b>
<b>FIGURE 6</b>	MEES Pilot School Locations	<b>20</b>
<b>FIGURE 7</b>	MEES Model 1: Entry-Exit	<b>25</b>
<b>FIGURE 8</b>	MEES Model 2: Entry-Exit in a Single Level Across Streams	<b>26</b>
<b>FIGURE 9</b>	MEES Model 3: Entry-Exit from One Stream to Another	<b>27</b>
<b>FIGURE 10</b>	MEES Model 4: Combination of Models 1-3	<b>28</b>
<b>FIGURE 11</b>	MEES Structural Mechanism	<b>29</b>
<b>FIGURE 12</b>	MEES Quality Assurance Process	<b>42</b>
<b>FIGURE 13</b>	Location of Texmaco Karawang Vocational School in West Java	<b>55</b>
<b>FIGURE 14</b>	MEES Model Used in Texmaco Karawang Vocational School	<b>57</b>

## List of Tables

<b>TABLE 1</b>	Dropout Rates for Senior High School and Vocational School, AY 2012/13 to 2018/19	<b>9</b>
<b>TABLE 2</b>	Dropout Rates from Primary to Vocational Senior Secondary, AY 2011/12 to 2014/15	<b>10</b>
<b>TABLE 3</b>	The MEES Implementing Schools	<b>21</b>
<b>TABLE 4</b>	Stakeholder’s Roles and Functions on MEES Implementation	<b>32</b>
<b>TABLE 5</b>	MEES Enrollment and Examination Passers, AY 2012/13	<b>46</b>
<b>TABLE 6</b>	MEES Learners by Secondary Year Level, AY 2012/13	<b>47</b>
<b>TABLE 7</b>	MEES Achievement Rate by Subject, AY 2011/12	<b>62</b>
<b>TABLE 8</b>	MEES Curriculum Accreditation by Competency Area	<b>62</b>
<b>TABLE 9</b>	Number of Learners by Secondary Year Level	<b>63</b>
<b>TABLE 10</b>	Number of Learners by Age	<b>64</b>
<b>TABLE 11</b>	Number of School Repeaters and Dropouts	<b>64</b>
<b>TABLE 12</b>	Number of Learners by Economic Status and Previous School Attended	<b>65</b>





## Foreword

Enrollment in secondary schools has been increasing over the past decade, but more and more young people are unable to access quality and relevant secondary education. Some learners experience difficulty in transitioning from primary to second-

ary level and from secondary level to the labor market. In some parts of Southeast Asia, there is a disparity in terms of completion of secondary education between rural and urban learners and between working students and those studying full time. Learners from disadvantaged groups including indigenous people, young adults with disabilities, and those from low socio-economic status groups also face challenges in accessing and completing secondary education.

There are many barriers that can push learners out of the formal school system, among which are geographical distance, poverty, conflict, natural disasters, health problems, teenage pregnancy, and other challenging circumstances. Alternative delivery modes (ADMs) are education solutions that may help students who are not in regular schools acquire the needed basic learning competencies and life skills. At the secondary level, these ADMs can provide learners with opportunities to complete their education at their own

pace, given the resources and the context they are in, and thereby prepare them for college and future careers. ADMs offer flexibility, relevance, accreditation, equivalency, and access to affordable education at a lower cost than conventional education systems.

Numerous forms of alternative learning modalities have been and are being implemented by education ministries in Southeast Asia. The SEAMEO Regional Center for Educational Innovation and Technology (INNOTECH) launched a research project to document successful secondary level ADMs in selected SEAMEO-member countries. The aim was to consolidate the best practices in ADM implementation, study more closely how ADMs work given the varied contexts and identify factors that contributed to ADMs' success. This project resulted in the documentation of four exemplary secondary ADM programs, which shall be presented as a series of case studies. These include: i) school-industry partnerships of the Multi Entry-Exit System (MEES) in Indonesia; ii) access to secondary education of Island Learners in Vietnam; iii) flexible learning delivery modalities and the learner-centered support system of the Open High School Program (OHSP) in the Philippines; and iv) the project-based learning approach in support of a needs-based curriculum evident in the Home School Program in Thailand. Each case study discusses the various ADM components and highlights the unique and facilitative factors underlying successful ADMs.

The series of case studies was made possible through active collaboration with in-country researchers from education ministries in Indonesia, Philippines, Thailand, and Vietnam; and other stakeholders who contributed their ideas, insights, and experience in ADM implementation. We hope that these case studies will give the education ministries a better understanding of ADMs as education solutions and widen their perspectives on the benefits of employing such modalities for high school students.



**Ramon C. Bacani**

Center Director

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Finally, we would like to convey our deepest appreciation for the support given by the Ministry of Education and Culture and to Dr. Henderman, former Secretary of the Indonesian National Office for Research and Development of Education, and former SEAMEO INNOTECH Governing Board Member.

## Acronyms

ADM	Alternative Delivery Mode
AY	Academic Year
BAN-S/M	Badan Akreditasi Nasional Sekolah/Madrasah
BOS	Bantuan Operasional Sekolah
CCT	Conditional Cash Transfer
ES	Elementary School
FGD	Focus Group Discussion
GSSS	General Senior Secondary School
ICT	Information and Communication Technology
JHS	Junior High School
LPMP	Lembaga Penjamin Mutu Pendidikan
MEES	Multi Entry-Exit System
MES	Madrasah Elementary School
MJHS	Madrasah Junior High School
MOEC	Ministry of Education and Culture
MOR	Ministry of Religion
MoU	Memorandum of Understanding
MSHS	Madrasah Senior High School
MVS	Madrasah Vocational School
MWI	Ministry of Workforce and Industry

OECD	Organization for Economic Cooperation and Development
OERD	Office of Educational Research and Development
OHSP	Open High School Program
OJT	On-the-Job Training
PLC	Programmable Logic Controller
SEAMEO INNOTECH	Southeast Asian Ministers of Education Organization, Regional Center for Educational Innovation and Technology
SBFP	School-Based Feeding Program
SHS	Senior High School
SSS	Senior Secondary School
TCS	Training Center for the Society
UNESCO	United Nations Educational, Scientific and Cultural Organization
VS	Vocational School
YPPSTT	Yayasan Pusat Pengembangan Sains dan Teknologi Texmaco

# Background of the Study

## Introduction

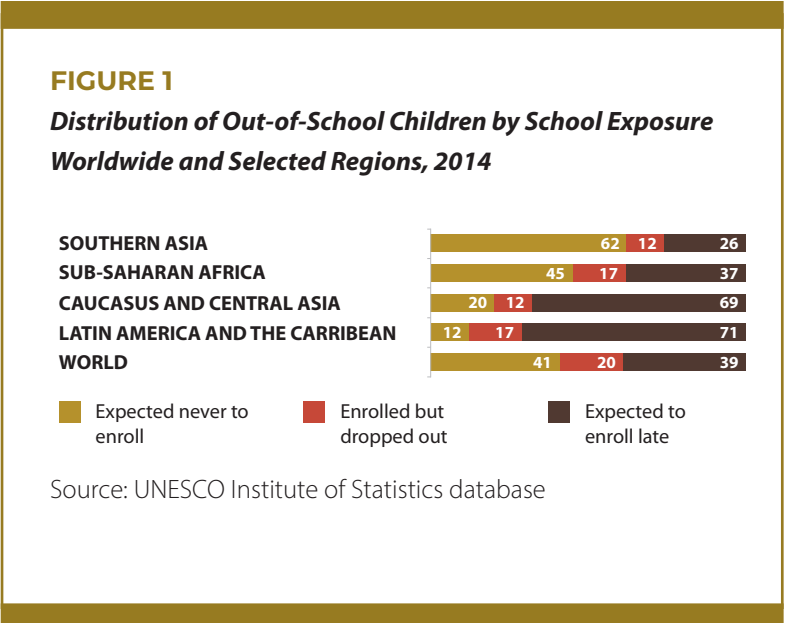
In the past four decades, the demand for secondary education has grown due to current global economic developments that require higher educational qualifications and a certain level of skills. Companies around the world need more well-trained and productive employees that are articulate, competitive yet competent, and able to solve problems, make decisions, accommodate change more rapidly, process information fast, and produce high-quality outputs at lower costs (Figueredo & Anzalone, 2003).

Many developing countries, including those in Southeast Asia, have tried various means to address this demand, even as they continue to raise the educational attainment of their population. Some countries, however, struggle with the issue of increasing school dropout rates, which is fast becoming a serious social problem.

The increasing school dropout rate is a problem affecting not only SEAMEO-member countries but also others beyond Southeast Asia such as Brazil, Mexico, and Africa (**Figure 1**). In South Asia, 40 percent of children drop out after completing primary school; in Africa, over 30 percent do so (Figueredo et al, 2003). Some countries have initiated interventions to try to mitigate the number of dropouts. For example, Brazil and Mexico offer free school meals to encourage attendance. Recently, they have begun providing cereals and other basic food items for children to take home, the quantity of which is based on the number of days the children are in school. For older children such as those in high school, potential dropouts are provided with “wages for learning,” a scheme in which children

are “paid” to stay in school in amounts approximating what they would earn as “start-up” workers with no skills (Gabonton, 2008). The Philippines also implements a similar scheme, the conditional cash transfer (CCT) program and the School-Based Feeding Program (SBFP), to encourage children of indigent families to attend school.

One of the long-term solutions developed to address the increasing demand for quality secondary education, as well as the problem of an increasing dropout rate, is the provision of alternative delivery modes for secondary education.





Among the features of ADMs that help address school dropouts and access barriers are the following:

- ▶ Qualification requirements for learners are not as restrictive as that of conventional schools.
- ▶ Flexibility is given to learners in terms of learning time, entry and exit, and accreditation and/or certification.
- ▶ Learning materials are made more relevant to industry demands and the learners' context, thereby helping learners deal effectively with immediate social issues, improving their chances of getting employed, and enhancing job performance.
- ▶ Learning materials are made simpler and more manageable or "bite-sized" to guarantee a certain level of success on students' learning outcomes.
- ▶ Learners, no matter what their circumstances are, can continue with their schooling and attain some certification which otherwise cannot be achieved through conventional schooling.

## **Objectives**

The overall objective of the SEAMEO INNOTECH Regional Secondary ADM Project is to promote successful secondary level ADMs being implemented in SEAMEO-member countries. More specifically, the Project aims to:

- ▶ describe the secondary level ADM models being implemented in SEAMEO-member countries;

- ▶ conduct case studies of secondary ADM programs in selected SEAMEO-member countries; and
- ▶ document the best practices in secondary ADM implementation in select member countries.

The case studies were conducted to gather additional data to substantiate the information on ADM models consolidated from the Regional Forum on Secondary Level ADMs in Southeast Asia held at SEAMEO INNOTECH in 2012. More specifically, the case studies aimed to:

- ▶ assess the strengths and weaknesses of secondary ADM programs in four SEAMEO-member countries;
- ▶ provide insights on how various secondary ADM programs were implemented in terms of delivery system, organizational structure, sustainability, and other key elements; and
- ▶ highlight the best secondary ADM practices in four SEAMEO member countries as input to the development of a Regional Toolkit on ADM for Secondary Education.

### **Methodology of the Evaluation Study**

Four successful secondary ADM programs from among SEAMEO-member countries were identified during the Regional Forum on Secondary Level ADMs in Southeast Asia in 2012. These were the ADM Program for Island Learners (Vietnam), the Home School Program (Thailand), the Multi Entry-Exit System (Indonesia), and the Open High School Program (Philippines).

