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Active Learner Strategies in Era of Disruption: a Literature Review

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Abstract— In this transformation era, that humans be able to become competitive subjects to innovate in every single area. The disruption era that grows along with the industrial revolution 4.0 were called digitalization was brought many effects for its changing. As the agent of change, the learner should be able to face it wisely. The student should improve themselves with many competencies and skills. The aim of this review is to encourage the student insight and views about innovative strategies for being an active learner to fulfill the demands of society needs. This paper is based on a systematic literature review. It has collected some related article from JSTOR database, and at the process of article reduction, it has examined and found about 3 articles related to in five periods from 2013-2018. Based on the strategy revealed in the articles, every learner should equip themselves with strong knowledge about regulation, competency, and skills for developing the skills and mindset for dealing with the challenge in this era of disruption. After discussing the main concept of learner strategy for facing the era of disruption, this study finds some strategies should be present for understanding the learner. The most important things for increasing the competency are digital technology skill and foreign language mastery to encourage themselves and integrate the sciences in real implementation. The findings of this review are expected to be useful both learner and education practitioner for gaining insight to further research and successful educational reform.

Keywords— active learner, strategies, disruption era

I. INTRODUCTION

The rapid development of digital era requires people to be competitive and productive subjects in response to it. Markides (2006) new ways of competing disruption with innovation. Every development comes with a challenge to face. Newmann (2011) stated power disruption theories describing how challengers will develop. [3] The rapid pace of technological developments played a key role in the previous industrial revolutions (Industry 4.0). Such revolutions require all parties contribute to being able to survive along with the rapid development that continues to take place. One of them is education [4]. In this context, education which is relevant to the concept of industrial revolution 4.0 is one that is able to revive creativity and innovation covering planning until implementation, but still prioritizes effective relationships among each other. Thus in an increasingly fierce competition, easiness to

access technology could help solve existing problems without losing the core of education itself.

However, as what occurs these days, change of era is not accompanied by self-competence, leading to unpreparedness in facing it. This is evident by the fact that there is no integration between people's understanding and way of thinking; they have no skills relevant to technological development.

All the planning and implementations to be carried out should have a focal point that can be described in the forms of a real strategy. In particular, this is what should be addressed with a strategy and supported by all the stakeholders concerned. In terms of the education sector, the existence of rapid access to technology should be addressed with an effective and efficient strategy. Therefore, any innovations created are not only innovations that can be automated by machine, but also innovations that could integrate all the knowledge that has been learned into problem solving.

This literature review presents an overview of strategies for active learners in the era of disruption. This aims to provide a holistic view of any steps to actualize in facing the era of disruption. The research questions are as follows:

(RQ1) What are the steps to be prepared by active learners in the era of disruption?

(RQ2) What are the factors that support and inhibit active learners in the era of disruption?

In this article, we will explain our literature review method and the studies that we selected for this review. In the result section, we will answer two research questions based on the articles we have selected for this review. In the conclusion and discussion section, we will further discuss empirical findings from the selected studies and provide suggestions for future research. We will also discuss some limitations of this study.

II. METHODS

The review method used was a literature review. The review type for this study was a mapping review [5]. Mapping review aims to characterize the quantity and quality of literature and to identify any gaps in the research

literature that serve as the basis for further research. For this literature review, we collected the data by searching for electronic databases to identify any relevant studies. Our keywords included active learners, the era of disruption, strategic practices, parties contributing to implementation, and the factor of supervision for realization. In addition to searching through electronic databases, we manually searched for archives of journals and textbooks which discussed active learners in facing the era of disruption. We read abstracts from these articles, or the full texts if the abstracts did not provide enough information for decision making. During the process, we included empirical studies that focused on active learners in the era of disruption. This way, we excluded studies that only focused on industrial development in the era of disruption.

In the initial article research, we searched by using a journal that subscribed on campus. The article search resulted in 750 articles from the JSTOR database. We then began to limit the number of articles relevant to studies published between 2013 and 2018, totaling 69 articles. We read abstracts from this article and full text if the abstract does not provide enough information for decision making. In the process, we include empirical studies that focus on active learners in the era of disruption. We, therefore, exclude studies that focus on industrial development in the area of disruption. So that the articles relevant to the literature theme of this review are 9 articles.

