I. Purpose

1. The purpose of this working paper is to request the Governing Board to acknowledge the Centre’s annual report, which informs the Board of the projects and activities initiated and implemented by SEAMEO STEM-ED during the Centre’s first fiscal year (from the Centre’s establishment on 1 November 2019 through 30 June 2020).

II. Matters for Acknowledge

2. The Centre’s annual report provides information on the projects and activities undertaken by the Centre in the first year of operation up until the end of the fiscal year (30 June 2020).

III. Requested Action

3. The Governing Board is requested to take note of the annual report (FY 2019/2020) of the Centre.
Among a number of early activities soon after the Centre’s establishment in November 2019 includes a series of stakeholder meetings to present the Centre’s strategies and proposed development projects and obtain participants’ feedback for use to formulate a five-year development plan and ten development projects. The Centre then held an online meeting of the governing board on 12 May 2020 to approve the plan and the ten projects.

In the first year, the Centre laid an important foundation for the fulfillment of its mission and objectives by holding numerous meetings with potential partners and stakeholders related to the programmes and projects as specified in the five-year development plan. The outreach activities were critical in building necessary partnerships and networks to support programme and project implementation and regional expansion into SEAMEO member countries.

In the area of STEM Education Research and Evaluation, the Centre reached out through its network to find a suitable candidate for a staff position to lead this programme area and work with a network of researchers, both national and regional, to support the “What Works in Southeast Asia” programme.

In the area of Resources for and Capacity Building of Educational Personnel, the Centre reached out to and started working with potential partners in preparations for the initiation of the STEM Learning Resources on Sustainable Development Goals, the Korean Corporations for Southeast Asian STEM Education, the STEM Career Academies, and the STEM Leadership Academy projects. The Centre also agreed to partner with the Goethe-Institut and SEAMEO INNOTECH on their ongoing Southeast Asian Digital STEM (SEADSTEM) project.

In the area of Advocacy, Partnership, and Communication, the Centre explored the ideas for the Policy Advocacy Roundtables with a number of potential partners and contacted prospective contributors and reviewers of manuscripts in preparation for the publication of the Southeast Asian Journal of STEM Education.

The Centre subsequently reviewed its goals and strategies, and considering the Centre’s budgetary and resource constraints, the Centre decided to streamline the strategies and refine the ten development projects and combined them into five projects to enable the Centre to better focus resources on achieving the projects’ goals, results, and impacts. The Centre held a meeting of the internal Advisory Board on 17 September 2020 to review the revised strategies and development projects. With constructive inputs and recommendations from the Board, the Centre further refined the strategies and the five projects, and is proposing them to the Governing Board under the agenda item “Matters for Consideration: SEAMEO STEM-ED Project Action Plan (FY 2020/2021).”
In February and June 2020, the Centre received grants of approximately US$41,170 and $25,730 (US$ equivalent of THB 1.28 million and THB 800,000, respectively) from the Thailand Educational Development and Evaluation Tests (TEDET) Foundation. The grants were intended for projects to build teachers’ capacities and develop STEM learning resources. Nonetheless, with the occurrence of the COVID-19 pandemic, the Centre and the donor mutually agreed to postpone the implementation of the projects into fiscal year 2020/2021.

In April 2020, the Centre was awarded a US$ 5 million grant to implement the 2-year Thailand Partnership Initiative or Chevron Enjoy Science Phase II project from 8 April 2020 through 31 March 2022 to strengthen STEM education in Thailand and build on the foundation initiated during the first five years in phase I of the project with a focus on sustainability and exploring an expansion into the region. The donor wanted the implementation of the project to start in April notwithstanding the COVID-19 pandemic. The Centre found it necessary to avoid face-to-face situations and rely quite heavily on online interactions to advance project activities. The Chevron Enjoy Science Phase II project is still ongoing and being implemented in the current fiscal year through the ending date of the project in March 2022.
<table>
<thead>
<tr>
<th>No.</th>
<th>Project</th>
<th>Type</th>
<th>Status</th>
</tr>
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<tbody>
<tr>
<td>1.</td>
<td>Thailand Partnership Initiative (Chevron Enjoy Science Phase II)</td>
<td>A Public-Private Partnership (PPP) in STEM education capacity building and development</td>
<td>Ongoing (Project period: 8 April 2020 - 31 March 2022)</td>
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Thailand Partnership Initiative (Chevron Enjoy Science Phase II) Project

(Interim Report)