The main research method used was a qualitative approach to data collection. Focus group discussions with key ADM implementers and stakeholders (teachers, school staff, and students) as respondents were conducted by SEAMEO INNOTECH with assistance from the in-country case study researchers identified by the education ministries. In addition, the following techniques for data collection were used: class observations, photo and video documentation, key informant interviews, and review of secondary data. The data were collected in a two-day event on October 29-30, 2012 at SMK Texmaco Karawang Vocational School.

## The Multi Entry-Exit System

This case study on Indonesia's Multi Entry-Exit System (MEES) is one of the four country case studies featuring successful secondary level ADMs in Southeast Asia (**Figure 2**). This case study focuses on MEES as implemented in the Texmaco Karawang Vocational School in West Java.

### An Overview of Indonesia's Educational System

Indonesia's formal education system consists of pre-primary school (two years); elementary school (six years); junior secondary school (three years); senior secondary/vocational school (three years); and higher education/university. Higher education takes four to five years for the undergraduate program, two years for a master's degree, three years for a doctorate degree, and three years for a diploma certificate.

Non-formal education (NFE), on the other hand, consists of three ADM programs known as Paket (Package) A, B, and C, and several kinds of courses. Paket A is the non-formal counterpart of elementary education, Paket B of junior secondary education, and Paket C of senior secondary /vocational education.

Since 1994, elementary and junior secondary education have become compulsory: every child has to go to school. In relation to this, the Indonesian government has established an educational law to encourage children aged 6–17 years to obtain either formal or non-formal education.

Senior secondary education in Indonesia requires students to choose a focus of their studies upon passing the 10th grade. A vocational high school (VHS) usually specializes on one or several majors such as business management, tourism, culinary arts, cosmetology, social work, arts and crafts, performing arts, health, technical, marine, agriculture and forestry, textile, technology, shipbuilding, and aviation studies. Upon graduation, students of VHS usually enter the labor market.

In compliance with this law, parents who have school-age children send them to school. However, in spite of free schooling provided by the government, dropouts at each level (primary, junior, and senior secondary/vocational education) remained significantly high. According to the Centre of Educational Statistics, Ministry of Education and Culture (MOEC, 2019), population dropout for senior high school (SHS) and vocational school (VS) in academic year (AY) 2014/15 to 2018/19 are shown on **Table 1**.

**FIGURE 2**  
**Map of Indonesia**



Source: [www.freeworldmaps.net](http://www.freeworldmaps.net)

**TABLE 1**  
**Dropout Rates for Senior High School and Vocational School, AY 2012/13 to 2018/19**

Academic Year	Senior High School (SHS)			Vocational School (VS)			Average Dropout Rate (%)
	No. of Students	No. of Dropouts	Dropout Rate (%)	No. of Students	No. of Dropouts	Dropout Rate (%)	
2012/13	4,196,467	42,471	1.01	4,019,157	124,791	3.10	2.05
2013/14	4,272,860	42,008	0.98	4,189,519	129,037	3.08	2.03
2014/15	4,292,288	27,048	0.63	4,199,657	35,767	0.85	0.74
2015/16	4,232,572	40,454	0.96	4,211,245	77,899	1.85	1.40
2016/17	4,312,407	36,419	0.84	4,334,987	72,744	1.68	1.26
2017/18	4,659,542	31,123	0.67	4,682,913	73,388	1.57	1.12
2018/19	4,783,645	15,953	0.34	4,904,031	25,357	0.52	0.43

Source: Centre of Educational Statistics, Ministry of Education and Culture (MOEC) 2019. This data is completed by Mr. Ecep, the expert in the Centre of Educational Statistics.

**TABLE 2**  
**Dropout Rates for Primary to Vocational Senior Secondary, AY 2011/12 to 2014/15**

School Level/ Type	2011/12		2012/13		2013/14		2014/15	
	No. of Students	Dropout Share (%)	No. of Students	Dropout Share (%)	No. of Students	Dropout Share (%)	No. of Students	Dropout Share (%)
Primary	27,583,919	0.90	26,769,680	1.28	26,504,160	1.10	26,132,141	0.67
Junior Secondary	9,425,336	1.57	9,653,093	1.43	9,715,203	1.42	9,930,647	0.24
Senior Secondary	8,215,624	2.20	8,462,379	2.04	8,491,945	2.02	8,443,820	0.74
General Senior Secondary	4,196,467	1.16	4,272,860	1.01	4,292,288	0.98	4,232,575	0.63
Vocational Senior Secondary	4,019,157	2.20	4,189,519	3.10	4,199,657	3.08	4,211,245	0.85

Source: Centre of Educational Statistics, Ministry of Education and Culture (MOEC) 2019.



## **Rationale for the Establishment of the Multi Entry-Exit System**

One of the problems that the Indonesian government faced is the high dropout rate of school-age youth, particularly at the secondary level in both general and vocational senior secondary schools as shown in **Table 2**. To address this problem, the government established some alternatives. One of the alternative solutions was the institutionalization of a non-formal education equivalency program comprising Paket A, Paket B, and Paket C, which aims to help dropouts finish high school and get academic completion certificates. Elementary school dropouts can take Paket A; those from junior secondary schools can take Paket B; and those from senior secondary/vocational schools can take Paket C.

Another non-formal education route is a program where dropouts who wish to obtain special or specific job skills to qualify as full-time skilled workers or start their own business can attend special vocational courses offered by both government and private sectors. Vocational education may serve the purpose of a safety net for lower income families, who are financially unable to send their children to tertiary level schools.

The government also established an education model not only for dropouts but also for those who had to discontinue their studies due to various reasons such as work, relocation, and economic problems, among others.

## **The Multi Entry-Exit System**

The Multi Entry-Exit System (MEES) is an innovation of the Office of Educational Research and Development (OERD) and functions as an ADM to address the increasing dropout rate particularly among secondary schools. Students who wish to complete their secondary studies and obtain a completion certificate but had to stop schooling can opt to do so via MEES. There are several reasons why these students were unable to finish their secondary education, most of which are economic in nature. Some students had to work to help their families; some did not have enough money to pay for school fees; others did not have enough time, or physical capacities and resources to go to school; and some had to relocate.

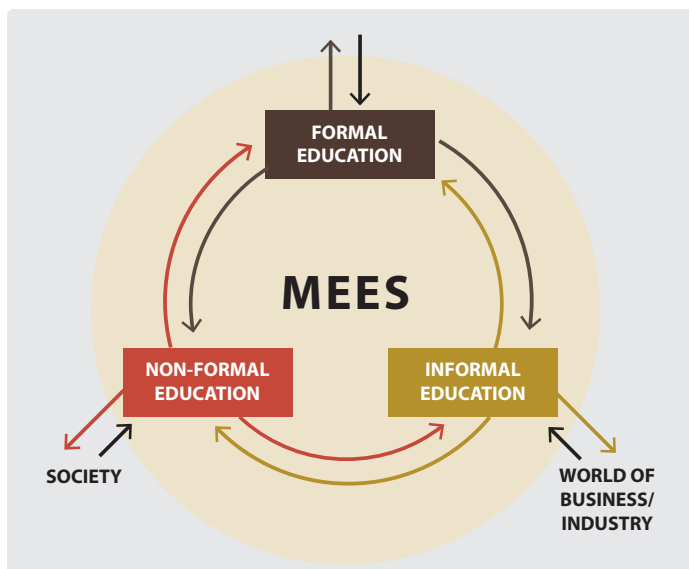
MEES is an educational model that gives a chance to students who stopped schooling for a certain period due to work or relocation. The system allows the students to continue with their studies at their own school or in another school to finish the course and get completion certificates.

MEES is a flexible educational model that emphasizes adjustability in terms of time, place of schooling, level of cross-cutting, stream, and education type. Its flexibility extends to allowing learners to determine when they will attend school, what level of education they wish to complete, and what stream of education (i.e., formal, non-formal, informal, general or vocational) they wish to pursue. The system allows the learners to stop schooling at certain times and to come back anytime they are ready based on their needs, which may include learning a new skill or reskilling at their own school or at another school.

The diagrams on **Figure 3** and **Figure 4** show how the Multi Entry-Exit System works.

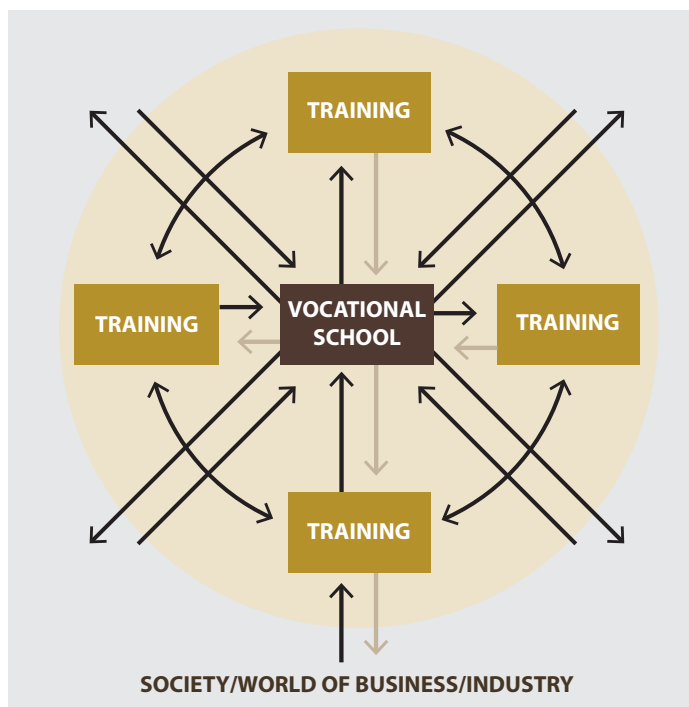
**FIGURE 3**

***MEES Model for All Streams and Levels of Education***



Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012

**FIGURE 4**  
**MEES Model for Secondary Level**



Source: The Office of Educational Research and Development,  
Ministry of Education and Culture, 2012

**Figure 3** illustrates MEES as a program which is open to those coming from the three education streams: formal and informal education or from other non-formal programs, or those wishing to get into either of these streams. Students will receive a certificate of competency equivalent to the kind and level of competence they have acquired from completing any of the three.

**Figure 4** shows that vocational secondary schools offer several kinds of training for students. They can freely enter the MEES program or exit from the MEES to transfer to other education and training institutions, have part-time/full time jobs, or engage in business.

### **Support Policies that Encourage Implementation of the Multi Entry-Exit System**

The development and implementation of MEES was based on the following policies:

- ▶ **Rule of National Education System No. 20, Year 2003, Article 4, Subsection 2:**

This policy states that education is conducted systematically using the open system while addressing multiple disciplines. An open education system promotes flexibility in determining when and what programs across levels and streams of education learners can take. A learner can enter and exit the system multiple times, depending on his/her academic requirements. As such, he/she can study and work at the same time by choosing to take programs that use a combination of face-to-face instruction and distance learning. The system is open

in such a way that it also addresses multiple disciplines that include culture, empowerment, character building, personal identity, and skills development.

▶ **Rule of National Education System No. 2, Year 1989:**

This policy discusses the two streams of education (formal and non-formal/out-of-school education) that any learner can take.

