Integrating information technology into Indonesian EFL curriculum

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Abstract. Technology-assisted language learning needs to be integrated in curriculum. There are several studies on the usage of technology can be used to improve students' language skills. However, there is significant gap on how to integrate technology into EFL curriculum. This current study focused on how the heads of English Education Department manage the integration of technology into the curriculum, what the steps taken by them to make the integration of technology reliable to be applied into the classroom are, and how the students' attitudes toward the technology integration are. Moreover, it was a descriptive qualitative study using interview to collect the data. The findings showed that (1) the heads of the departments got positive support from institutional policy to integrate technology in their curriculum; (2) there were various steps taken to promote this technology integration; and (3) several students' attitudes can be performed when they joined classes applying technology. It can be concluded that students preferred a blended-learning model.

1 Introduction

A curriculum review is a multifaceted process, which determines curriculum planners to consider present and future educational needs. Toffler [1] claims that curriculum designers need to develop well-organized curricula in order to avoid regular conflict that may occur continuously because they create a new permanent curriculum for all purposes. However, he suggests that sets of impermanent curricula, which have a series of procedure of evaluation and renovation for several years is vital to be developed. His fore coming future shock vision seems it is a real condition nowadays. Curriculum designers experience challenges to review curriculum because they appear to jot down a permanent curriculum, instead of impermanent curricula. Thus reviewing a curriculum demands curriculum planners to have a comprehensive perspective toward old and new changes in educational area.

This present study will not discuss how heads of English education department and teams figure out curriculum review. Instead, new educational changes act as trigger to be considered for curriculum review. Currently, the new common topic, i.e. technology for English teaching and learning process, is prominent topic among educators. Moreover, sustaining professional teaching development using technology is also commonly applied. For example, a tailored made project designed by RELO US Embassy in Indonesia gives a terrific benchmark for professional teaching development using technology. The project called Indonesian Massive Open Online Course (IMOOC), which equips pre-service and in-service English teachers to develop their teaching skills using technology for autonomous learning. It was started in 2017, 15 IMOOC developers (from 15 universities across Indonesia) developed IMOOC to meet Indonesian curriculum. The first year success result is continued with the next session of IMOOC in 2018. It is expected that it can gain another success after reviewing the modules in the first session (this information is gather from an interview with several IMOOC facilitators).

On the other hand, several researchers also marked this phenomenon by conducting researches related to using technology into EFL classrooms. Regarding this study, five previous studies [2 - 5] are used to define the implementations of technology-assisted language learning.

First, Hui et.al [2] conducted the longitudinal experiment study, which intrigued to see the differences between technology-assisted learning and face-to-face learning. The respondents were first-year students at a major university in Hong Kong, and took the mandatory freshman English class. It was found that the students' acquisition of abstract conceptualization and reflective observation were increased when they joined the technology-assisted learning group. In contrast, they indicated to have negative performances for concrete experience. In addition, technology-assisted learning (compared to face-to-face learning) frequently supported vocabulary learning. However, it is less effective to develop the students' listening comprehension skills.

Second, Golonka et.al [3] stated that over 350 published studies (including classroom-based

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technologies, individual study tools, network-based social computing, and mobile and portable devices) were examined to see effectiveness of using technology in foreign language (FL) learning and teaching. The empirical studies found that the automatic speech recognition (ASR) as the part of the computer-assisted pronunciation training was able to give influence on pronunciation and supply effective feedback. In addition, the use of chat in FL learning showed that significant improvement was captured from the language production of the students.

Third, Toetenel [4] conducted a study on 30 students of a further education in United Kingdom, who joined a social networking site called Ning (she developed it as an open educational resource/ OER). She analyzed their peer interaction in and outside classroom and examined their preference of the type of activities used and effect of these on peer interaction within the research. The results showed that Ning enhanced group cohesion, and the students worked in different groups when they were interacted both in and outside classroom. She found that technical and administrative issue (e.g. IT department was not followed the project even though she got the permission for head of department) as the barriers. In addition, she asserted that the further education college where she conducted her research project did not have policy in term of the use of OER in the classroom.

