

Teacher Education in the Age of Digital Economy

SEAMEO RIHED's Initiatives to Foster Key Skills for Teachers of Today and the Future

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1. The Digital Economy

Digital technologies and innovations have brought about a profound impact on economic and social activities. They continue to transform the ways in which a society interacts and have resulted in intensified connectivity among people, information and processes. The digital transformation is accelerating and its effects penetrate across all sectors, from retail to communication and transportation to health and education, heightening the relevance and significance of digital skills for every individual¹.

In the context of Southeast Asia, while the region presents a promising potential to play an active role in the digital transformation of the global economy, challenges such as the digital divide in terms of access to and affordability of internet connections both among and within countries in the region continues to widen².

2. Innovation and Education

Education is often perceived as a sector resistant to changes and innovations. At the same time, it is also a sector that is currently and will be experiencing critical changes posed by the wave of digital transformations and integration of technologies into learning processes.

The Organisation for Economic Cooperation and Development (OECD) recently conducted research to investigate the perceived level of innovation by sector in reference to three types of innovation: products of services (e.g. educational materials); technologies, tools or instruments utilized (e.g. use of ICT in delivering learning contents); and knowledge or methods (e.g. new pedagogies, use of ICT for communication)³. The result revealed that in comparison to other sectors, education is at or below the average in terms of the speed of adoption of innovation.

¹ OECD (2016), *Innovating Education and Educating for Innovation: The Power of Digital Technologies and Skills*, OECD Publishing, Paris.

² IMF (2018), 'Chart of the Week: The Digital Divide in Asia', last accessed on 7 February 2018.

< <https://blogs.imf.org/2018/09/25/chart-of-the-week-the-digital-divide-in-asia-2/>>

³ OECD (2016), *ibid*

The research also examined the perceived level of innovation in the education sector across different levels. It found that 80 percent of education professionals employed in higher education considered their workplaces to be highly innovative compared with the rate in other levels of education (65 percent in primary level and 63 percent in secondary level)⁴. It is highlighted that higher education stands out in the speed of adopting innovation.

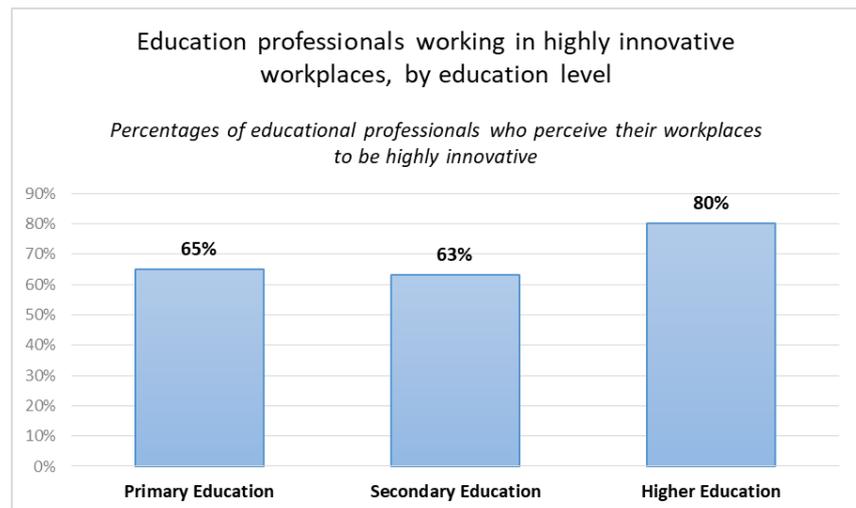


Figure 1 Data drawn from OECD (2016), *Innovating Education and Educating for Innovation: The Power of Digital Technologies and Skills*, OECD Publishing, Paris.

Digital technologies possess a great potential to transform the ways teaching and learning is practiced in schools and universities and ways teachers and learners interact. Technologies can be integrated into teaching and learning settings in various ways. For example, teachers can adopt innovative pedagogic models based around online laboratories, real-time assessment that aim to enhance students' creativity as well as skills for imagination and problem-solving. Technologies also brings about the extensive international collaboration opportunities by overcoming geographical and time barriers, which may provide students with insight into diverse cultures and multicultural communication strategies that are necessary to establish a collaborative partnership in today's interconnected world. In addition, E-learning, open education resources (OER) and massive open online courses (MOOCs) are other primary examples of how digital technologies can change the ways educational contents are delivered to learners while addressing the critical issue of educational access and equality across all education levels.