### **Principles of the Multi Entry-Exit System**

The design and implementation of MEES is founded on the following principles:

▶ **Flexibility in Choosing the Kind of Education:**

Learners are free to enter and exit from different streams of education: formal, non-formal, informal. Formal education refers to a regular kind of schooling that learners go through in either public or private institutions. Non-formal education, meanwhile, refers to taking up vocational and technical courses for specific skills supported by the government or private sectors. Finally, informal education generally refers to self-directed learning.

▶ **Equal Competency Certification:**

The MEES learners are viewed as having been endowed with the same level of competence and receive the same certification of completion as those who finished their secondary education in formal schools.

▶ **Incorporation of Lifelong Education and Mastery of Learning:**

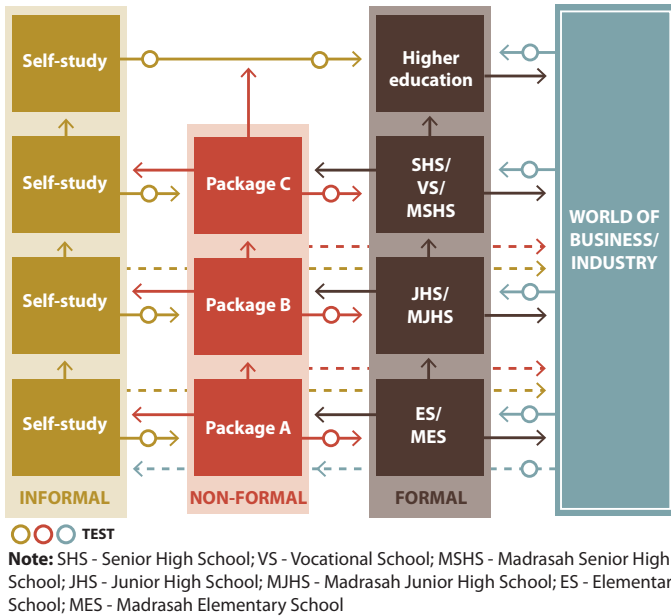
Apart from mastery of learning, the MEES students are also given the opportunity to pursue lifelong education through the achievement of the goals of UNESCO's Four Pillars of Learning: i.e., Learning to Know, Learning to Do, Learning to Live Together, and Learning to Be.

▶ **Multi-sectoral Coordination:**

Different aspects of the MEES program require coordination and cooperation of various sectors, such as private industries and the school community. For example, learner registration should be coordinated among stakeholders, industries, and the society as a whole.

## The MEES Process Framework

**FIGURE 5**  
**MEES Process Framework**



Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012

Students may enroll at the MEES coming from any stream of education: formal, non-formal, or informal; or from any level, i.e.:

- a) elementary/ Madrasah elementary/ Paket A;
- b) junior/ Madrasah junior high school/ Paket B; or
- c) vocational/ senior/ Madrasah senior high school/ Paket C.



They may even come from the world of business and industry. They may also exit from the MEES and enter to any of the streams. Either way, students are required to take a placement test to determine their appropriate level of education. When they finish a particular stream, they receive a certificate of competency equivalent to the kind and level of competency they have acquired and completed (**Figure 5**).

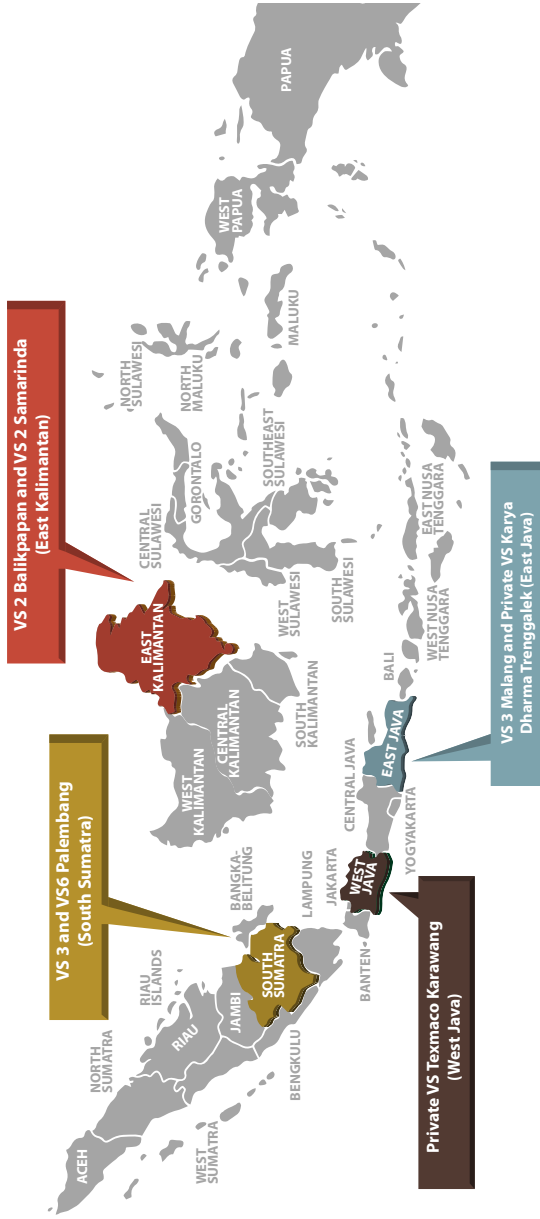
### **Priority Targets**

The MEES can be implemented in elementary schools and Madrasah elementary schools; junior high schools and Madrasah junior high schools; senior high schools and Madrasah senior high schools; vocational schools, and training centers managed either by public or private institutions. During its pilot implementation, seven vocational schools in four provinces were considered as the pioneering schools. These schools offered various technical trainings such as electrical technology, machine handling, and construction and building technology programs.

The following were the pilot schools and **Figure 6** shows a map indicating school locations:

- ▶ **South Sumatra:** Public Vocational School (VS) 3 and Public VS 6 Palembang
- ▶ **East Java:** Public VS 3 Malang and Private VS Karya Dharma Trenggalek
- ▶ **East Kalimantan:** Public VS 2 Balikpapan and Public VS 2 Samarinda
- ▶ **West Java:** Private VS Texmaco Karawang

**FIGURE 6**  
**MEES Pilot School Locations**



Source: [www.freeworldmaps.net](http://www.freeworldmaps.net)

In the years after its initial implementation, the MEES was expanded, covering fifty-five (55) schools in eight (8) provinces as shown in **Table 3**.

**TABLE 3**

***The MEES Implementing Schools***

**West Java**

1. Public Senior High School (SHS) Kosgoro Karawang
2. Public Madrasah Senior High School (MSHS) Karawang Madrasah
3. Training Center for the Society (TCS) Cepat Tepat/Paket C Karawang
4. Public Junior High School (JHS) Islam Karawang
5. Public Madrasah Junior High School (MJHS) Karawang
6. Training Center for the Society (TCS) Bina Sejahtera/Paket B Karawang
7. Public Elementary School (ES) Tanjung Mekar 3 Karawang
8. Training Center for the Society (TCS) Tanjungpura Karawang/Paket A Karawang

**East Java**

9. Public Madrasah Senior High School (MSHS) 9
10. Public Madrasah Senior High School (MSHS) 1
11. Training Center for the Society (TCS) Kota Malang/Paket C/ Paket B
12. Public Junior High School (JHS) 17
13. Public Madrasah Junior High School (MJHS) Malang

### **North Sumatra**

14. Public Vocational School (VS) 5 Medan
15. Public Madrasah Senior High School (MSHS) 7 Medan
16. Public Madrasah Senior High School (MSHS) 2 Medan
17. Training Center for the Society (TCS) Pembangunan Nasional/Paket C Medan
18. Public Junior High School (JHS) 18 Medan
19. Public Madrasah Junior High School (MJHS) 3 Medan
20. Training Center for the Society (TCS) Teladan/Paket B Medan
21. Public Elementary School (ES) 060855 Medan
22. Public Madrasah Elementary School (MES) Tanjungsari Medan
23. Training Center for the Society (TCS) Econom/Paket A Medan

### **South Sumatra**

24. Public Madrasah Senior High School (MSHS) 13
25. Public Madrasah Senior High School (MSHS) 1
26. Training Center for the Society (TCS) Cahaya/Paket C/Paket B/Paket A
27. Public Junior High School (JHS) 51
28. Public Madrasah Junior High School (MJHS) 1
29. Public Elementary School (ES) 1
30. Training Center for the Society (TCS) 1 Palembang

### **Central Kalimantan**

31. Public Senior High School (SHS)
32. Public Madrasah Senior High School (MSHS)
33. Training Center for the Society (TCS) Paket C Palangkaraya

### **East Kalimantan**

34. Public Madrasah Senior High School (MSHS) 9 Samarinda
35. Training Center for the Society (TCS) Samarinda/Paket C
36. Public Junior High School (JHS) 21 Balikpapan
37. Training Center for the Society (TCS) Balikpapan/Paket B

### **South Sulawesi**

38. VS Muhamadiyah 2 Bontoala Makasar
39. Public Madrasah Senior High School (MSHS) 19 Makasar
40. Training Center for the Society (TCS) Yaskib Makasar/Paket C
41. Training Center for the Society (TCS) Tari Makasar/Paket B
42. Public Junior High School (JHS) Kr. Elim Makasar
43. Public Madrasah Junior High School (MJHS) Model Makasar
44. Public Elementary School (ES) Pampang Makasar
45. Public Madrasah Elementary School (MES) Banta Banteng Makasar
46. Training Center for the Society (TCS) Adipura/Paket A

## **West Nusa Tenggara**

47. Public Madrasah Senior High School (MSHS) 6 Mataram
48. Public Madrasah Senior High School (MSHS) 2 Mataram
49. Training Center for the Society (TCS) Sinar Harapan Mataram/Paket C
50. Public Junior High School (JHS) 3 Mataram
51. Public Madrasah Junior High School (MJHS) 2 Mataram
52. Training Center for the Society (TCS) A1 Hidayah Mataram/Paket B
53. Public Elementary School (ES) 13 Ampenan
54. Public Madrasah Elementary School (MES) Punia Mataram
55. Training Center for the Society (TCS) Hijratul Rasul/Paket A

Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012

## **Delivery Strategies**

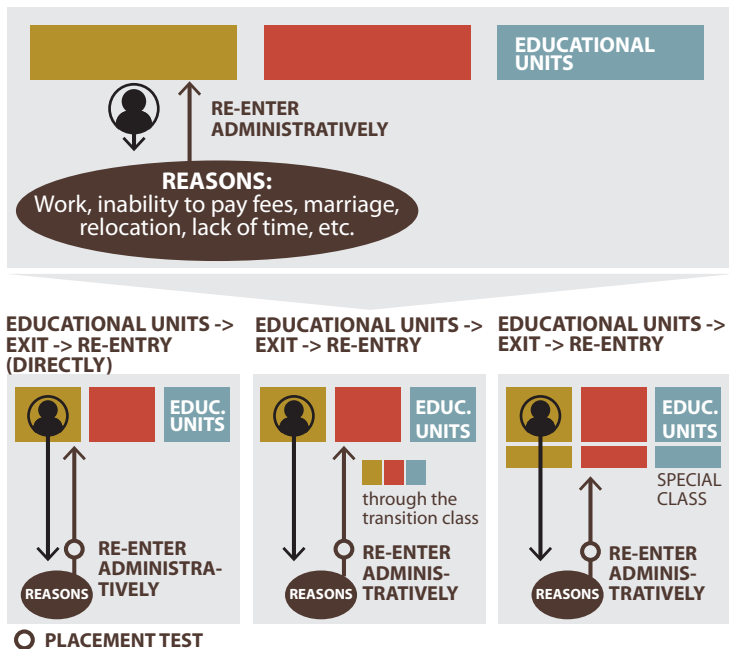
The four models used as a guiding framework to deliver the MEES in Indonesia are detailed in the next pages.