Fourth, Huang and Chuang [5] investigated the effectiveness of technology-assisted sheltered model by using the animation design course, which adopted content-based instruction (CBI), aimed to boost the students' reading abilities, and implemented in English majors at a technology university in Taiwan. Moreover, there were a control group and an experimental group that consisted of 117 and 121 students respectively. The quantitative and qualitative data revealed significant improvement in the experimental group. The researchers reported this group to have better performances of reading comprehension, reading speed, acceptance, attention, exams, and easing teaching difficulties. Furthermore, the empirical results showed that the technology-assisted sheltered model was generated for EFL multi-purpose courses.

Fifth, Yusny and Kumita [6] found that teaching grammar utilizing Prezi presentation helps students improving their grammar mastery. Thus, it is another evidence that technology influence students' competence.

Mostly all researchers highlight that the integration of technology brings positive improvement for the students' language acquisition. Hui et.al. [2] and Huang and Chuang [5] argue that it has benefits for English skills whereas Golonka et.al [3] mention that it gives valuable effect on FL learning in general. In contrast, Toetenel [4] claims that negative responses of working place in implementing OER in term of the social networking site give technical and administrative obstacles. However, none of the researchers investigates how to integrate technology into curriculum. They frequently only report technology assisted-language learning may influence the students' competence. Therefore, this present study explores technology integration into Indonesian EFL curriculum. It only focuses on curriculum of English Education Departments which organized by Ministry of Religious Affairs of the Republic of Indonesia. In addition, Indonesian EFL curriculum for tertiary schools should be based on National Qualification Framework of Indonesia (*Kerangka Kualifikasi Nasional Indonesia (KKNI)).* It is a standardized Indonesian criterion of learning outcomes that must be achieved by undergraduate students. Thus, it is also interesting to recognize how curriculum designers link *KKNI* toward the curriculum.

1.1 Theoretical framework

Reviewing a curriculum demands curriculum designers to accommodate requested requirements from three fundamental aspects namely learners, teachers, and school. It is a complex situation because it is aimed to comprise present and long-term objectives, which include those required necessities from three fundamental aspects. Richards [7] states that understanding current and long-standing needs of students and society is essential considerations mainly addressed by curriculum planners with regards to develop goal for educational programs. Planners' belief and ideologies about schools, students, and teachers are several factors that reflect how they view learning objectives of educational programs. Thus it seems that learning objectives work in line with prominent requirements that should be mentioned in a curriculum. Currently, technology is one of the requirements that should be addressed in Indonesian EFL curriculum. However, according to Corder and U-Mackey [8], the integration of technology and curriculum must be addressed carefully, to realize the affordances of technology, and linked clearly to learning outcomes and learning, teaching, and assessment activities. In other words, technology must be integrated to resolve pedagogical issues. Although it is important to use technology-assisted language learning, curriculum planners must think about the flexibility and affordability of technology. Another main issue is how to link it into teaching and learning process that associates with learning outcomes and assessment. Therefore, technology integration is suggested to facilitate pedagogical issues rather than it only focuses on digital literacy.

Martin and Grudziecki as quoted by Goodfellow [9] define "digital literacy as the awareness, attitude and ability of individuals to use digital tools for communication, expression and social action in specific life situations." Digital literacy tends to display learners' competence to operate different digital gadgets, which can be used for communication and interaction virtually. Therefore, he asserts that the exemplifications of digital literary are information and communications technology (ICT), technology, information, media, visual and communications literacy [9]. It is described that digital literacy explores digital tools that can be used for communication and interaction, thus, it can be recommended for technology-assisted language learning.

Computer is a very common device that can be used to perform technology-assisted language learning. Although computer assisted language learning (CALL) is a well-known concept among educators, it should not be recognized because it has series of historical phases. Motteram [10] claims that CALL should not be discussed merely regarding to its development historical phases. However, implementing technology into practical usage in classrooms must be explored further in order to shape its benefits for students' learning outcomes. She thinks that students' learning outcomes are more central to be observed because integrating technology into curriculum expects teachers to be reliable to link it into syllabus and course plans. For example, CALL activities can perform computer learner interactions, and all students in a class can actively participate in that interactions in the same time [15]. Thus, it can be assumed that a school must be equipped with computer laboratory. In addition, probably students may provide their personal laptops. It must be highlighted that for this type of CALL activities computer or laptop must be available. Furthermore, CALL activities should focus on the curriculum of English. Chapelle [11] argues that language learning features should be considered as principle of evaluating CALL, as a consequence, language focus should be stated as one of part of CALL tasks. However, Mustikasari [12] says that designing activities for MOOC must avoid a time consuming pattern of learning.