<table>
<thead>
<tr>
<th>Type/Category</th>
<th>A Public-Private Partnership (PPP) in STEM education capacity building and development in Thailand</th>
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<tbody>
<tr>
<td>Venue/Location</td>
<td>Thailand</td>
</tr>
<tr>
<td>Dates</td>
<td>8 April 2020 - ongoing (Project ends 31 March 2022)</td>
</tr>
<tr>
<td>Partners/ Collaborators</td>
<td>Teachers' Council of Thailand, Office of Basic Education Commission, Office of Non-Formal and Informal Education, National Science Museum, National Science and Technology Development Agency, The Institute for the Promotion of Teaching Science and Technology, Office of National Higher Education Science Research and Innovation Policy Council, Department of Local Administration, Office of the Teacher Civil Service and Educational Personnel Commission, National Institute for Development of Teachers, Faculty Staff and Educational Personnel, Edu Park Co., Ltd., Wisdom Wide Co., Ltd., Siam University, St Theresa International College, etc.</td>
</tr>
<tr>
<td>Target Group/ Beneficiaries</td>
<td>Students; education professionals including teachers, school administrators, and educational supervisors; policy makers; educational researchers; targeted workforce for skills development</td>
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Summary

The project aims to strengthen Thailand’s competitiveness and innovation by improving science, technology, engineering, and mathematics education. The goal of the project in Phase 2 is to strengthen the capacity of project stakeholders to scale and sustain the impact of the project’s STEM education efforts for sustainable development. Accordingly, the operational objectives are set up to align with the project’s core mission as well as government policies.

Objectives

1. To enhance STEM education in the formal and informal education sectors in Thailand.
2. To build and sustain professional capacity within the education system by working closely with government agencies and private partners.
3. To build a culture of improvement within schools.
4. To introduce a college and career readiness program called Career Academies, which has been proven in many countries to be a successful intervention for addressing skills gap in the STEM workforce.
5. To promote evidence-based policies and practices aimed at high-impact teaching and learning, effective school leadership, and instructional support by varied stakeholders which have been proven to increase student outcomes.
Outputs (to date)

STEM Component

- MOU signing with three partners: Teachers' Council of Thailand (TCT), WisdomWide Co., Ltd., and Edu Park Co., Ltd. in May 2020.
- Preparation meetings with partners (Edu Park and the Institute for the Promotion of Teaching Science and Technology) to seek collaboration on the management of the Thailand Educational Development and Evaluation Tests (TEDET) test items.
- Nine workshops were held in May and June 2020 as follows:
  - A virtual information workshop for 135 Professional Learning Community (PLC) network leaders to introduce the PLC protocols and 15 Thailand School Improvement Program (TSIP) networks to discuss the project support for capacity building activities and the student assessments to be provided for the networks in May.
  - Six sessions of two-hour workshop, led by Professor Tom Corcoran and Mr. Bill Stroud, were conducted for TSIP leaders and university faculty members in May and June to introduce active learning, enhance literacy in science using reading materials relevant to the teaching subject, and introduce Ordinary National Educational Test (O-NET) analysis approach. A total of 70 participants attended.
  - A three-hour webinar was organized in June for 66 teaching students of Burapha University focusing on the integration of mathematics and literacy with science teaching.
  - A workshop on the Ordinary National Educational Test (O-NET) analysis, led by the director of the Education Service Area Office (ESAO) Udon Thani 4, was organized in June for the administrators and teachers from the TSIP school network.
- Prof. Dr. Joseph Krajcik, Director, CREATE for STEM Institute, Michigan State University, was engaged to provide a workshop and advise faculty members from partner universities on learning modules development.

Career Academies Component

- Four partners were engaged as follows:
  - St Theresa International College, Siam University, and Mahidol University for collaboration on Career Academies in Health Science.
  - WisdomWide Co., Ltd. for collaboration on Career Academies in Information Technology

Awareness Component

- Five partners were engaged for collaborations for the awareness component of the project: The National Science and Technology Development Agency (NSTDA) and the National Science Museum (NSM), the Office of the Non-formal and Informal Education (NFE), the New York Hall of Science, the Science Center for Education

Communication & Policy Advocacy Component

- Website domain name registration, engage website developer to develop project website, Facebook fan page registration, Line official account registration
- The content for media release on Online Courses Development in response to COVID 19 was disseminated in May with over 8,100 views on Facebook Live.
Monitoring & Evaluation Component

- Prof. Tom Corcoran serves as research and evaluation advisor.
- Professor Emeritus Dr. Somwang Pitiyanuwat, an advisory board member of the Centre, was invited to serve as team leader for research and evaluation.
- Prof. Brian Rowan was engaged to provide capacity building on research methodology to the research and evaluation team.
- Inverness Research Inc. was engaged as an evaluation consulting firm for project evaluation. The Inverness team comprises Dr. Mark St. John, Mr. Daniel Humphrey, and Mr. Mac Cannady.
- Engaged the SEAMEO Secretariat to collaborate on the SEAMEO Centre’s Policy Research Network (CPRN).

Outcomes (to date)

Ongoing (yet to be assessed and reported)

Budget Expenditure:

US$ 5 million (over the two-year project life)

Reported by:

Project communication team

Date:

31 August 2020