## Model 1: Entry-Exit

This model allows learners who stopped studying for a certain period of time in either a formal or non-formal setting (i.e., Paket Programs) to go back to school. It caters to learners who were temporarily out of school because they had to work to help their parents, were unable to pay the necessary school fees, got married, moved to another city/town, or just did not have enough time to attend school. It also allows them to enter their chosen stream(s) where they left off after taking a placement test.

**FIGURE 7**

### **MEES Model 1: Entry-Exit**



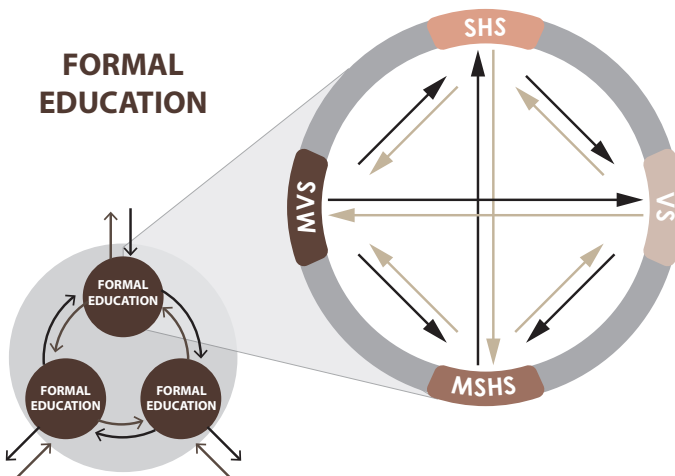
Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012

## Model 2: Entry-Exit in a Single Level Across Streams

This model allows learners in a certain stream to exit anytime they want to and to reenter the same stream but enrolling only in courses/ programs that interest them or will help them improve their skills (e.g., employable skills). Again, the level at which a learner reenters the stream is subject to the results of a placement test.

**FIGURE 8**

**MEES Model 2: Entry-Exit in a Single Level Across Streams**



(Notes: MVS = Madrasah Vocational School; VS = Vocational School; SHS =Senior High School; MSMS = Madrasah Senior High School)

Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012



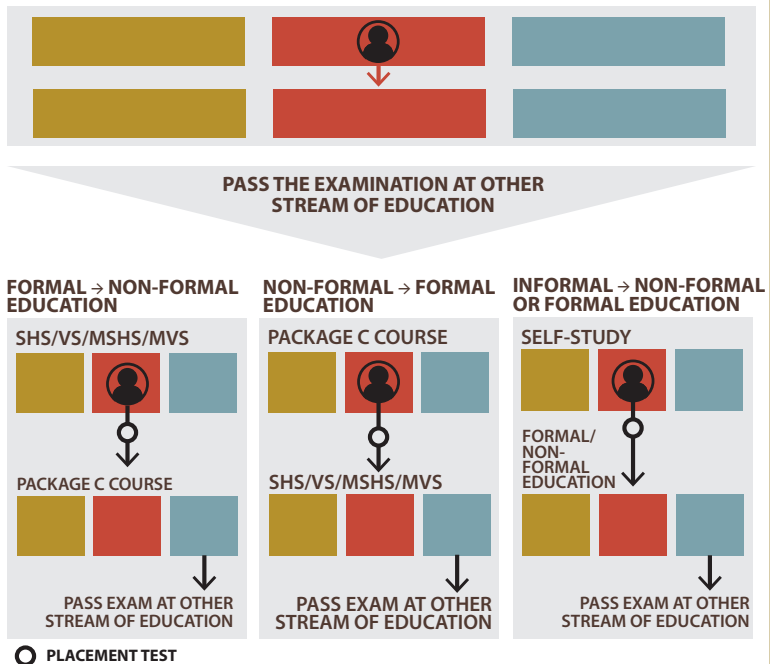
### Model 3: Entry-Exit from One Stream to Another

This model allows learners to cross over from the informal to non-formal, non-formal to formal, or informal to formal stream at any time based on their interests, talents, motivations, or economic conditions. Entry admission is again based on results of the placement test.

**FIGURE 9**

#### **MEES Model 3: Entry-Exit from One Stream to Another**

##### ENTRY-EXIT THROUGH EDUCATIONAL STREAMS

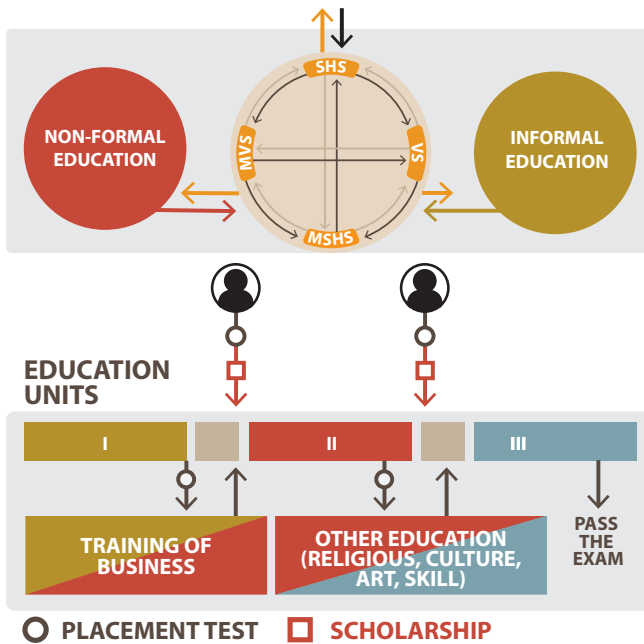


Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012

## Model 4: Combination of Models 1-3

This model is a combination of the three models where learners are given full flexibility and all of the chances to exit and reenter the education system regardless of stream and grade level, according to their talents, motivations, and economic conditions. Learners can exit and reenter from and to the same stream or from one stream to another, or from and to the same level or from one level to another, depending, of course, on the results of the placement test.

**FIGURE 10**  
**MEES Model 4: Combination of Models 1–3**

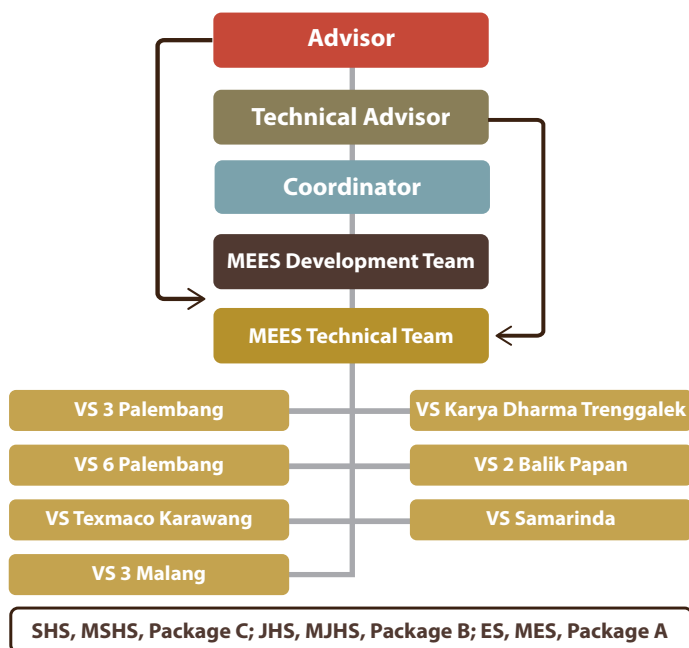


Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012

## Implementation Strategies

To properly implement the MEES, a separate bureau in the Ministry of Education and Culture (MOEC) was created and mandated to oversee related tasks. The diagram in **Figure 11** shows the organizational structure of MEES.

**FIGURE 11**  
**MEES Structural Mechanism**



Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012

The basis for the implementation of MEES is described in the Rule of National Education System No. 20, Year 2003, Article 4, Subsection 2, which states that education should be conducted systematically using the open system while addressing multiple disciplines. The MEES was first designed in 2004 by the Office of Educational Research and Development (OERD), which is considered as the MOEC's innovator. After designing the ADM, schools from several districts that are committed to implementing MEES were chosen to participate as pilot schools. OERD invited educational district and vocational school heads to attend the orientation and preparation meetings at the MOEC central office and their respective educational district offices.

The MEES was introduced to the school heads of the participating schools and district officials in a national-level meeting. Particulars of the program's implementation in the participating schools, meanwhile, were discussed during district-level meetings. As part of MOEC, the educational district offices were tasked to make policy-related decisions on MEES implementation, as stated in the Rule of the National Education System No. 20, Year 2003, Article 4, Subsection 2.

The school heads who attended the orientation and meetings were expected to discuss the MEES with their school teachers and staff. They were also expected to introduce the program to students and various stakeholders, including industry partners, parents, and the community. Upon completing the capacity-building for school staff, students, parents, and various stakeholders, the schools embarked on identifying the strategies for effective MEES implementation. These included designing relevant programs (i.e., accounting, electricity, and machinery) in collaboration with industry partners.

Within MOEC lies the Institution for Educational Quality Assurance or Lembaga Penjamin Mutu Pendidikan (LPMP). As a technical unit found in every province, the LMLP helps provincial governments supervise, monitor, and provide advice to elementary, junior high, senior high, and vocational schools, along with non-formal education institutions, to maintain a desired level of educational quality and to achieve the national standards. Since the MEES has been made part of the national education system, the LPMP also supervises, monitors, and provides technical advice to MEES participants.

Every school in Indonesia adheres to the standards set by independent boards that determine if an ADM could be integrated in the existing streams of education. One such body is the Board of National Accreditation for Madrasah Senior High Schools or Badan Akreditasi Nasional Sekolah/Madrasah (BAN-S/M). The Board of National Education Accreditation for Non-formal Education, meanwhile, determines the feasibility of integrating a program and/or level in existing streams of education. Schools that wish to use MEES need to present their plans to these boards before embarking on actual implementation.

Implementing MEES at the school level involves the district and subdistrict education offices, business and industry partners, and the parent organizations. Each of them has a role to play in implementing the MEES. The school head is, however, the most critical player since the MEES' technical and administrative management rests on his/her shoulders. **Table 4** shows the various stakeholders' roles and functions in MEES implementation at the school level.

**TABLE 4*****Stakeholder's Roles and Functions on MEES Implementation***

<b>Stakeholders</b>	<b>Roles and Functions</b>
OERD of MOEC	<ul style="list-style-type: none"><li>• Design and develop the MEES</li><li>• Orient district offices and school heads about MEES</li></ul>
District and sub-district offices	<ul style="list-style-type: none"><li>• Create policies regarding MEES implementation for schools under their jurisdiction</li><li>• Assist in introducing MEES to school staff, parents, students, industry partners, and the community as a whole</li><li>• Supervise, monitor, and provide advice to schools regarding MEES implementation</li></ul>

**Stakeholders****Roles and Functions**

Institution for Educational Quality Assurance

- Supervise, monitor, and give advice to elementary schools, junior high and senior high schools, and vocational schools, along with non-formal education institutions, including MEES to align with quality-related goals in the achievement of national standards.

Board of National Accreditation of Schools and Madrasah Senior High Schools and Vocational Schools

- Determine the feasibility of programs and/or streams of education in accordance with national standards.

Board of National Education Accreditation for Non-formal Education

- Determine the feasibility of programs and/or levels of non-formal education in accordance with national standards.