Activities and tasks, which employ technology, become more interesting when e-learning occurs to change face-to-face interaction in a classroom. Coryell and Chlup [13] point out that computer-mediated communication (CMC), language acquisition software, course management software (e.g. WebCT, Moodle, and Blackboard), online streaming audio and video, Internet language learning meeting places (i.e. Dave's ESL Cafe´) are various options of e-learning. Moreover, Elliot [14] adds that CMC relies on communication experiences, which use networked computers. CMC can be classified into synchronous (a real time event) such as instant messaging, video conferencing; and asynchronous namely email, internet forums. Those online learning activities utilize virtual communication in order to invite students to use English in real-life situation. Coryell and Chlup [13] suggest four characteristics of e-learning activities which are taken from the survey and focus group discussion data in implementing e-learning for adult English language learners, namely preparation, individualized, student-centered instruction, support, and collaboration. Those features are expected to maximize students' independent learning.

On the other hand, blended learning emerges to be preferred. Hubackovaa [15] asserts that blended learning will be frequently used in the future because her survey result reveals that among adults students from lifelong education from divergent types of school are indicated to used blended learning as their preference. Blended learning is also well-known as "hybrid learning" [16] and it is probably liked by adult students because it is a combination of face-to-face and online learning.

Both of e-learning and blended learning demand teachers to have a well-structured preparation to design them. Compton [17] claims some aspects needed to be adjusted to prepare language teachers to teach language online:

1) Despite of technical and software specific skills (which can be learned), online language teachers should spend more time on how to develop their skills to facilitate online socializing and community building for students so that meaningful communicative interaction can be boosted
2) A language teacher education program should be framed for three categories of online language teaching skills (technology, pedagogy and evaluation) which accommodate three levels of expertise (novice, proficient and expert)
3) Divergent roles and responsibilities of online language teachers in the online language learning system must be recognized in order to avoid gaps and take necessary actions.
4) Learning system concerning integration of online language teaching and learning must be related to issues in existing curriculum design and methods courses.

From his perspectives, it can be defined that teachers must recognize their personal competence to teach online because each teacher has unalike levels of expertise. Similar to Compton, Hanson [18] adds that educators can be categorized into two big domains namely innovators (those who are able to take a risk by trying new ideas that use latest technology and desiring for revolutionary change) and majority (those who need help, opportunity, and confidence to try ICT for teaching). Both classifications of teachers' technological competence are important to be noticed because technical issues are needed to solve. In addition, teachers can learn how to use software and other technology specific skills; as a result, they can provide a virtual interaction, which is meaningful and communicative. Therefore, it is crucial to set up standard of operational procedure of those members of online learning facilitator. On the other hand, integration of online activities, which is suitable with current curriculum and course is another vital issue. Technology-assisted language learning should address language pedagogy because students' language competence must be concerned first in order to maximize their learning outcomes.

Students' learning outcomes must be stated in a curriculum; therefore, curriculum designers need to arrange an intended learning outcome. Biggs and Tang [19] offer three levels of outcome statements of intended learning outcome, they are (1) institutional level (a statement of competence of a university graduation), (2) program level (a statement of competence of a department graduation), and (3) course level (a statement of competence of a course completion). An interconnection among those levels must be smoothly organized so that an intended learning outcome is reliable to be jotted down and achieved.