3. What Skills Are Needed for Teachers Today?

The emergence of digital economy have redefined what skills and competencies are required for teachers to possess. Besides technical teaching skills such as the understanding of subject matters, pedagogical approaches, classroom management and organisation, some of the non-cognitive or 21st century skills that are considered critical for teaching professionals today include:

- **Adaptability:** New ideas and technologies emerge every day, which are changing the ways in which students and teachers interact and the process of learning takes place. Depending on learning pace and the needs of students, teachers need to adjust their learning activities and strategies to better achieve learning outcomes.
- **Communication:** Communication skills are necessary for teachers not only in terms of verbal and written forms but also adapting different communication styles to the needs of students with diverse backgrounds including their age, culture and personality.

⁴ Ibid

- **Collaboration:** Teachers should consider technology as a means to increase collaborative learning. Collaboration through technology can enhance and diversify students' learning experiences and collaboration especially with international partners can help to increase students' awareness of global affairs and understanding of different cultures.
- **Digital Skill:** As technology is increasingly integrated into teaching and learning and it plays an essential role in shaping pedagogical practices and strategies, teachers need to be equipped with digital skills and literacy. It also implies the skill to blend effective digital tools in learning process to create more interactive and student-centred learning environment.

4. SEAMEO RIHED's Effort to Nurture the 21st Century Skills for Students through Academic Mobility: The Case of AIMS Programme

- SEAMEO RIHED

As the SEAMEO Regional Centre specialising in higher education development, SEAMEO RIHED aspires to advance cooperation, alignment and the development of higher education systems in the region by creating policy platforms, engaging in policy-driven research and broadening space for information dissemination. It is committed to taking lead in the advancement of SEAMEO Priority Area No 6: Promoting Harmonisation in Higher Education and Research. With its key strategic pillars, which are 1) Alignment and Development; 2) Cooperation and Synergy; 3) Research; and 4) Information Portal, SEAMEO RIHED continues to engage in the region to address new challenges brought forward in the harmonisation and development of higher education in Southeast Asia.

- SEAMEO RIHED's AIMS Programme

Project Summary

Initiated and facilitated by SEAMEO RIHED, the Asian International Mobility for Students (AIMS) Programme is a collaborative and multilateral student exchange programme that involves both governments and HEIs with the goal of enhancing student mobility in the region and beyond.

In Southeast Asia, past efforts to promote student mobility have concentrated on bilateral agreements between HEIs in the region. Benefits, therefore, have only been limited to HEIs with these agreements. AIMS overcomes this limitation by working with both Governments and HEIs to develop a truly regional Programme.

By November 2018, AIMS has offered a single semester exchange to over 4100 undergraduate students from 8 participating Member Countries, 69 HEIs, and among 10 study fields. AIMS Member Countries are: Malaysia, Indonesia, Thailand, Vietnam, Brunei Darussalam, the Philippines, Japan, and the Republic of Korea. Singapore will officially join the Programme as the 9th Member Country.

The objectives of AIMS Programme is to create a vibrant platform for all citizens of SEAMEO Member Countries and beyond, promoting the mobility of students in order to cultivate globalised human resources for the region, create and nurture an ASEAN identity in the minds of young people of the

region, contribute to the internationalisation of higher education in the region, and build towards the formulation of an ASEAN Community and a regional higher education common space.

Programme Principles and Operational Mechanism

One of the key features that make AIMS different from other mobility initiatives is the autonomy that it offers to Member Countries, whilst providing a structure for collaboration through underlying key principles that guide its implementation. The first principle is the self-sufficiency and sustainability whereby each Member Country supports its own participation in the Programme, and where new members are encouraged to join based on their own readiness to participate. The balanced mobility and reciprocity is another core principle whereby national authorities responsible for higher education nominate HEIs to participate in study fields, and where the number of exchange students is mutually agreed upon and reciprocated in each study field. In addition, the operation of the Programme is supplemented by regional mechanisms whereby regional coordination is undertaken by SEAMEO RIHED to support the programme implementation and give stakeholders key opportunities to feedback, address challenges and propose further developments to the Programme. There are 2 regional mechanisms that support the programme - the AIMS Annual Review Meeting and AIMS Steering Committee Meeting.