**Stakeholders****Roles and Functions**

Other key stakeholders (parents, society, business, and industry partners, etc.)

- Participate in creating implementation strategies and designing programs and learning materials.
- Collaborate with implementing schools to prepare learning materials that have been contextualized to fit the needs of learners and all stakeholders.
- Issue the necessary certificates to learners who gained actual work experience to qualify for employment in business and industry of their choice as a substitute for completing/passing competency tests.

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School heads

- Take full responsibility for technical and administrative management of the MEES program.
- 

Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012



## Curriculum

The MEES curriculum's design is based on the needs of learners in accordance with business and industry requirements of the immediate communities. It is collaboratively designed by staff of the implementing schools and business and industry partners in the hope of providing learners with basic workplace competencies necessary to enter the world of business and/or industry.

The MEES curriculum includes basic subjects such as religion, Moral Pancasila, and the Indonesian language as taught in formal schools. Some adjustments to fit the learners' context were, however, made to its contents. Subjects that require skills practice (practicum) allow the MEES learners to gain job-specific skills and other technical competencies that they can readily apply to their work. Unlike a vocational school learner who still needs to take certain academic subjects as those taught in regular schools, the MEES learners can opt to take subjects that are not taught in formal schools as long as these subjects have the same number of units/credits. In regular and even vocational schools, learners need to pass the theoretical and practical tests at a given time before they can obtain a certificate of completion. A MEES learner can opt to take the same test(s) at his/her desired time.

The learning materials are designed for the learner's specific context, needs, and interests. They have been specially crafted by business and industry experts to help the MEES learners obtain the required competencies (knowledge and skills) for their job placement. The materials have been tailor-made to fit a learner's proficiency/competency based on results of the placement test, making learning scalable, adaptable, and contextualized to learners' needs.

## Instructional System

The MEES students follow the same instructional system as students in regular schools. The difference lies in the learning materials that they use. The materials used by MEES learners have been collaboratively prepared with business and industry partners and contextualized to fit their competency levels. Instruction involves face-to-face, e-learning platforms, or both using the blended learning approach. Practicum is required, so internship with a business or industry partner or even actual work experience can be considered part of the learner's requirements for course completion.



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Students practicing their skills in computer and industrial electricity at Texmaco Karawang Vocational School. (Photo credit: SEAMEO INNOTECH)

## **Learner Assessment**

Learner assessment in MEES is conducted through formative and summative tests per subject and a national final examination. The testing tools used are designed by the school, principal, and district education offices in collaboration with the business and industry sector.

The results of formative and summative tests are combined with the learners' scores in terms of technical skills as judged by the business or industry experts that they work with. In general, however, as most MEES learners are employed, they are no longer required to take competency assessments or skills tests; instead, their actual work experience is recognized as part of the learner assessment and performance.

Learning assessment in MEES is conducted by the district and provincial education offices who also monitor and evaluate the effectiveness of the MEES program in addressing the needs of learners.

## **Support Systems**

The MEES implementation support system is mainly provided through a partnership among the school, education district and provincial offices, and the Ministry of Workforce and Industry (MWI). This is demonstrated by the program to link and match schools with industries. The program aims to develop the capacities of schools, particularly vocational schools, in delivering its courses and is supported through a memorandum of understanding (MoU) between MOEC and the participating industry. Industry experts become resource persons as part of the capacity-building program while

aiding in the development of learning materials and assessment tools. The linked industries also participate by providing employment and/or “on-the-job training” (OJT) to learners who opt to “exit” from school to earn and later return or “enter” the school again using their work experience as a substitute for competency or skills tests that are required for program completion.

Another form of support comes from the community members where district offices and schools collaboratively work with village chiefs and education subdistrict office leaders. They work together to inform community members and promote the MEES, especially to those who have family members who wish to continue their studies but are unable to go to regular school.

Policies and funds from the Ministry of Religion (MOR) and MOEC also facilitate the successful implementation of MEES. These institutions craft education policies and distribute education funds from the ministry level down to the provincial education authorities. The funds are later distributed to the municipal and regional authorities, and then to the schools.

A so-called Operation School Help or Bantuan Operasional Sekolah (BOS) fund is specifically allocated to each MEES student per year. This money intends to help schools finance their operational costs so they can continuously provide quality education to both public and private school learners. Apart from BOS, the MEES implementing schools also receive funding for all their students’ needs from the government. As such, these schools do not need to charge learners with additional fees, except for those taking up advanced subjects/ courses with higher educational standards which are not part of the basic education curriculum (e.g., English subject).

Private schools, meanwhile, may collect fees from students or find other sources of funds if the BOS funding is not available. The MEES learners who can afford the school fees are obliged to pay. The amount of school fee depends on the financial capability of students. Students who cannot afford to pay school fees can also receive financial aid from the parents' association. If the parents' association lacks funding, some students can opt for discounts or pay at a much later time (i.e., up to six months after taking a course). If they are graduating, however, they can only get their diploma after settling all school fees.

Funding for non-formal schools are disbursed by the MOEC office (ministry level) based on the schools' annual proposal for a one-year block grant. These schools are monitored and supervised by the regional and municipal education offices in terms of operational requirements and policy compliance.

### **Quality Assurance Mechanism**

All Indonesian schools go through a process of accreditation as part of MOEC's quality assurance mechanism. A school can receive any of these three accreditations: Level A, Level B, and Level C.

Level C schools can fulfill only the minimum required standards. The schools partly comply with standard facilities for teaching and learning. They do not have information and communication technology (ICT) facilities and use only traditional teaching-learning methods. Not all of their teachers possess the necessary educational qualifications and as a result, the teachers meet students' learning needs only partially.

Level B schools, meanwhile, comply with a certain extent of the required standards. The schools have at least some of the required facilities, including air-conditioned rooms, ICT equipment, etc. All teachers have bachelor's degrees with some taking up master's degrees. They properly implement the teaching-learning processes, as evidenced by an 85 percent annual final examination rate.

Finally, Level A schools have nearly all the requirements for school accreditation. All teaching staff have bachelor's degrees with most of them expecting to be on their way to obtaining master's and doctorate degrees. The schools have complete ICT facilities and thus able to conduct technology-aided classes (computer-assisted programs). Physical environment is clean and green, making it conducive for learning. Each year, 95 to 100 per cent of their graduates pass the national examination.

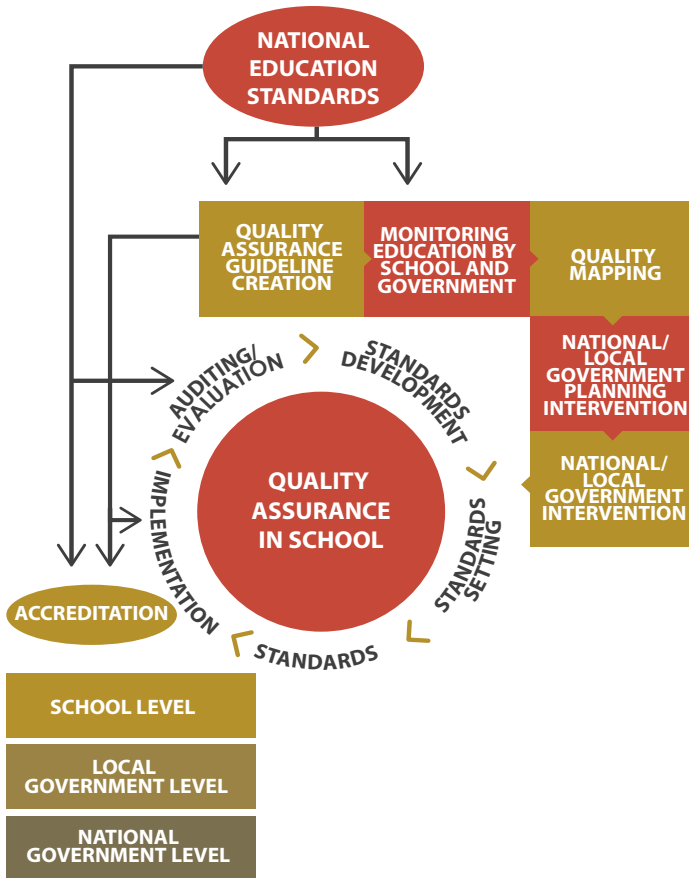
MEEs's quality assurance mechanism is anchored on the National Education Standards' criteria for school accreditation. To guarantee and control the quality of education, accreditation, evaluation, and certification are regularly conducted in accordance with the Minister's Rule No. 19, Year 2005, which states all the requirements that all learners must meet to take the national examination.

Assessment activities are not just extended to the schools. Regular monitoring and evaluation of students' progress is also conducted. All learners who have completed the MEEs program are permitted to take the national examination that allows the authorities to measure the students' level of competency and performance.

School principals also monitor the MEES teaching and learning process in their respective institutions while the education district and subdistrict office staff (through supervisors) ensure that ADM is properly implemented on a regular basis. MEES implementation follows quality assurance standards. Evaluation is conducted against these standards to determine which specific areas/levels the schools as well as teachers need to improve on. In addition, all MEES schools go through a process of accreditation which is administered by MOEC. The schools receive advice from MOEC on necessary enhancements based on their accreditation level.

The MEES's quality assurance process ensures that all participating schools are providing the best possible education. Quality assurance is focused on quality and quantity of graduates each year. The results of quality monitoring and evaluation are used as inputs to improve the MEES program related to planning, design, development, and production activities including the teaching and learning process. **Figure 12** shows the MEES quality assurance process that is anchored on the National Education Standards.

**FIGURE 12**  
**MEES Quality Assurance Process**



Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012



The MEES quality assurance process follows the Shewhart Cycle, which comprises four steps: Plan, Do, Check, and Act. Following these steps will ensure proper program evaluation and continuous improvement on a regular basis. The steps in the MEES quality assurance process are as follows:

1. **PLAN.** In planning, the MEES objectives and required processes or changes to achieve the desired results are identified. This step includes determining specific quality levels or measurable results. MEES strives to ensure that excellence is achieved in addressing the learners' needs. The quality assurance process helps schools determine what steps to take so they can appropriately address the needs of their learners in terms of timelines and context. Quality assurance also helps improve the MEES processes to be more efficient where implementing schools will continuously refine and enhance their implementation.

For example, in Texmaco Karawang Vocational School, the plan specifies the quality expected of graduates before they take the national examination. Under the course on Industrial Electricity Technology, for example, the Texmaco Karawang Vocational School requires the learners to master selected major subjects first before they can take the final examination. Learners are required to engage in practical work in a partner company such as ASI Company and Harmonic Company or some other nearby industrial electric companies. As part of their practicum, learners are trained by experienced workers and required to contribute to the company's performance while meeting quality standards.

2. **DO.** In this step, the MEES processes are continuously evaluated and improved to ascertain if changes need to be made. This could mean a total revision of processes to correct the technical aspects of the program or making very minor changes to improve efficiency or accuracy of learners' products/services.

Within the six-month-long compulsory work in a partner company, for instance, a MEES implementing school can discuss with the company and educational district officials the changes that need to be prioritized. Only when a consensus is achieved can changes be made.

3. **CHECK.** This step allows stakeholders to continuously monitor and evaluate the processes and results to ensure that they meet predetermined objectives. Checking involves testing out other objective measurements to determine if expected performance outputs/outcomes are indeed being met.

