EXAMINING TEACHERS’ INNOVATION IN EFL CLASSROOMS IN PROMOTING STUDENTS’ AUTONOMOUS LEARNING

Sri Wahyuni¹
Universitas Negeri Semarang
sriwahyunifbs@mail.unnes.ac.id

Dwi Rukmini³
Universitas Negeri Semarang
wiwidwirukmini@yahoo.com

Januarius Mujiyanto²
Universitas Negeri Semarang
yanmujiyanto@gmail.com

Sri Wuli Fitriati⁴
Universitas Negeri Semarang
SriWuli.Fitriati@mail.unnes.ac.id

Abstract - The 21st century is in high demand of information, media and technology skills. In classroom context, teachers are the front liners who have to possess technological pedagogical and content knowledge (TPACK) which can support the success of the 21st century education. In line with this, in the language education context, the development of approaches in language teaching has shifted teacher-centered into student-centered instruction. However, teachers as facilitators play an important role in promoting learner autonomy. At the same time, the emergence of technology has also altered teachers' choices of instructional strategies and media to facilitate students’ learning. The present study is an attempt to explore how teachers’ use of technology and project work in EFL classrooms help boosting autonomous learners. One English teacher of a public senior high school and a class of 36 students took part in this study. Classroom observation was carried out to gain description of how the teacher and students made use of technology and carried out project work for ELT purposes. Questionnaire and interview were also administered to obtain information about how integration of technology into students' project work contributed to the promotion of student autonomous learning. To evaluate how teaching and learning processes have been directed to promote autonomous learning, the Autonomous Learner Model (ALM) by Betts and Kercher (1999) was employed as the framework to analyze the data [1]. Finally, pedagogical implications are also presented.

Keywords - teacher’s innovation, technology, project work, EFL, autonomous learners

I. INTRODUCTION
Rapid development and the increase use of technology has been embedded into so many aspects of people’s lives including education. In this digital era, students known as the Millennial or Net Generation are very much different from their Generation X parents and Baby Boomer grandparents (Pletka, 2007, p. 19) [2]. The differences lie on among others the way they communicate and get information. The Net Generation described as “shaped by a new, networked, visually rich, digitally constructed communication and information world” (Tapscott in Pletka, 2007, p. 28) [2] have more opportunities for communicating and socializing through their technology outside classrooms. Pletka (2007, p. 21) [2] argues that “they have been nurtured by a world of digital technology, instant information, global communication, individually customized environments.”

With this in view and in regard to the demands of the 21st century education, teachers should be able to facilitate students with digitally learning environment and enable them to collaborate with peers. In accordance with Trilling and Fadel (2009, p. 49) [3] the 21st century skills focus on (1) critical thinking and problem solving, (2) communication and collaboration, and (3) creativity and innovation.
Meanwhile, in the Indonesian context, the 21st century education is the education which integrates literacy, knowledge, skills, and attitude, as well as technological skill. To achieve this goal, the school curriculum mandates teachers to carry out teaching and learning processes by moving from developing students’ low order thinking skills – LOTS to higher order thinking skills – HOTS (Dit.PSMA Ditjen.Pendidikan Dasar dan Menengah, 2017). [4]. In the spirit of this goal, classroom teachers should embed those four 21st century skills into teaching and learning processes. Therefore, to cope with this challenge school teachers should be innovative. Innovation is an attempt to bring about educational improvement by doing something new or different. Innovation in language education includes new pedagogic approaches such as task-based language teaching, changes to teaching materials, technological developments - Computer Assisted Language Learning (CALL), and alternative assessment methods - portfolios (Carless, 2013). [5]

