Application of Digital Technology in Language Teaching Toward Industrial Revolution 4.0 Era: Perspective of Language Teachers' Readiness

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ABSTRACT

The use of technology has become an influential part in language teaching and learning. The emergence of industrial revolution 4.0 era asks the language teachers to explore the use of technology in exploring language teaching. This qualitative study aims at revealing the language teachers readiness and willingness in using digital technology in their language learning classroom. There were twenty language teachers (ten English teachers and ten Indonesian language teachers) participated as subject of the study. The data was collected through semi-structured interview. The result shows that 65% language teachers had used digital technology in teaching, but 35% language teachers used traditional way in teaching (not using technology in language teaching and learning). Moreover, the data finding also reveals the teachers' obstacles in using technology in language teaching classroom such as limited school's digital technology facilities, time-consumed preparation in using digital technology, and teachers' technology illiterate. These facts come to the conclusion that language teachers need more attention from government to realize the digital technology based-language class.
Keywords: digital technology, language teaching, industrial revolution 4.0 era

1. INTRODUCTION

In this era, the world face the transformation of technology development. The people have to get along with this challenge. This rapid revolution in digital era contribute in some aspects. One of them is in education. Technology increases impacts in education world-wide. Student are forced to compete among others to conquer the discruption. They are standing on the technology revolution that is called industry revolution 4.0. Education 4.0 is new model where builds on the concept of learning by doing. [1] advocate that it is important to ensure that future workers will be highly trained in emerging technologies, but also to develop interdisciplinary skills that will enable them to develop reflective thinking. Era 4.0 emphasizes the innovation that prioritizes relationship among each other.

Teachers have to plan some effective and efficient stategies to impart knowledge in facing digital era. They are expected to combine their teaching learning process with using of technology or internet. Teachers are the important factor to implement the digital technology in teaching learning process. In the digital era, they revolutionize the traditional teaching learning process into the class that full of using technology. A few year ago, teacher used traditional technique in teaching. [2] said that curriculum needs to be rescued from traditional behaviourist approach domination and cognitiveconstructivist approach should be introduced to the system, which is today internationally accepted and fast growing model in education systems. Now, they have to

integrate technology during the lesson. [3] stated that there are categories of digital technology: (a) input technologies (e.g., interactive whiteboards, projectors, virtual reality headsets), (b) interactive technologies (e.g., online quizzes, video conferencing), and (c) portable technologies (e.g., tablets, voting devices, and head-mounted displays). For teachers and students technology is now mobile, laptop or computer, smartphones, tablet etc. Technology provides more accesible way to enrich knowledge. It can optimize pedagogical effects. [4] has mentioned that more and more teachers and school administrators accept the role that digital resources and the internet can play in raising levels of motivation and engagement in learners, supporting learners with different learning styles and helping improve the quality of teaching and learning. The massive advancement of technology transfromes the teachers' culture of work. The transformation of technology development enhances the active learning process in the class.

In language teaching, it is a complex process for both students and teachers. The students, as new learners in acquiring the new language need more motivation and willingness. Therefore, the teachers need to support them by using an interactive an interesting media and technique in teaching. in line with that case, the use of digital technologies in language learning have more benefits in achieving language learning acquisition. To add, the use of technologies now becomes a requirement to support the

learning process. For teachers and students technology is now mobile, and laptop computers, tablet devices and smartphones are a normal part of the teaching and learning context in many schools [5].

This study explores the use of technology in language teaching. It highlights the condition and challenges in teachers perspective in using digital teachnology during teaching and learning process. It aims at revealing the language teachers readiness and willingness in using digital technology in their teaching learning process. It also actualizes the challenge from the technology development.

2. LITERATURE REVIEW

2.1 Digital Technology in Language Teaching

The development of technology changes many aspects. In education, we have to follow that current. The use of technology in education have influenced in the quality of education system. [6] stated that teacher needs to acquire knowledge as well as skills to be able to survive and more than that to impart best of knowledge to the students. As teachers, they have to be equipped with competence in using digital technology. By using digital technology, it is expected that the class is more active and they can evolve their knowledge.

Technology is changing the ways language teachers teach and that language learners learn and consequently is playing an increasingly central role in curriculum implementation [7]. To add, [8] says that it is important for language teachers to be aware of the latest and best equipment and to have a full knowledge of what is available in any given situation. Teachers can use Multimedia Technology to give more colorful, stimulating lectures. [9] identifies five levels at which technology can support language teaching:

a. *The physical level,* with tools such as mobile phones, digital cameras, laptops and tablets.
b. *The management level,* which includes learning management systems (LMSs) that enable the administration, delivery, tracking, reporting etc. of a language course.
c. *The applications level,* including word processing software, email and chat clients, social networking sites and blogs.
d. *The resource level,* which includes access to authentic materials, such as online newspapers, magazines, language tutors and dedicated websites for learners.
e. *The component technology level,* such as spelling checkers, grammar checkers, electronic dictionaries and other support tools.