In this step, MEES schools such as Texmaco Karawang Vocational School can identify technical/vocational programs that work and those that do not. Challenges and constraints in MEES implementation are discussed as well with stakeholders, including the district and partner company officials to jointly address these challenges with appropriate solutions.

4. **ACT.** This step allows the MEES schools and stakeholders to take necessary actions on problems with MEES implementation to achieve the desired improvements goals. After all problems have been identified and discussed, strategies on process change are created and arrangements for actual application and implementation are done.

## Elements of Success

MEES is an excellent alternative learning modality, especially for students who are already in the workforce. It offers great flexibility in terms of time and location for learners to complete their studies. It is beneficial as well to the industries and businesses as it provides job-ready skilled workers who have the competencies needed in specific fields of work.

**Table 5** compares the number of learners enrolled in MEES programs in Texmaco Karawang Vocational School with the number of national examination passers. This reflects the quality of education that students obtained from a technical course, having a 100% passing mark for all MEES students. In addition, **Table 6** breaks down the number of enrollees by secondary year level in two MEES programs of study.

**TABLE 5**  
**MEES Enrollment and Examination Passers, AY 2012/13**

Competency Area/Program	Enrollment		Examination Passers		Passing Rate(%)	Number of Classes
	Male	Female	Male	Female		
Techniques in handling machinery	371	0	371	0	100%	8
Techniques used in industrial electricity	97	45	97	45	100%	5
<b>TOTAL</b>	<b>468</b>	<b>45</b>	<b>468</b>	<b>45</b>	<b>100%</b>	<b>13</b>

Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012

**TABLE 6**  
**MEES Learners by Secondary Year Level, AY 2012/13**

Competency Area/Program	*Year 1		No. of Classes	*Year 2		No. of Classes	*Year 3		No. of Classes	Total
	M	F		M	F		M	F		
Techniques in handling machinery	371	0	8	342	0	8	290	0	8	1,003
Techniques used in industrial electricity	79	45	3	98	26	3	63	35	3	346
<b>Total</b>	<b>450</b>	<b>45</b>	<b>11</b>	<b>440</b>	<b>26</b>	<b>11</b>	<b>353</b>	<b>35</b>	<b>11</b>	<b>1,349</b>

Legend: \* Secondary Grade/Year Level

Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012

The factors that contribute to successful MEES implementation are as follows:

1. **Flexibility in Time.** A successful MEES school must first and foremost offer learners flexibility in terms of class schedule. The learners are the ones determining when and where they can go to school so they can still continue to work. Adapting the MEES class schedule to learners' needs is key to keep them in school.
2. **Relevant Curriculum and Learning Materials.** The curriculum and learning materials that MEES schools use have been specifically designed to meet learners' needs with the help of business and industry partners and other stakeholders. As such, the learners can obtain the right knowledge, skills, and completion certificate which are aligned with the competency requirements of their future employers.

The participation of business and industry in the design of the curriculum and learning materials is an affirmation of their strong commitment to the program. A curriculum aligned to their requirements is beneficial to both the learners and the industries as it ensures that young workers acquire the necessary skills that they need to apply in the workplace.

3. **Link and Match Mechanism.** Since the MEES schools specialize in providing vocational training and have strong links to industry partners, they have established an effective link and match program. This program helps MEES schools to establish partnerships with the right companies in their communities by forging a Memoranda of Understanding (MoU). In return, partner companies get MEES graduates with the required soft

and hard skills as workers/employees. The MEES schools will have to match the skills identified by partner companies with the programs that they offer. This is the reason why representatives from partner companies have a hand in designing programs, developing learning materials, and providing skills trainings, especially during the six-month compulsory on-the-job training. Industry experts are also tapped to serve as resource persons in specific courses. This link and match program increases the possibility of employment among MEES graduates and lowers the investment of partner companies in employee skills training and development.

4. **Strong Quality Assurance System.** Constant improvements and enhancements to the MEES teaching-learning process resulted in improvements in the quality and quantity of graduates. Quality is ensured through well-established quality assurance standards and systems. On this account, MEES target learners—who have previously dropped out of school—are provided a chance to continue their studies while working. Also, finishing a MEES program means getting a completion certificate equivalent to a secondary school diploma. Hence, senior high school graduates not only get better job opportunities but can even become entrepreneurs themselves.

## Sustainability Mechanisms

To sustain the success of MEES as an alternative delivery mode for basic education and to scale up its implementation in the country, MOEC has capitalized on two major mechanisms:

1. **Well-established Monitoring and Evaluation:** Program monitoring and evaluation is the responsibility of the district/subdistrict supervisor. MEES monitoring and evaluation is done together with regular school monitoring for other streams of education.

The district/subdistrict supervisor conducts monitoring and evaluation at two levels: school (program-related) and classroom (instruction-related). At the school level, the supervisor monitors and evaluates how school principals manage the MEES program and discusses the results with the school heads. At the classroom level, the supervisor helps teachers improve the teaching-learning process by giving them technical advice on developing and improving their teaching-learning materials and activities, including lesson planning and classroom management. Improvements stemming from these monitoring and evaluation activities are aligned with program goals. Monitoring and evaluation is, however, not a one-way process. The supervisor also listens to feedback from the school principal and the teachers so they can work together in addressing challenges and issues.



A team from MOEC's OERD and the Directorate of Senior High School Education and the district/subdistrict supervisor also conduct MEES school visits to identify areas that are challenging or in need of improvement. This is done with the help of school principals, teachers, and students, among others.

2. **Regular Workshops for MEES Implementers:** Workshops are conducted at least every semester in every district and province where MEES schools are located. The participants include the MEES supervisors, education district staff, and the students' parents. In these workshops, a sharing of experiences and valuable insights in making the existing programs successful is held. Participants also find ways to address the issues and problems on MEES implementation.

A key lesson learned from the workshops is the importance of linking knowledge and skills with actual application. Learners from the Texmaco Kawarang Vocational School, for example, are taught skills that companies in their vicinity need. In the Machinery courses, for instance, students learn to use automotive machines and other heavy machineries for manufacturing at the Texmaco Group of Companies. When the learners graduate from the Texmaco Karawang Vocational School, they no longer need to be trained on entry-level skills for employment at the Texmaco Group of Companies. They can be instantly deployed to work after graduation.

The provincial education offices also conduct workshops in collaboration with business and industry partners. These workshops not only allow the participants to share their experiences with MEES but also discuss what their local businesses need in

terms of labor and skills requirement, including quantitative projections for manpower recruitment within a certain period (i.e., short/medium/long-term forecasts).

Each year, the MOEC hosts a national meeting to discuss educational issues and problems and also conducts annual education planning/re-programming. This is followed by another meeting of all educators at all levels to discuss the implementation, management, and financing of programs, including the MEES program.

The district/subdistrict education offices and school principals can then revise their plans and programs based on inputs from the workshops and meetings. At the school level, the principal can share his/her learnings with teachers, students, and even parents so they can revise and prioritize their existing programs.

### **Strategy for Upscaling**

To encourage other schools to implement the MEES, the MOEC invites the provincial/district educational officers and school management staff (i.e., school heads and lead teachers) to take part in a week-long seminar and workshop in Jakarta each year. The participants are engaged in discussions of best practices and experience sharing with representatives from pilot schools, including Public VS 2 Balikpapan, Public VS 2 Samarinda, Public VS 3 Malang, and Private VS Karya Dharma Trenggalek, Private VS Texmaco Karawang, Public VS 3 Palembang, and Public VS 6 Palembang. After attending the seminar-workshop, the participants are asked to conduct a week-long mini-workshop to design programs and come up with strategies for MEES imple-

mentation in their own province/district. The programs and strategies are designed to meet the needs of their business and industry partners and the society as a whole, along with their intended learners.

A MEES evaluation/assessment team from MOEC (ministry level) takes a look at the programs to ensure that they meet the standards and can be implemented and sustained by the schools. Provincial and district education offices use the Rules of the Education System as an anchor for evaluating the MEES implementation. The Rules of the Education System is founded on the Rule of Education No. 20, Year 2003, which states that decisions regarding school systems must be aligned with the National Education Standards and the Directorate of Basic and Middle School (Senior High and Vocational Schools) No. 282/C/Kep/M/1994.

The Rule of National Education No. 20, Year 2003, on the other hand, states that the national education system should guarantee educational equality, improve the quality and relevance of education, and enhance the efficiency of educational management. Article 26 of the said rule mandates that standards of non-formal education should be at par with formal education. As such, the national and local governments have appointed supervisors to monitor the MEES processes and learners' progress and evaluate the students' learning achievement as embodied under Article 58, Section 1 of the said Rule.

# Texmaco Karawang Vocational School: A Multiple Exit-Entry System School in West Java

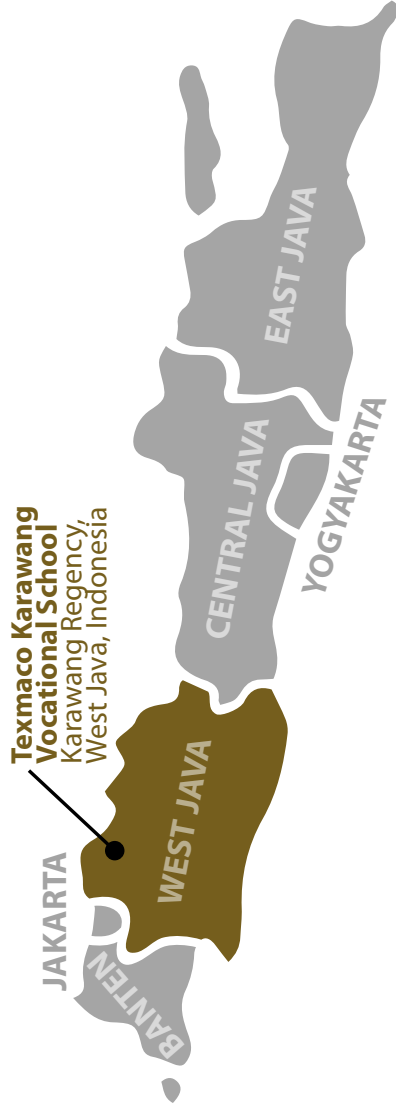
## School Background

One of the pilot MEES schools in West Java is the Texmaco Karawang Vocational School (**Figure 13**). It is a private vocational school established by the Texmaco Group of Companies in 1997 through its foundation, Yayasan Pusat Pengembangan Sains dan Teknologi Texmaco (YPPSTT). The MEES program in the school started in 2004.

The Texmaco Group of Companies was originally engaged in textile and garment production. It has, however, shifted to car electronics and machine parts production and assembly industry after suffering the ill effects of the Asian financial crisis from 1997 to 2007. In 2003, the company stopped providing full scholarship grants to financially challenged students of Texmaco Karawang Vocational School but continued to support the school through its YPPSTT foundation. The company established two other vocational schools in Pemalang and Semarang in Central Java but due to financial problems has ceased its operations. The schools' facilities now serve as the company's warehouses.

In the past, Texmaco Karawang Vocational School produced skilled workers who later became part of the Texmaco Group of Companies' human resource pool. Even after the company had pulled out its full financial support for the school, the Texmaco Karawang Vocational School continued to produce graduates who have the skills required of industry partners like the Texmaco Group of Companies under the link and match program.

**FIGURE 13**  
*Location of Texmaco Karawang Vocational School in West Java*



Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012

As an industry partner in the program, the Texmaco Group of Companies has provided learners with equipment and machines that they would need to use in courses offered by the school. To date, the company continues to provide on-the-job trainings (OJT)/internships to learners enrolled in industrial electricity and machinery handling programs.