TABLE I. OVERVIEW THE STUDIES SELECTED FOR THE REVIEW

| Study | Sample | Country | Data | Method |
|---|---------------------------|-----------------|---|-------------|
| Molaodi Tselane and Sechaba | Curriculum | South of Africa | Van Dijk's critical Discourse Analysis | Qualitative |
| Mahlomaholo (2015) | Grade 5 And 6 Classrooms | Switzerland | a questionnaire survey; video observation; and interviews | Qualitative |
| Marion Scherzinger and Alexander Wettstein (2018) | - | New Zealand | - | Magazine |
| Bronwyn Hegarty (2015) | Employer | U.S. America | Empirical Verification | Qualitative |
| Sarbari Bordia and Prashat Bordia (2015) | 2 students | Australia | Book Chapter | |
| Nancy W. Gleason (2014) | 41 learners | California | Situation, Judgment Test | Qualitative |
| (Ramaley, 2013) | 10 learner | America | Interview | Qualitative |
| [8] | Three university Educator | Australia | Interview | Qualitative |
| [9] | | Amerika Serikat | Interview | Qualitative |

III. RESULT AND DISCUSSION

A. (RQ1) Strategies of Active Learners in Era of Disruption

In this section we will provide a thematic analysis from the literature about a strategic practice which is capable of supporting someone to become active learners in the era of disruption. Based on the articles collected, the researchers concluded two practical strategies that are capable of supporting learners to become active learners in the era of disruption, i.e. good education and skill development. Along with the development of era, technological development is able to bring changes in all fields, one of which is education sector. Thus, any educational institutions which are willing to neither make improvement nor adopt changes into their development design will have to struggle harder in facing the era of disruption (Psotka, 2013)

A good education will be held with some factors influencing it. Education in digital age should be accompanied by self-mastery of education based on information and communication technology. [10] This is in line with articles whose topics are related to open education. They bring eight attributes to be implemented in open education, one of which is participatory technology. Currently, social networking media are an effective means of sharing ideas, knowledge and sources. [11] This is in accordance with the concept "the role of technology in innovative education". Technology could contribute to many aspects in improving the quality of learning, such as: redefining the fundamental elements of learning with technology, making innovations of learning dynamics, implementing technology-based inquiry method to encourage students to be more active during learning, supporting leaders to design technology-based leadership and expanding social networks. (Kools, 2013)

The second strategy is a good relationship among all members of school community, especially between students and teachers. A good learning is impossible to run in the absence of good relationship. [12] A good relationship between teachers and students is also influenced by teacher characteristics. Good teacher characteristics and capacity could create a good and fun learning environment. (Holfve-Sabel, 2014)

The third strategy is the implementation of open education. What is meant by open education is one that is accessible by all the elements of the community, making its access and usefulness real. [11] Strengthening the concept of open education, UNESCO has also mentioned about it in its definition of open education resources, in which open education is one of the programs for the procurement of educational resource which is active to information, communication, and technology. (Tuomi, 2013) In this context, the government of Indonesia has made efforts to implement open education, one of which is by conducting training organized by governmental agencies. For example, a training held by the Board of Job Training and Productivity Development (BLKPP) under the Agency of Manpower and Transmigration. This training offers various free courses. This is an example of open education. In its implementation, it is possible to

provide these trainings as digital-based trainings, allowing participants to be able to compete in the industrial sector based on Industrial Revolution 4.0.

Like fresh air, discussion about strategy in facing the era of disruption is not something rigid. Innovations in thinking and taking actions should be made in facing it. Game-based learning can be one of the alternatives. (Psootka, 2013)

Mastery and use of foreign languages are a powerful strategy to keep up with the rapid development of technology and information in this era of disruption. In the absence of foreign language mastery, it is impossible for us to compete at the international level. (Bordia, 2015). In addition to language skill, technological mastery is the second thing all learners should have in order to be able to compete. (Gleason, 2018)

B. (RQ2) Supporting and Inhibiting Factors

In this section, we will present supporting and inhibiting factors for active learners in the era of disruption. These supporting and inhibiting factors are found in articles written by Psootka (2013), Connor (2013), and Sweeny (2013). The conclusion is presented in Table 2.