In this case, technology gives much richer information that now easily provided for students. Thus, technology will lead the students to take part more in learning

2.2 Industrial Revolution 4.0 Era

Industry 4.0 refers to the fourth industrial revolution. It is usually known as a dynamic transformation for all business. Countries can no longer remain confined within their borders but must become citizens of the world [10] People in this era need to be critical in thinking that will create problem solvers who can interact well in global world. Those people must be well-educated to be in the ear of industrial revolution. In the future, people will be asked to be trained and used the technology. That kind of thinking is both reflective and interdisciplinary. Schools must reinvent themselves quickly. They need to adapt to the demands and have the obligation to come out of its shell, its hermetic spaces and try to give as many opportunities as possible by creating the adequate contexts for students to be prepared for the future jobs [11]. Too add, The fourth industrial revolution has its influences on the teaching process within the new era of industry 4.0 [12]. This new era will ask the teachers to make changes in many aspects. They also must train themselves in using technology in the classroom.

A. Previous Studies

There are some previous studies in line with this study. The first study was done by [13]. Her paper entitled "CELLO as a Language Teaching Method in Industrial Revolution Era" published in *English Review: Journal of English Education.* This paper aimed to explore the use of CELLO in assisting students' speaking fluency. This classroom action researcg consists of three cycles in which each cycle consists of six stages, namely identify the proclem, data gathering, data interpreting, action on evidence, evaluation, and revision. The obtained dta showed that CELLO method could improve students' speaking fluency. Based on the finding, implementating CELLO method is strongly recommended in teaching speaking especially at fostering students' speaking fluency. The second was done by [8] with a study entitled" The Use of Technology in English Language Teaching and Learning: An Analysis" presented in 2012 International Conference Language, Medias, and Culture. She analyzed the necessity of multimedia technology to language teaching and also brings out the problems faced by using these technologies. It also aims to make English teachers aware of the strategies to use it in an effective manner.

The last is [14] who conducted a study entitled "English Language Teachers' Readiness for the Application of Technology towards Fourth Industrial Revolution Demands". The purpose of the study, therefore, is to measure the English language teachers' readiness and willingness to use the technology in teaching the English language in the era of the fourth industrial revolution. Ten in-service English language teachers participated in the structured and semi-structured interviews. The findings of the interview showed that the English language teachers are not ready yet to use the technology in teaching the English language some ideas were revealed through the interviews 1) traditional and cultural ways of teaching 2) the understanding and attitudes towards technology 3) obstacles hinder teachers from using technology. Finally, the paper presented a number of implications and recommendations that include providing training programs for teachers and forums with experts of the fourth industrial revolution. The policy must be formulated to encourage teachers to use technology to improve the Arab teachers and students' use of the new technology in teaching and learning spaces.

This study is quite different to the previous studies. This study explores two sides of languages; English language and Indonesian language and how the teachers of both languages face the use of technology in their classroom.

3. METHODOLOGY OF THE STUDY

This is a descriptive qualitative study which took place in junior high schools in Semarang. There were 20 language teachers participated. They were ten Indonesian language teachers and ten English teachers. This study used questionnaires and interview to obtain the data. The data then analyzed qualitatively and quantitaive to come to the last conclusion.

4. FINDINGS

This study is clearly investigating the teachers' readiness and their willingness in using digital technology in language teaching. The data was collected through questionnaires and face to face. According to the data, there are three main data. They are teachers' readiness, teachers' obstacles, and teachers' need.

4.1 Teachers' Readiness in Using Digital Technology

According to the data from questionnaires, it has been stated that most teachers are not ready yet in using digital technology in their language teaching in the classroom. Most of them mention that they are not ready yet in using digital media in the classroom.
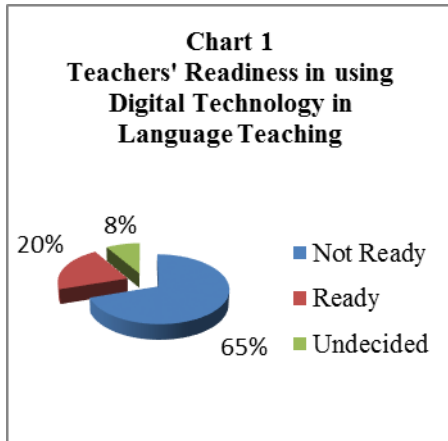

Chart 1 above shows that 65% from 20 language teachers mentions that they are not ready in using digital media. The rests are 20% teachers says that they are ready in using digital media and 8% teachers are unsure whether they are ready or not in using digital media in language classroom.

This data is also supported by interview data. Here are some of their statements which mentioning their unreadiness in using digital technology:

Teacher 3   : *Saya tidak begitu menyukai teknologi, jadi*

               saya tidak siap jika di kelas harus pakai teknologi. Jujur saja saya gaptek teknologi

Teacher 5   :*Saya malas ribet kalau pakai teknologi digital dikelas, saya tidak siap apalagi*

sekarang ini macem-macem teknologinya. Saya semakin tidak paham dan tidak siap. Sudah seusia saya agak susah belajar hal baru.