Both located in Karawang, an industrial zone, companies such as the ASI Company and Harmonic Company have also partnered with Texmaco Karawang Vocational School in its MEES program. Although these companies do not financially support the school, they provide training to learners and hire graduates that meet their skills requirements and recruitment standards. Another company that participates in the link and match program is Texmaco Micro Indo Utama Karawang. It supports the school by providing training facilities, machines, and equipment. It also offers OJT for learners who wish to gain employment after graduation. The company produces and assembles electronics and car machine parts and also supports the same courses that the Texmaco Group of Companies does. The other companies that accept OJTs and graduates from Texmaco Karawang Vocational School MEES are the HPPM Company, Atsumitec Company, and Wings Company.

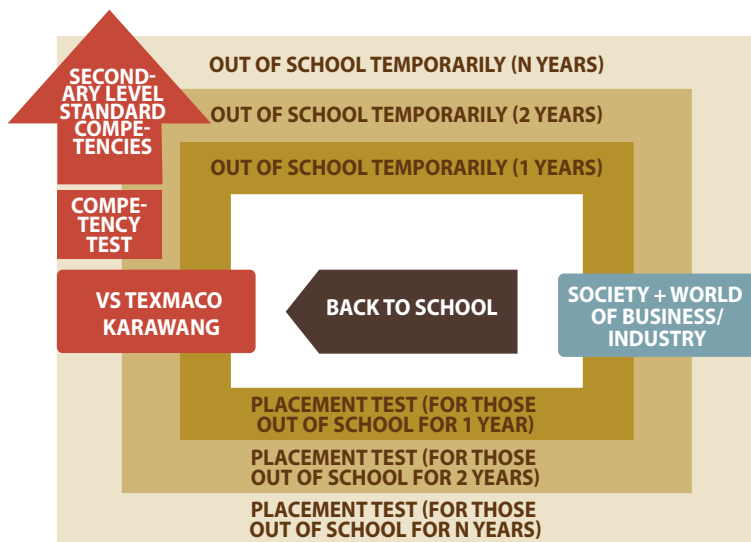
The Texmaco Karawang Vocational School offers regular vocational classes to junior and senior high school students in addition to MEES courses. It provides the MEES learners, after undergoing qualification assessment, some incentives such as:

- ▶ scholarships for the indigent, although limited in scope;
- ▶ tuition fee waivers; and
- ▶ free meals and lodging for financially challenged students who live far from the school allowing learners who live in the school compound to use the facilities even at night for their projects.

The MEES model of Texmaco Karawang Vocational School targets those learners who have been temporarily out of school, have entered the world of work, or have left school due to personal circumstances. School leavers who wish to return to school are given a placement test before they enroll and are placed in the appropriate level. After completing the MEES program, students undergo a competency test to assess if they have fully met the competency standards expected of secondary level students. This model is illustrated in **Figure 14**.

**FIGURE 14**

***MEES Model Used in Texmaco Karawang Vocational School***



Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012

The school's MEES model also has the following features which are beneficial to learners based on students' perception:

1. **No Age Requirement:** All learners, regardless of age, are admitted and can return to school at any time.
2. **Free Enrollment:** Learners are not required to pay fees.
3. **Stay-in-School Scheme:** Students who live very far from the school are provided with residential facilities so they can stay in the school compound in exchange for assistance in maintaining the grounds and facilities (e.g., cleaning the classroom and doing electrical repairs) or by assisting in school activities.

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Student 1: "My skills improved because the school has good facilities. I have more time to study and I consider my school as my second home."

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Student 2: "Living inside the school gave me more time to study because when I'm at home I have very limited time because I have a lot of chores to do."

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4. **Meal Subsidies:** Free meals are provided to learners who live in far-flung areas and opt to stay within the school's premises.
5. **Learning Materials:** Learners who cannot physically attend classes are provided the necessary learning materials to complete the course requirements. This will ensure that they can continue to study even outside school premises.



6. **Additional Time:** Learners are afforded more time to complete a program, especially if they are working.

---

Student 1: "My skills improved because I have more time to study."

---

7. **Multiple Exit-Entry Scheme:** The school gives learners a chance to leave school temporarily for all kinds of economic reasons or time constraints and go back when they are ready. During their time away from school, they can get skills training that can be credited as part of their course completion afterward.

8. **Equivalent Standards:** MEES graduates are accorded the same recognition as their high school counterparts from formal education streams. They must, however, also take and pass the national examination before they are recognized as high school graduates, just like those who finished secondary level formal schooling.

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Student 1: "The program helped me acquire the competencies to become part of this industry. I was directly hired by the company through the skills that I acquired in school!"

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Student 2: "The school helped me get occupational skills training and a certificate that will enable me to find a good job in the future."

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9. **Part-time Job Placement:** Graduates of the MEES program are given the opportunity to work as school staff or instructors while they continue to pursue their tertiary education. In fact, there was even a MEES graduate who was able to get a job as an instructor in Texmaco Karawang Vocational School.
  
10. **Value for Education:** Given the support system, such as free enrollment, meal subsidies, and others, students have learned to value education and are motivated to finish their studies.

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Student 1: "Now that my school supported my studies, I learned how to value my education and I am motivated to finish my studies."

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Student 2: "The school helped my family not to worry about my school fees and other expenses because the Texmaco Karawang Vocational School provided me free education, meal allowances, and housing facilities inside the school."

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Student 3: "I learned how to become independent."

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## School Performance

The Texmaco Karawang Vocational School continues to offer two MEES programs that teach learners techniques in handling machinery and engaging in industrial electricity. In 2012, the school faculty was composed of 56 teachers and was supported by eight administrative staff.

The school's MEES programs had 1,336 students in AY 2012–2013, spread across grades 1–3 (502 students in grade 1, 449 in grade 2, and 385 in grade 3). Each class had 48 students. In 2012, 385 students graduated after passing the national examination.

The following tables represent the school's performance for AY 2011–2012 on six (6) key indicators, namely: academic achievement, competency/curriculum accreditation, number of repeaters and dropouts, enrollment by grade level and by age, economic status, and lastly, previous schools attended.

The Texmaco Karawang Vocational School's MEES program had an achievement rate index ranging from 7.20–8.10 (out of 10.00) in AY 2011–2012 as shown in **Table 7**.

**TABLE 7*****MEES Achievement Rate by Subject, AY 2011/2012***

<b>Subject</b>	<b>Cumulative Achievement Rate Index</b>
Mathematics	7.20
Indonesian language	8.10
English language	8.00
Production skills	8.00

Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012

The school has Level A accreditation across its courses as presented in **Table 8**.

**TABLE 8*****MEES Curriculum Accreditation by Competency Area***

<b>Competency Area</b>	<b>Accreditation Rating</b>	<b>Curriculum Used</b>
Specific skill/ competence	Level A	School curriculum
Techniques in handling machinery	Level A	School curriculum
Techniques in industrial electricity	Level A	School curriculum
Productive skill	Level A	School curriculum

Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012

In AY 2011–2012, the school had 1,349 students distributed across three year levels of secondary education as shown in **Table 9**.

**TABLE 9**  
**Number of Learners by Secondary Year Level**

Competency Area	*Year 1		*Year 2		*Year 3		No. of Classes	Total
	M	F	M	F	M	F		
Techniques in handling machinery	371	0	342	0	290	0	8	1,003
Industrial electricity	79	45	98	26	63	35	3	346
<b>TOTAL</b>	<b>450</b>	<b>45</b>	<b>440</b>	<b>26</b>	<b>353</b>	<b>35</b>	<b>11</b>	<b>1,349</b>

Legend: \* Secondary Grade/Year Level

Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012

Most of the learners are young (less than 15 to 18 years old) as shown in **Table 10**.

**TABLE 10**  
**Number of Learners by Age**

Age	Number of Students		
	*Year 1	*Year 2	*Year 3
≤15 years old	480	0	0
16 years old	22	411	0
17 years old	5	55	354
18 years old	6	0	43

Legend: \* Secondary Grade/Year Level  
Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012

As shown in **Table 11**, very few of the school’s MEES program learners drop out of school or repeat courses.

**TABLE 11**  
**Number of School Repeaters and Dropouts**

Competency Area	Repeaters	Dropouts	
	*Year 3	*Year 1	*Year 3
Techniques in industrial electricity	1	3	1
<b>Total</b>	<b>1</b>	<b>3</b>	<b>1</b>

Legend: \* Secondary Grade/Year Level  
Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012

In **Table 12**, a majority of the MEES learners come from indigent families and may have dropped out of their previous school because of economic reasons.

**TABLE 12**  
***Number of Learners by Economic Status and Previous School Attended***

Parents' Economic Status	Number of Students			Student's Previous School Type	Number of Students	National Exam Ranking
	*Year 1	*Year 2	*Year 3			
Middle Class	87	78	141	JHS	461	256
Poor	426	388	247	MJHS	46	6
				TCS Paket B	6	1

Legend: \* Secondary Grade/Year Level

Source: The Office of Educational Research and Development, Ministry of Education and Culture, 2012

## Curriculum and Learning Resources

The design of MEES, Texmaco Karawang Vocational School's curriculum caters not only to its learners' needs but to those of its business and industry partners and the society. At present, the school offers two programs that teach learners technical skills in using machinery and industrial electricity. These were originally conceptualized when the Texmaco Group of Companies was still financially supporting the school.

Like their regular school counterparts, MEES learners also take basic subjects, including religion, moral education, and Indonesian language with modified content to fit their specialized needs. Other subjects include arts and culture, counseling, sports, civics, history, chemistry, social science, physics, entrepreneurship, general science, English, mathematics, and subjects related to job-specific skills such as electrical, mechanical, and automotive courses.

Texmaco Karawang Vocational School has adequate infrastructure facilities to manage the MEES program as follows: teachers' rooms, a principal's office, a prayer room, a canteen, a unit production room, a workshop, a machine laboratory, a computer room with internet access, a design art room, an assembly facility, a programmable logic controller (PLC) laboratory, a machine practice room, a digging machine, an electrical laboratory, and a library.

The curriculum, the learning resources, and infrastructure had made significant impact on the program learners. When MEES students were asked to share their feedback, these were their responses:



On the difference between the MEES program and a regular school:

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Student: "In this program, I can acquire the technical skills which I am interested to learn which are not available in a regular school."

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On the difficulties encountered and how these were solved:

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Student: "Our teachers often give us heavy loads like assignments and projects that sometimes we have difficulty managing our time between work and study. But the school allows us to use the facilities and equipment at night so we are able [to] complete our assignments and projects."

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On the aspects of the MEES program the students liked:

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Student 1: "I have learned to study independently."

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Student 2: "I became more disciplined when it comes to studying."

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Student 3: "Teaching and learning here in the school is interesting."

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Student 4: "Less study loads while there's more learning of techniques and how these are applied."

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On the aspects of MEES that they did not like:

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Student: "We have limited time to do extra-curricular activities."

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Students of Texmaco Karawang Vocational School and learning resources for MEES. (Photo credit: SEAMEO INNOTECH)

## **Instructional Strategies and Assessment**

In terms of instructional delivery, the school employs face-to-face classes, e-learning methodologies, and entrepreneurship skills training. MEES students are provided with hands-on activities that help them become independent learners.

MEES students, like their regular school peers, also need to pass the national examination and engage in practicum prior to actual job placement. As part of their course completion, they take formative and summative tests per subject. They also need to pass a competency/skills test, which are conducted by industry partners, before they can graduate. Their actual work experience can be considered part of their completion requirements or as a substitute for passing the skills test.

