FINDING THE GAPS BETWEEN ENGLISH SKILLS NEEDED IN THE IT SPECIALISTS' EMPLOYABILITY (DEMAND SIDES) AND HIGHER EDUCATION INSTITUTIONS (SUPPLY SIDES) IN INDUSTRY 4.0 ERA IN INDONESIA: A CONCEPTUAL FRAMEWORK

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ABSTRACT

Nowadays, there is a phenomenon of the increasing number of IT specialists as the effect of Industry 4.0 in many countries. This phenomenon also happens in Indonesia currently. Therefore, companies demand qualified IT specialists' human resources. However, it is questionable whether Higher Education Institutions (hereinafter, HEIs) could provide qualified IT specialists who have good IT skills or competencies as well as English skills. This study proposes a conceptual framework for doing research to find the gaps between the English materials taught in the HEIs and the specific English required practically on the IT specialists' workplace.

Keywords: *IT specialists' Employability, English Skills, Demand Sides, Supply Sides, HEIs*

RESEARCH HIGHLIGHTS

The research focus taken for this study is English skills considering that English is still an international language that is used for communication around the world. In addition, it was generally known that most computer products are from western countries that use English as well as the syntaxes in programming languages used by IT specialists especially programmers in creating technologies are also written in English. Some IT documentations/manuals/FAQs provided on some websites or on online IT forums like *Stackoverflow* or *Github* are also in English.

Research Objectives

The aim of this study is to create a conceptual framework for the study about investigating the gaps between the English skills required in IT specialists' workplace and the English materials taught in the HEIs.

Methodology

Since the aim of this study is to create a conceptual framework for being a path of another study so it utilizes a conceptual framework structure. Adom, Hussein, & Agyem (2018) pointed out that a conceptual framework is the tool utilized by the investigator to illustrate the way in investigating the problems of the research. In order to design the conceptual framework, the author needs some literatures such as about IT specialists' jobs, industry 4.0 including its history, required or necessary skills to perform in industry 4.0 era, industry 4.0 phenomenon in Indonesia, potential impact of industry 4.0 for IT specialists' employment in Indonesia. some other literatures about English skills needed on workplaces, Indonesian HEIs including types of HEIs in Indonesia, curriculum in Indonesian HEIs, Industry 4.0 and challenges for HEIs in Indonesia, English language teaching in Indonesian HEIs including English for general purposes and English for specific purposes are also taken as the consideration to create that conceptual framework.

Results

The result of this study is the generated conceptual framework that is utilized for the study about the gaps between the English skills required in IT specialists' workplace and the English materials taught in the HEIs. That conceptual framework is presented on the following finding part.

Findings

Fig. 1. The Generated Conceptual Framework

References

- Adom, D., Hussein E.K., & Agyem, J.A. (2018). Theoretical and Conceptual Framework: Mandatory Ingredients of a Quality Research. *International Journal of Scientific Research*, 7(1), 438-441

- Badan Pusat Statistik. (2020). Statistik Pertumbuhan Ekonomi Indonesia Triwulan I-2020. In *Pertumbuhan Ekonomi Indonesia Triwulan IV-2019* (Issue 17). Badan Pusat Statistik. <https://www.bps.go.id/pressrelease/2020/02/05/1755/ekonomi-indonesia-2019-tumbuh-5-02-persen.html>
- Daily Social; DSRResearch. (2020). *Scaling Through Technology Democratization: Startup Report 2019* (Issue March). DailySocial.
- International Labour Organization. (2019). *Skills shortages and labour migration in the field of information and communication technology in India, Indonesia and Thailand*. [https://www.ilo.org/sector/Resources/publications/WCMS_710031/lang--en/index.htm](https://www.ilo.org/sector/Resources/publications/WCMS_710031/lang-en/index.htm)
- Rojko, A. (2017). Industry 4.0 concept: Background and overview. *International Journal of Interactive Mobile Technologies*, 11(5), 77–90. <https://doi.org/10.3991/ijim.v11i5.7072>

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