A Research Study
The 4th Industrial Revolution and TVET:
The Relevance of Entrepreneurship Education

1. Background

There are growing concerns about robots taking over the world of work with the advent of the 4th Industrial Revolution, thus leading to increased unemployment and associated socio-economic issues. The 1st Industrial Revolution of mechanization using water and steam power and the 2nd relying on electric power increased productivity and raised living standards for the masses. The rapid changes experienced during the 3rd Industrial Revolution with the help of electronics and information technology are now moving into the sphere of Artificial Intelligence, the Internet of Things, quantum computing and more, thus setting the stage for human and machine interactions never seen before, except in science fiction.

Several reports have predicted shifting labour practices and job markets, potentially displacing workers who lack the knowledge and skills needed for the new world. According to the World Economic Forum (WEF), more than 5 million jobs could be lost by 2020 to disruptive labour market changes. Furthermore, 65% of primary school students will be working in jobs that do not exist today.

Pearson’s report on the Future of Skills looking at the employment landscape in the U.S. and U.K. presents a more positive outlook, for example, only one in five workers are in occupations that will shrink, and occupations can be re-designed to pair human skills with technology to boost demand for jobs. It must be acknowledged that there are substantial uncertainties in the analysis, and critics underlined the challenges of implementing public and private reforms amidst political and social instability. Proper planning, education, and training of the workforce must be in place to minimize the impact of displaced workers and the gaps between those who have the knowledge and skills to adapt to the new world and those who do not.

Technical and vocational education and training (TVET) plays an important role in the 4th Industrial Revolution to equip the youth of today for jobs in the future. Apart from knowledge-based proficiencies, TVET students learn practical, hands-on skills aligned to the needs of the industries. At the same time, the 4th Industrial Revolution demands 21st century skills including critical thinking, creativity, adaptability, willingness to take risks, all attributes associated with entrepreneurship. The significance of entrepreneurship is the ability and determination to adopt challenges and devise solutions in an evolving environment. Developing entrepreneurship aptitudes in TVET offers a promising model for success in the 4th Industrial Revolution.
2. Research Study

UNESCO Bangkok and The Korea Research Institute for Vocational Education & Training (KRIVET) are conducting a study on the 4th Industrial Revolution and TVET: The Relevance of Entrepreneurship Education to contribute to the development of vocational education and training systems in the Asia-Pacific region, with a special focus on Entrepreneurship Education. The specific objectives are to:

- Collect information on the current situation of TVET focusing on Entrepreneurship Education
- Identify challenges and opportunities in TVET focusing on Entrepreneurship Education
- Analyse primary TVET issues focusing on Entrepreneurship Education in selected countries
- Explore opportunities for enhancing Entrepreneurship Education in TVET
- Provide recommendations for moving forward

3. Call for research proposals

UNESCO Bangkok and KRIVET are calling for researchers based in Asia-Pacific region to submit a proposal to conduct a study examining their country’s TVET system and Entrepreneurship Education in relation to the 4th Industrial Revolution. The proposal should include an outline of the study, including the scope, methodology, areas of focus and limitations.

Selected researchers will receive an honorarium of USD 1,300 each to conduct the study and prepare a report. Guidelines for the report will be provided to the selected researchers upon confirmation.

The researchers are expected to present their findings at a regional seminar in Bangkok, Thailand on 30-31 August 2018.

4. Timeline

- Submission of proposal: 13 April 2018
- Selection of researchers: 27 April 2018
- Submission of first draft report: 29 June 2018
- Feedback from UNESCO/KRIVET: 27 July 2018
- Submission of second draft report: 24 July 2018
- Presentation of research findings: 30-31 August 2018

5. Contact persons

- Ms. Lay Cheng, Programme Officer, UNESCO Bangkok
  email: lc.tan@unesco.org
- Ms. Yu-Jin Ahn, Researcher, Global Cooperation Center, KRIVET
  email: yjahn@krivet.re.kr