## **Other Support Systems**

Apart from MOEC, other government agencies and non-government entities also support the Texmaco Karawang VS. For its part, the national government provides computers, books, and learning materials. It has also lifted the age requirement for MEES learners. It recognizes graduates based on their competence in relation to the industries they work in. It also provides financial support to indigent students via scholarships. Finally, the government enhances the capacity of school heads through workshops. The government's innovation team has, in fact, been helping principals by making them part of innovative projects. This is to help principals improve their respective schools by implementing their own innovative programs and projects in the future (e.g., developing new teaching and learning materials and providing facilities for both teachers and students).

Industry partners, on the other hand, work with Texmaco Karawang VS to make sure that the curriculum/programs are aligned with their competency needs and job requirements. The link and match program grants learners a chance to apply their learnings during their practicum. Industry partners also have a hand in determining what skills learners need to obtain to graduate and get a completion certificate. Finally, they provide graduates opportunities to work and become part of their company.

### **Challenges and Issues**

The Texmaco Karawang Vocational School has faced a number of challenges when the Texmaco Group of Companies withdrew its financial support in the early 2000s. These challenges included the following:

- ▶ ***Sustaining the MEES Programs:*** When the company that established the school ceased to provide financial assistance, supporting indigent learners became a huge challenge. The MEES learners mostly came from financially challenged families who could not afford to pay their tuition fees. To prevent them from dropping out, the school allowed them to live in the premises, as permitted by the parents. Teachers and school staff assisted by providing food for the learners. In return, the learners help out around the campus (cooking, cleaning, etc.).

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Student: “It was difficult for me to work and study at the same time but because we are staying in school, we are able to consult with our teachers even in the evening or after classes.”

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Providing financial support to the learners was not the only challenge, though. The school also had to identify new industry partners for its link and match program. Fortunately, with the support of district officials and the fact that Karawang is an industrial zone, finding other companies to support its MEEs program was successful. The school chose companies that supported its course offerings as industry partners on work immersion. Their partners participated in reviewing and finalizing the curriculum design and learning materials, along with the procedures for the six-month OJT and granting of completion certificates. To enhance the course offerings, the companies even provided resource persons to teach the learners on basic theories and practical skills. In this manner, the school's curriculum was made more relevant to the needs of the industry.

- ▶ ***Upgrading the School Facilities:*** To ensure that technical and vocational courses offered have high standards and are relevant to both learners and industry partners, the school had to continuously maintain their facilities through repair and upgrading as necessary. To address this challenge, the school relies on support of the government and other stakeholders. Support is made through provision of computers, equipment, books, and other learning materials.

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Student 1: "Need to continuously update facilities like computers and software as these should match what are being used in actual jobs."

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Student 2: "Need to improve the school facilities to better serve the learning needs of students."

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Student 3: "Additional learning and reference materials should be provided."

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→ **Recommendations:**

1. The school should update its curriculum, add and update learning materials to match the competency standards and demands of the business and industry, and incorporate the use of new technologies such as work tools in the MEES program.
2. It should improve facilities to better serve the learners' needs. In collaboration with business and industry partners, the school needs to update its computer facilities and software, and other technical specifications to match those used in the actual workplace.

- ▶ ***Adhering to the Requirements of National Education Standards:*** All learners (from regular and MEES schools) are required to pass the National Competency Test before they can proceed to the tertiary or diploma level. Unfortunately, some MEES learners fail and so cannot proceed to higher education because no one can retake the competency test. Students who failed the test are encouraged to either return to secondary school to study more or to apply for work in the industry using their vocational completion certificates (i.e., six months OJT experience). MEES schools are currently seeking to be exempted from this rule to give their learners an opportunity to pursue higher studies should they wish to.

→ **Recommendation:**

Teachers should lessen study loads and focus more on hands-on activities. They should use various teaching-learning techniques such as interactive teaching aided by ICT and classroom dialogues, employ authentic learning assessment tools, and promote inclusive education and evidence-based classroom practices.

### **Success Factors**

Texmaco Karawang Vocational School's MEES tech-voc programs have been successful due to various factors, including:

▶ ***A Curriculum Responsive and Relevant to Student and Industry Needs***

The students acquire the technical expertise in accordance with industry demands because the school's curriculum matches the industries' skills requirements. On the other hand, the school considers each learners' socio-economic background and adjusts the schedules and course requirements according to learners' customized needs. Students pay their school fees based on the financial capability of their families.

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Student 1: "Yes, I can recommend this program to other students especially those who are poor and have dropped out of school. This program will really help them to continue and finish their studies."

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Student 2: “The program helped me develop my skills and apply them in my daily life. Since I’m enrolled in the electrical program, I can use my skills not only at home but also in the school where I am working now.”

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▶ ***Flexibility in Terms of Time***

Learners are not limited in terms of time to complete their studies. They can study at their own pace. MEES learners are permitted to bring the learning materials with them so they can continue their studies while at home and/or they are not working. They may also leave the school anytime especially if they work for a living and then return to school to continue their studies.

▶ ***Access to Good Facilities***

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Student: “The school has good facilities. We can borrow books and use the computers anytime to help us with our research projects and assignments.”

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▶ ***Incentives for Indigent Students***

Financially challenged students have the privilege to stay within the premises. In return, they would assist in school activities and do small tasks. Even their daily food is subsidized.



▶ *Recognition of Work Experience*

Learners who temporarily left school can use their work experience in lieu of finishing equivalent subjects (e.g., through credit banking or recognition of prior learning). This lessens the amount of time and effort they need to spend on taking special classes just to meet the course requirements.

▶ *Equal Recognition with Regular School System*

MEES graduates get the same academic recognition as those who attended the regular schools.

▶ *Competence and Commitment of School Staff*

The school's staff is committed to help financially challenged students improve their economic status by ensuring that they graduate and gain employment.

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Student 1: "Teachers in the school are very competent/skilled. They assisted us with our lessons and provided us with hands-on activities which made learning easier for us."

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Student 2: "I can ask my teachers freely about the concepts I can't understand and they are willing to help me anytime. Unlike in regular school, [where] teachers have limited contact time with their students."

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Student 3: "Here in our school, teachers can be approached freely anytime inside the school. This program can give me certification and when I graduate, I am sure of having a job in the industry."

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Student 4: "Teachers are always available anytime."

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► ***Students' Supportive Attitude towards Peers***

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Student 1: "Have a strong motivation to finish your studies."

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Student 2: "Study hard and pray always."

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Student 3: "Be inspired by your teachers because they are also determined to help you continue with your studies and become successful in life."

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## **Insights from the Texmaco Karawang Vocational School Experience**

Future MEES designers and implementers in other countries can benefit from the following insights as gleaned from the Texmaco Karawang Vocational School's experience:

- ▶ Guidelines should first be established so everything is clear prior to actual implementation, particularly on the entry and exit policies to and from the different streams of education.
- ▶ The MEES teaching-learning materials should allow learners to study independently at home or in the workplace. Every school should have a special implementing team to handle the MEES program to ensure its success. The implementers' competence should continuously be enhanced so that they can innovate and improve the program and readily address challenges related to it. Continuous improvement of learning programs, the curriculum, materials, and facilities are a must to address the changing needs of various industries due to fast technological advancement, among others.

### **→ Recommendations:**

1. Continuous alignment of the MEES curriculum with the industry's competency standards
2. Focus on improving the teaching and learning processes
3. Regular monitoring and evaluation of MEES to inform policy and improve the curriculum

- ▶ Collaboration and cooperation among all relevant and interested stakeholders are crucial when implementing the MEES program. Continued linking and networking with industry partners are critical to gain more avenues for curriculum enhancement, facilities and materials improvement, internship, and future employment.

→ **Recommendations:**

1. Industry partners should maintain their link with schools and ensure them of their commitment to help and consistently support the implementation of MEES. They can provide facilities, technical expertise, and industry-based materials. They can also recruit graduates to work in their companies.
  2. Sustain the “link and match” strategy.
- ▶ The government should explore options for providing the MEES implementing schools and students who are part of the program with incentives such as food allowance/subsidy, residential facilities, and other support mechanisms/services.

→ **Recommendation:**

The local, district, and national government should be encouraged to sustain support for the MEES through legislation and policy support at various levels, and by providing facilities and equipment. The government should also regularly monitor implementation progress to get timely and relevant feedback and to ensure that the program is able to address both needs of the learners and the industry.

- ▶ Advocacy activities may include presentation of the MEES program by the school principal or school teachers during morning ceremonies and home visitations and, also the promotions done by school teachers and alumni. Adequate and sustainable advocacy is required to get the support of all parents, local governments and other community members.

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Student 1: "The principal presented the program during our morning ceremony and explained how the MEES program will help the students especially those experiencing economic problems."

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Student 2: "The principal went to our house and talked to my parents to enroll me in MEES."

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Student 3: "It was through our teachers that we became aware of this program."

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Student 4: "I know that the school is offering this program and our principal told my parents that they will help me continue my education."

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Student 5: "I learned (about MEES) through other students who are enrolled in the program."

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## Conclusion

MEES is a non-formal education for secondary level equivalency program that is characterized by its flexibility in terms of time, location, and level of learning (i.e., elementary and high school), cutting across streams (i.e., formal, informal, or non-formal) and education types (i.e., general, vocational, and religious). It allows out-of-school youth to return in order to obtain secondary education, and complete the course. It is also open to those already in the program to temporarily stop schooling when economic or personal circumstances do not permit them, and to resume anytime to comply with the national competency standards for secondary education and finally complete the course. The MEES specializes in providing technical and vocational skills development; thus, the training or work experience they gained, while out of school, is recognized and can be credited or substituted to appropriate subjects.

A very successful component of MEES is the link and match strategy. Through this approach, the schools can link and work together with business and industries, and thereby match the skills of the learners with the demands of industries or vice versa. To ensure that the needs of both learners and businesses are aligned, industry partners should participate in the design of the MEES curriculum and learning materials. Industry partners also offer avenues for practicum or internship and provide resource persons/instructors on theory and practice. The “link and match” program guarantees employment for MEES completers, which reduces the need for partner companies to look for and train new employees. Above all, the MEES program allows the learners opportunities to work and study at their own pace.

The program of Texmaco Karawang Vocational School is consistent with the basic principles of MEES but employs a different approach in its implementation whereby the learners' actual needs and conditions are significantly considered. For one, the school does not charge students' enrollment fees and other school fees although it is a private school. Learners who are very poor are allowed to live within the school premises and receive food allowances in exchange for assisting in school activities and doing other tasks. While this boarding arrangement has benefitted the learners economically, it has also been advantageous to them in their study load as learners are able to make use of the facilities after class or at night which allows them to accomplish their assignments and consult with their teachers as needed.

The Texmaco Karawang Vocational School, with its extensive business and industry partnerships, has been effective in implementing the MEES program. The school was able to receive industry facilities and technical expertise through industry-based resource persons while learners were provided the training ground to apply their skills in these partner companies. The national and local governments also extended support through provision of books and other learning materials, technical equipment, and facilities; capacity building for school staff; and mechanisms that ensure the school's program's alignment with the competency requirements of the National Education Standards.

Given all these resources and support from key stakeholders, the school was able to produce graduates with the necessary employability/job skills. Through MEES, high school graduates were given by the school opportunities to work as (part-time/full-time) school staff or instructor or by industry partners as on-the-job trainees or skilled workers.

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