From this perspective, one of the innovations that can be introduced to enhance students’ learning is technology use. In the educational context, there have been a number of studies confirming the benefits of technology in many ways. The study by Lea, Clayton, Draude, and Barlow (2001) [6] exploring the teachers and students’ perceptions on the use of technology on teaching and learning found that the integration of technology into classroom activities is essential. Next in 2010, Kasapoglu-Akyol’s [7] study revealed that use of computers is excellent to motivate students to write and develop students’ writing. Similarly, the study by Tabatabaei and Gui (2011) [8] discovered that technology has helped enhancing classroom activities, motivate students, and engage them in instructional activities. Furthermore, Granito and Chernobilsky (2012) [9] carried out a study showing that the participants who chose to complete projects using available technology scored significantly better than those who were forced to use available technology. In addition, Nomass (2013) [10] identified that in general, technology helps the students learn the language faster. This is in compliance with Alsulami (2016) [11] who found out that technology influences students’ reading and writing skills. Tosun (2015) [12] summarized that various instructional materials including videos, blogs, online forums and other digital tools provide students opportunities to practice outside the class. A similar study by Purnawarman and Sundayana (2016) [13] reported that Edmodo as a course management system was possibly integrated into the Genre-based Approach to teach writing and it also enhanced students’ engagement towards instruction.

In addition, for decades now, many scholars have been interested in exploring the impacts of technology towards learner autonomy (LA) and LA itself has been a distinct field of research and has its own place for researchers. Balçikanlı (2010) [14] carried out a study on student teachers’ beliefs about learner autonomy in the Turkish educational context. The result showed that student teachers were positive towards the adoption of LA principles. Ariza and Sánchez (2013) [15] discovered that ICT enhanced the integration of metacognitive strategies and independent activities and it revealed that integrating the use of metacognitive positively developed students’ language achievement as well as learners’ awareness. Lee (2016) [16] explored the implementation of task-based instruction incorporated with Web 2.0 technology and four-language skill-tasks as well as digital tools. The results indicated that the types of tasks and utilization of digital tools fostered learner autonomy in different ways.

Meanwhile, in the Indonesian context, there seem quite a few scholars carrying out studies on LA. This is supported by Lengkanawati (1997) in Lengkanawati (2017) [17] stating that “LA is less commonly utilized in Indonesia compared to that of in the Western context”. Likewise, Lengkanawati (2014a) in Lengkanawati (2017) asserted that “LA was very rarely discussed in Indonesian literature”. The followings are some scholars conducting studies on LA. Myartawan, Latief, and Suḥarmanto (2013) [18] carried out a correlational study and using multiple linear regression analysis the study revealed that learner autonomy had a significant, strong, positive correlation with the students’ English proficiency. Next, Lamb (2014) [19] investigated learning attitudes and activity among adolescents in Indonesia. Administering questionnaire, interview and classroom observation instruments, the research reported that even younger learners are already learning English independently both inside and outside classrooms. Tahi (2016) [20] explored the factors helping students to enhance autonomous learning in EFL reading. Tahi’s study revealed that student autonomous learning in reading was affected by both internal factors - learners gained it
subconsciously and gradually since childhood and external factors - autonomy in EFL reading is seen as universal due to Indonesian’s collectivist culture. Different from the previously mentioned studies, Lengkanawati (2017) [17] did a study aiming to find out teachers’ perceptions and experiences of LA and the significance of professional development on LA.

Referring to these previous studies, there seems quite limited research evaluating the use of technology combined with other innovative teaching methods and strategies to promote LA. Therefore, the present study aiming to examine the teacher’s use of technology and project work in promoting student autonomous learning was intended to fill this gap.

The concept of LA was firstly introduced by Holec (1981, p. 3) in Lee (2016). [16] LA is defined as ‘the ability to take charge of one’s own learning.” In language education, LA is understood as ‘learner independence’, ‘self-direction’, and ‘independent learning’ (Masouleh & Jooneghani, 2012). [21]. Betts & Knapp (1981) in Betts (2017) [22] defined autonomous learners as “students who solves problems or develop new ideas through a combination of divergent and convergent thinking and function with minimal external guidance in selected areas of endeavor.”

Benson and Voller (1997, p. 2) in Thanasoulas (2000) [23] explain the term autonomy in five ways: (1) for situations in which learners study entirely on their own; (2) for a set of skills which can be learned and applied in self-directed learning; (3) for an inborn capacity which is suppressed by institutional education; (4) for the exercise of learners' responsibility for their own learning; and (5) for the right of learners to determine the direction of their own learning.