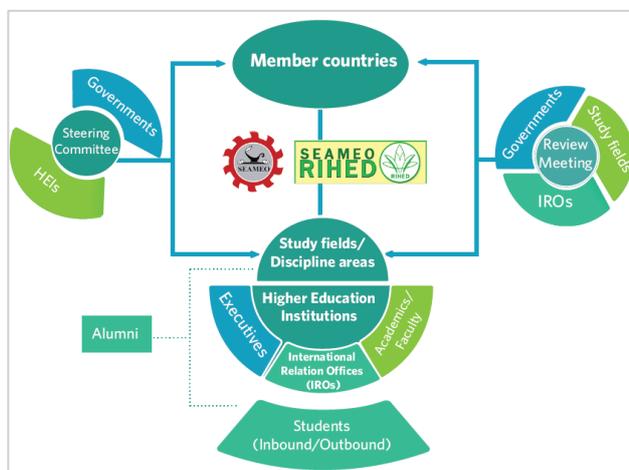


Figure 2 Operational Mechanism of AIMS Programme

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What AIMS Programme Offers to Students – Nurturing the 21st Century Skills

The AIMS Programme is a multilateral platform that involves diverse stakeholders of higher education including students, alumni, governments and HEIs in the region, offering unique learning experiences and collaborative opportunities. The Programme currently facilitates the academic exchange in the following 10 study fields.

Hospitality and Tourism	Economics
Agriculture	Engineering
Language and Culture	Environmental Management and Science
International Business	Biodiversity
Food Science and Technology	Marine Science

The essence of academic exchange the Programme provides for students is not limited to the acquisition of new academic knowledge in host institutions, but also includes the opportunity for students to develop and strengthen a set of non-cognitive skills, which are commonly referred to as transversal competencies, soft skills or 21st century skills. Whilst cognitive skills involve the ability to understand complex ideas and to engage in various forms of reasoning and are associated with reading, writing and numeric comprehension, non-cognitive skills are defined as “patterns of thought, feelings and behaviours” comprised of personal traits, attitudes and values⁵. Through establishing the

⁵ Paper commissioned for the Global Education Monitoring Report 2016, Education for people and planet: Creating sustainable futures for all”

academic collaboration and close engagement with students, HEIs and governments in the region, the AIMS Programme has enabled students to gain exposure to diverse cultural contexts and international environments, to cultivate skills necessary to become a well-rounded, responsible global citizen and to build friendships and community ties both regionally and internationally.

In collaboration with Ministry of Education, Republic of Korea, Korean Council for University Education (KCUE) and AIMS Member Countries, a research project has been conducted to better understand the experiences of students participating in the AIMS Programme and programme's outcomes. The survey targeted over 500 people from 8 countries who had previously participated in the Programme and the result highlighted the strong impact of the programme experience on the participating students in terms of the acquisition of intercultural competences and the ability to establish collaborations with people from diverse backgrounds, which are among the core values of AIMS Programme.

While the Programme currently focuses on students as the primary target of mobility, however, it is important to note that the abovementioned unique structure of the Programme operation has enabled faculty and administrative staff from member HEIs to be exposed to internationalisation process, for which cross-border collaboration, intercultural communication and problem-solving skills are among the key elements to move forward.

The AIMS Programme does not currently address teacher education directly in its mobility scheme. The above 10 study fields have been refined and selected through ongoing discussion and mutual agreement between stakeholders in the Programme, as either common areas of focus for Member Countries, participating HEIs, or as strategic priority areas for developing expertise in the Southeast Asian region. Nevertheless, discussions have been held to add more study fields in order to explore further opportunities for partnership and the Programme aspires to be a platform to promote a broader academic mobility, including teaching and administrative staff of member HEIs in the region.

The mobility experience demonstratively provides learners with opportunities to strengthen key skills required for teaching professionals in the digital economy, such as skills associated with effective communications, collaboration and adaptability. In addition, with the transformation brought by digitalisation and its impact on a mode and way teaching and learning takes place, anyone who has expertise in subject areas has a potential to be an educator. Therefore, it is imperative for the region to foster cross-border collaborations in promoting the mobility flow of general students and both pre-service and in-service teachers who play a crucial role in shaping well-prepared global citizens in the region.