An intended learning outcome should facilitate students to perform their learning process rather than learning product. A learning process resembles students' learning experiences. For instance, CBI is adopted in a curriculum. CBI supplies authentic content that it can be used to contextualize learning in order to foster dual learning that is language and content [5]. Therefore, students' learning experience must be facilitated with activities that explore authentic materials' usage, and both language-driven and content-driven should be linked and mentioned in an intended learning outcome that wisely addresses learning process compared to learning product. It is expected that students can show their independent learning. Papadima-Sophocleous [20] informs that autonomous learning is frequently occurred in an integral element of language education in Cyprus. It can be systematically designed because it is aimed to foster the students to perform their autonomous language learning, to provide effective learning potential, to boost lifelong language learning, and to shape European intercultural awareness and communication identity. Regarding to enhance independent learning, some actions are taken such as maximizing the school library programs, sustaining the language rooms, and promoting new syllabuses. This is a good example of how to design a curriculum, which includes all requirements that considered the need of schools, teachers, and students. In contrast, other scholars mention another students' personal behavior, which can be reported to influence students' independent learning in language learning using technology. Lai and Gu [21] state that some factors of the students' self-regulations such as goal commitment, resource, affection, culture learning, metacognition, and social connection regulation respectively influence Hong Kong university students' careful choices of technology for language learning. They also mention that the students' perspective on language training is not merely vital in language learning beliefs. In addition, they also show their point of view in technology-assisted language learning which it is a reflection of their metacognitive knowledge. It can be clearly recognized that both of behaviors, autonomous learning and self-regulations can be used to enhance students' language learning using technology. Thus in this study, I will pursue to investigate how the heads of English Education Department manage the integration of technology into the curriculum, what steps they do to integrate technology into classrooms, and how the students' attitudes toward the technology integration are.

2 Methods

This study was a descriptive qualitative study. Larsen-Freeman and Long [22] state that Qualitative paradigm has some attributes such as it is "process-oriented; valid, rich, deep data; holistic; natural; subjective; dynamic reality; descriptive; exploratory, etc." Thus, this study tried to find out the general implementation of the integration of technology into the Indonesian EFL curriculum.

The locations of study were 11 English education departments of the state Islamic tertiary educations (i.e. universities and institutes), which are located on western Indonesian time zone. They are managed by Ministry of Religious Affairs of the Republic of Indonesia. In the first step, the researchers interviewed 11 heads of the departments who are the members of the committee of the English Linguistics Literature and Education (ELITE). It is a national-based association of English lecturers. The interview was conducted to gain initial information about the use of technology in the 11 English education departments. The second step was in-depth interview. The participants were 5 of the 11 head departments, who has applied blended learning. The five departments has qualified for level of A or B for the department accreditation.

2.1. Data collection

Firstly, open-ended interview was proceeded to gain the data. Three IMOOC facilitators examined and validated the list of interview questions. McKay [23] claims that an open-ended interview provides a well-constructed standard of procedure because it has specified questions that have the same order and exact words so that identical questions are given to participants. Thus, comparable data and data analysis are easier to do. Secondly, curriculum, lesson plan, and departments' academic information on websites were needed as documents.

2.2 Data analysis

The data was analyzed with deductive approach. Coding, classifying and categorizing the data were done. Baralt [24] states that some features of qualitative coding are: (1) including series of reading and examining data, (2) using extracting themes of data as initial steps of coding, (3) comparing themes from some data types, therefore, this present study compared the data from interview and documentation.

3 Findings and discussion

The findings and discussion are separately presented in the following sections.

3.1 The heads of English education departments manage the integration of technology into the curriculum

The institutional and faculty policy played a vital role to shape the departments' curriculum. This was the basic base for the departments to make legal steps regarding their initiatives toward new changes that influenced by the trend in education and stakeholders' requirements for the qualified-alumnae. The departments' initiatives also supported and facilitated by the institutional positive regulation of infrastructure toward the usage of technology in equipping academic and administrative atmospheres.

Each university and institution has online integrated-system for academic and administrative matters. Particularly for academic needs, this system utilizes such as blog staff and e-learning. Lecturers might upload their teaching documents (syllabus, course plan, teaching material) in blog staff. On the other hand, lecturers could have online class using e-learning portal. However, it found that most of the heads of department mentions that blog staff and e-learning were not used effectively by lecturers because lecturers tended to use face-to-face meeting rather than online meeting. In contrast, there was only 1 university confirmed that lecturers must do online meeting, eventough, they had to simply inform only assignments in the online integrated academic system which provides some features namely home, profile, students' academic assistance, grade, schedule, electronic syllabus. This online system facilitates lecturers to upload and text their assignments. Moreover, students had an out-class activity to learn and do assignments. Thus, it seemed that this university had a blended-learning environment. In addition, the institutional policy did not have a strict rule of how many percentages in arranging the combination of face-to-face and online meeting that must be done by lecturers. A design for fashion time allocation to organize blended-learning were mandatory for lecturers.