TABLE II. SUPPORTING AND INHIBITING FACTORS

| Supporting | Inhibiting |
|---|--|
| Education [6] | Rigid leadership (Ramaley, 2013) |
| Flexible institutional policy [8] | Absence of desire to take advantage of opportunities [9] |
| Adequate internet [6] | Speed of integration that is not managed properly [6] |
| Cross-generational groups of students who can inspire and inform each other (Ramaley, 2013) | Political disparity (Ramaley, 2013) |
| The use e-learning policy as a vehicle for curriculum redesign [9] | |
| Aplikasi digital yang produktif [9] | |

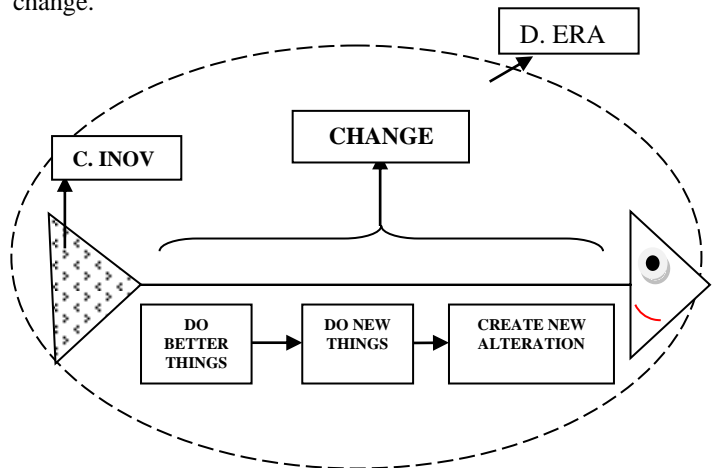
Education factor serves as the main thing to consider. Opportunity in education sector in the era of disruption can be measured by a detailed design. Learning innovations should ideally be developed according to technological development. Innovations in education sector in the era of disruption certainly could accommodate all the components of education to deliver learning materials and information. This then affects institutional policies which are flexible and not rigid, contain novelty element, and aware of current situations. A change in paradigm is also necessary to organize rapid changes, thus making all the systems in an organizational structure more efficient, effective, productive, and able to survive. Another factor is Cross-generational groups of students who can inspire and inform each other (Ramaley, 2013), the use e-learning policy as a vehicle for curriculum redesign, and productive digital application (Sweeny, 2013).

Unlike the supporting factors of the era of disruption, this literature review also discusses the inhibiting factors of active learners in the era of disruption. These factors can be found in an article by Ramaley (2013) who mentions

that an inhibiting factor of active learners is rigid leadership. Leadership in the era of disruption is ideally about altering or making innovations for leadership styles to adjust with technological development and changes as well as all the dominant aspects of civilization.

Leadership in the era of disruption requires fast, dynamic, and creative moves [13] where all the existing leadership styles can be implemented provided there is a combination or harmony of these leadership styles, thus being able to respond to the challenges that the era of disruption has. All leaders understand that disruption is not an exception, but a global rule. Disruption can be seen as something positive because it actually is a dynamic innovation. The role of leaders is very crucial, particularly their role to help each institution face changes. Therefore, this era requires leaders make some changes; and these leaders cannot avoid this era because technological development does take place.

The absence of interest in taking opportunity is also written in a reviewed article. However, the writer did not agree with the statements found in an article written by Sweeny (2013). In the writer’s opinion, opportunity in the era of disruption should be used for the sake of better development. The era of disruption definitely creates significant changes, for example in education sector. Teaching and learning activities will totally change. Classrooms will undergo evolution with digital-based learning, which offers more creative, participatory, varied, and comprehensive learning. Thus, it is necessary to create innovations to face challenges, to take opportunity over the future challenges. In addition, teachers also need to change the way they teach, leaving their old styles and being flexible to be able to quickly understand something new. Digital technology could assist teachers in learning more quickly and more effectively in order to develop and change.



C. Inov. : Create an innovation
D. Era : Disruption Era

IV. CONCLUSIONS

The conclusion of this literature review is expected to be a new insight to become active learners in the era of disruption. The acceleration of global change takes place very rapidly that it requires human resources be able to

compete at the global level. Thus they could improve the quality of learners in response to the era of disruption.

Based on the above discussion, there are two main strategies to become active learners, i.e. good education and personal skill development. Good education includes a professional integrated ICT-based curriculum, good relationship between teachers and students, open education practices, and game-based learning. On the other hand, personal skill development in facing the era of disruption includes improving foreign language mastery and digital skills.

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