Teacher 6   : *Saya menggunakan metode tradisional saja selama ini, sudah berpuluh-puluh tahun dan cukup baik kok hasilnya. Soalnya saya itu ndak pinter teknologi. Takut malah salah dan hasil tidak maksimal.*

The data above has shown that the teachers are truly not ready in using digital technology. To add, they mention that they are not technology literate.

Another data of questionnaires below shows that most teachers (65% from 20 teachers) use traditional methods. Meanwhile, 35% teachers are able to use digital technology.
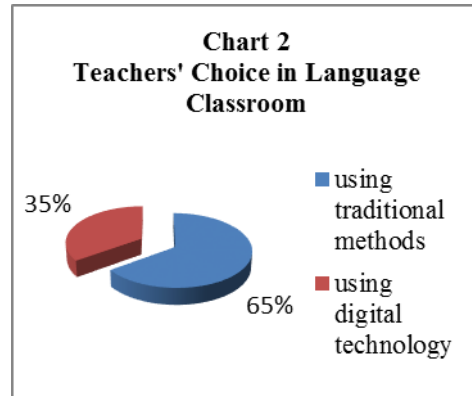
This also supported by the data of interview such as:

Teacher 8   :*Ya, saya memang selama ini tidak mencoba digital technology. Habisnya sekolahnya tidak ada fasilitas. Jadi saya tetap menggunakan tradisional saja. Saya juga tidak terlalu repot menyiapkan. Kan pasti makan waktu.*

Teacher 11   :*Pakai metode tradisional saja sudah banyak kendala, apalagi pakai yang digital… saya kok malah ragu apa saya bisa. Sekolah juga tidak ada lcd banyak. Harus bergantian. Jadi mending yang tradisional saja saya pakai selama ini.*

Teacher 12   :*Jujur ndak berani pakai digital, saya tradisional metodenya dalam mengajar bahasa inggris. Kalau pakai digital pasti saya tidak pinter, internet saja saya masih belajar sampai sekarang. Maklum saya masih gaptek.*

According to this Chart 2, teachers tend to use traditional method in language teaching. as it said by [15] in traditional language teaching methodologies, teachers teach facts from books. The teachers are seen as the main source of knowledge to the students. This condition is actually not good enough for students' learning improvement because students need more than the teachers.

4.2 Teachers' Obstacels in Using Digital Technology in Language Classroom

This study also reveals what are the reasons why most teachers do not use digital technology in language classroom. Meanwhile in the industrial era, both teachers and students are expected to be ready in digital era.

According the findings, most teachers mention three basic reasons as their obstacles in using digital technology in the language teaching, namely limited school's digital technology facilities, time-consumed preparation in using digital technology, and teachers' technology illiterate. It has been clearly seen in the Chart 3 below.

Chart 3
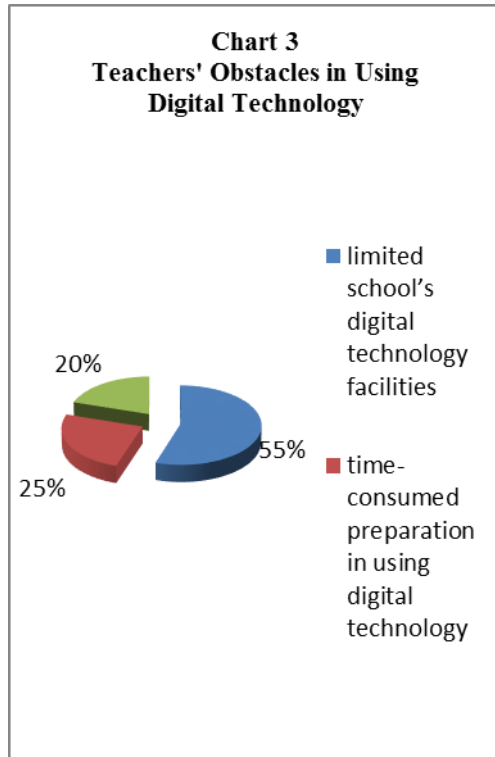Teachers' Obstacles in Using Digital Technology

Chart 3 above has shown a clear description on how teachers face three main obstacles in using digital technology in language classroom. The first and main obstacle is about school facilities that they consider as low. They mention that government should provide the school with internet connection, LCD screen, computers for both teachers and students. It means that they need a renewal of school infrastructures to support their need in teaching language using digital technology. Then, some teachers also mention that using digital technology is time-consumed that will lead them to the worse difficulties in teaching. They assume that they will be difficult to find materials to be implemented using digital technology. Their last obstacle is about their technology illiterate. They have mentioned that they are not technology literate which means that they are not ready yet in using digital technology. Some teachers are old enough and do not want to learn more about digital technology. On the other hand, others are expecting more training from the government to renew their skills in facing digital era in industrial era.

5. CONCLUSION AND SUGGESTION

The result of the study shows that most teachers are not ready in using digital technology in language classroom because they have some obstacles such as limited school's digital technology facilities, time-consumed preparation in using digital technology, and teachers' technology illiterate. This leads them still using traditional methods in teaching than digital technology.

According to the result of the study, it can be suggested that government should provide more better school facilities to support teaching improvement. To add, teachers are also facilitated by digital technology training that will add their knowledge in language teaching.

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