The institutional and faculty policy as well as the infrastructure were strengthening the heads of the departments to arrange the well-organized curriculum. Based on the data, all heads of department and teams had the adequate ability to integrate technology into their curriculum.

They organized the curriculum based on *KKNI,* which is used to standardized criterion of targeted-learning outcomes for undergraduate alumnae. This stage was the starting point for them to design the set of departments' curriculum identities namely the vision, mission, goal, targeted-learning outcomes and a milestone of specific strategy. It can be reported that the identities of the departments' curriculum had a friendly concepts, which display various efforts to accommodate the integration of technology into the curriculum. Following the education trends on the usage of technology for language learning and supplying the requests from the stakeholders in the needs of qualified alumnae are crucial factors, which influence the heads and teams to integrate technology for their curriculum.

Regarding one of the essential components of the specific-skills of Level 6 for undergraduate alumnae in *KKNI*, it is stated and translated that undergraduate alumnae has the ability of specific skills to use the technology to teach and do research in English teaching. Therefore, the heads of the departments and teams used this component to make a remarkable act of integrating technology toward the curriculum. Several initialing acts that can be informed as follows:

1. Discuss and state the identities of the departments which utilize technology
2. Choose subjects of study that contain technology-based assisted language learning
3. Illuminate the syllabus of the subjects
4. Organize course plan

Moreover, related evidence toward the above acts was found, they were:

1. Majority of the departments' curriculum identities had stated the term "information and communication technology, information technology, or technology"
2. The subjects, which implemented the technology-based assisted language learning (the subjects were gather across the departments; the same subjects' names are not repeated) are Integrating ICT in Curriculum and Instruction (elective), EFL Instruction with Multimedia, ELT Media Design, EFL Pedagogies for Flexible Learning, Computer-Assisted Language Learning (CALL), English course design, Instructional Media, Media Instructional Technology, Internet-based Language Teaching, Macro Media Flash, Instructional Material and Media Development, Media for Teaching Young Learners (elective)
3. The course plan, which elaborated syllabus, clearly defined the topics of discussion that address technology enhancing English language teaching. Moreover, lecturers have the chance to initiate new topics of discussion in their course plan; however, they have to relate new topics with the syllabus. The course plan provides sufficient knowledge for students of how to integrate technology into classroom activities when they act as teachers. For example, from the data, it was appeared that the course plan of the same name of subject can have different topics; nevertheless, it had ample coverage topics on specific virtual learning environment platform, related software, and websites, virtual ethnicity, technology in education, history of CALL, and online resources for English as foreign language teachers.

3.2 The steps taken by the heads of the departments to make the integration of technology reliable to be applied into the classroom activities

After structuring the curriculum document, the heads of departments tried to manage and facilitate lecturers to have a better performance in teaching using technology. Four steps were taken in integrating technology to be more feasible in the teaching and learning process: 1) providing supportive department policy, 2) conducting workshop, 3) organizing equipments/ tools, 4) having regular supervision system.

Majority of the heads of the department did not have firm rule toward department policy using technology in the classroom. Lecturers were freely taught using technology as their wish. In contrast, there was only 1 head of department that assigned lecturers to teach at least 1 subject using a blended-learning environment, and he had a special workshop to assist lecturers so that his effort was realistic to be done. He asked 1 lecturer to

train the other lecturers using canvas.instructure as the platform for blended-learning.

On the other hand, all heads of department organize several workshops that can be used to give insight for lecturers regarding the implementation of technology into their daily classroom activities. In addition, budgeting for lecturers' trainings came from the institution, faculty or department schemes. On the contrary, the heads of department might organize non-budgeting workshop which commonly recognized as lecturer discussion forum, and it is a monthly meeting. Nevertheless, the topics of discussion could be various because they depended on lecturers' preferences who present their talks. Another way to furnish lecturers digital literacy, the heads of the department assigned certain lecturers to follow workshops that organized by RELO US Embassy and AUSAID. The lecturers who were mandated to join this teacher training programs trained the other colleagues after they finished the programs. Moreover, the data showed that there was 1 department which had approximately 6 lecturers who act as trainers for teacher professional development for external audiences.

Besides facilitated lecturers with workshops, providing equipments/ tools also became an issue to be considered. The term equipments/ tools refer to infrastructures and technology resources. The former items could be best seen from computer laboratory, smart classrooms which have LCD projector and wifi. Each department had those items. Furthermore, bring-your-own laptop/ gadget policy tended to be arranged and agreed between lecturers and students. While technology recourses might be founded in the usage of platform, software, and social media. The platform were canvas.instructure, moodle, Google classroom, Google form, email. Then there were several common software: PeerWise, camtasia, storyline2, edmodo, and Rosseta Stone. Meanwhile, facebook and instagram were famous social media. From the above data, it can be inferred that all departments used both types of CMC: 1) synchronous (a real time event namely social media), 2) asynchronous (such as email, and the above platform as the internet forum).

Although lecturers were reported to use the above platform, software, and social media, the heads of the departments had a system of customary supervision. It was normally done for twice per semester, and it was held in the mid-term and final-term. Basically, the system was not creating to address technology requirements in the teaching process; however, it covered all teaching aspects. In addition, students were examined lecturers' teaching performances by using online and printed form. The results of the assessments were informed to lecturers, and the heads of departments kept the confidential identity of the students.

Even though most of the heads of the department realized that lecturers probably did not use technology to teach for some reasons as follow:

1) They were senior who were not tech-savvy lecturers
2) The subject of study did not need to be delivered using technology

In contrast, disagreement to the above reasons was mentioned by 1 head of department. He said that age was not the main problem why the senior could not do teaching using technology. They were able to integrate technology in their classroom if they get a series of workshop, however, it might take a longer time to be fluent using technology. Therefore, he assigned a tech-savvy lecturer to organize helpdesk. Those steps that were crucial to help lecturers to teach using technology.

Another phenomenon arising in this study is that the heads of the departments considered CBI for non-English classes. English lecturers had the ability to teach non-English subject such as English for Islamic Studies, Education Management, Learning Theories, Philosophy in Education, English for Tourism, English for Business, Contemporary Issues in Islamic Studies, Introduction to Entrepreneurship, Islamic Entrepreneurship, English for Tourism, English for Correspondence, and English for Journalistic. Moreover, the result found that they also used technology in the process of teaching.

3.3 The students' attitudes toward the technology integration

Engage and active students were informed to be appeared when they attended the classes that employ technology as their learning activities. Thus, student-centered paradigm tended to be facilitated by lecturers. Another attitude, which dominantly display by students when they joined a blended-learning environment was autonomous learning. They felt excited with the new learning concept. In addition, lecturers who teach the subjects provided helpdesk. An interesting situation also appeared in providing helpdesk for the students. The helpdesk was organized by English students association from 1 university. The head of department asserted that the students have a solid skillful team so that they are able to help their friends whenever they have obstacles to use technology.

3.4 Discussion

The long process of integrating technology into the curriculum needs to be assisted from the top to bottom level. The departments will not able to have a legalized-curriculum which integrate technology if they do not have supportive encouragement and facilitation from the university or institution. As a result, the alumnae learning outcomes can meet stakeholders' expectation.

A series of workshop to boost lecturers' intention to teach using technology will need to be maintained the future so that no more senior will be labeled as non tech-savvy lecturers. From the data revealed that majority of lecturers tended to have low until medium skills of using technology. Working with the students to have the helpdesk is also interesting to be proceeded because it will foster scaffolding that can bring positive effect to minimize students' problems in using technology.

Technology assisted-language learning is emerged to have a blended-learning environment as the preference among the departments. This type of learning can be

used to accommodate the students with virtual learning environment as well as face-to-face meetingside.

4 Conclusion

The findings of this current study basically support Bach, et.al (2007). Their idea of blended-learning is preferable among adult learners is proof in this study. It is true that they like the activities of learning that combine online and face-to-face meeting. Recommendation for future study will be very useful to investigate the model of blended-learning which employ scaffolding between students to boost autonomous learning and self-regulated learning

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