Moreover, Thanasoulas (2000) [23] suggests some ways to include autonomous learning into classroom activities among others first by assigning students to make learning diaries or self-report. This way, students will determine their own learning objectives, learning outcomes, and what to learn. Next, students are required to record their assignment and assessment process in portfolios so that they can monitor how they have achieved their learning objectives. Students are also encouraged to utilize technology in their own learning. Teachers can direct and guide students to use varied learning applications and sources. Finally, teachers can build students’ motivation and engagement through persuasive communication to alter students’ learning goals, materials, sources, time and place, as well as learning methods and strategies.

As studies on LA are growing, some scholars propose learner autonomy models to guide teachers in developing student autonomous learning. To name two of them, Betts and Kercher (1999) in Autonomous Learner Model (n.d) [1] developed the ‘Autonomous Learner Model (ALM)’ with its five dimensions including orientation, individual development, enrichment, seminars, and in-depth study, while Tassinari (2000) [24] proposes ‘the dynamic model of learner autonomy’ with its ten dimensions. Besides the difference in the number of dimensions, Betts and Kercher’s (1999) model focuses on the teachers’ and students’ point of view and activities, while Tassinari’s (2000) on the students’. In light of this, the study employed the ALM by Betts and Kercher (1999) to examine the teacher’s use of technology and project work to develop student autonomous learning.

II. METHODOLOGY

The present research is a case study which employed a descriptive qualitative approach. It was carried out in one public senior high school in Semarang, Indonesia and the data were gathered in the first semester of the 2018-2019 academic year. The study involved one English teacher and 36 students of Social class. The teacher participant, having a Master’s degree in English education, has been teaching English for 15 years and has already been certified as a professional teacher. She teaches English classes for 39 hours a week in both Social and Science classes. Despite the teaching load, she is quite active in some teacher professional development programs. As regular activities she participates actively in a local English Teacher Association. She also attended a teacher professional development program on technology use-SEAMOLEC Digital Classroom Workshop in 2015. Besides, she is an active contributor in academic events such as presenting in international forum as well as writing and publishing articles on her best teaching practices.

The research instruments used to collect the data were observation, questionnaire, interview, and documentation. Classroom observation was done four times and video recorded. The observation focused on what technologies the teacher used and how she used the technology to facilitate her teaching and
students’ learning. The result of the observation was later confirmed with a questionnaire and an interview as well as the teaching documents. The questionnaire items and interview guide were developed based on the attributes of autonomous learners by Thanasoulas (2000). [23]. Moreover, the instruments were used to obtain information about the teacher participant’s personal data, kinds of technology used, and how the teacher integrated technology into the project work and overall classroom practices as well as how the teacher’s technology helped promoting students’ autonomous learning. The documents observed were the lesson plan and online-version documents such as Google classroom, Google slides, Google docs, WhatsApp Group, and Project presentation.

The collected data were analyzed through several stages: (1) reducing data – thinking about the data in relation to the research questions, (2) categorizing data – coding the relevant data, (3) reflecting on the data – writing notes, comments, etc., (4) organizing the data – finding patterns, and (5) analyzing data - connecting the emerging issues to the related concepts (Richards, 2003, p. 272 in Hood, 2009, p. 80). [25]

III. FINDINGS AND DISCUSSIONS

A. Research Context

The present study investigated an English teacher’s innovation in promoting students’ autonomous learning. By innovation, it means that the teacher participant uses ICT in her teaching and learning processes which include pre-teaching, whilst-teaching, and post-teaching activities. The ICT use was combined with the project-based learning. This was a four-week project for the students to evaluate and produce biography texts. Interactive learning log was employed to record students’ activities, progress, and product. To complete the project, the students were assigned to work in groups. The class meets once a week in three hours. The teacher made use of devices such as computer, laptop, tablet, smartphone, LCD to help her designing the syllabus and lesson plan, exploring and selecting teaching strategies, sources and media, and developing teaching materials. She also utilized the devices to carry out teaching activities and administer evaluation. Besides, to facilitate students’ learning she worked with Google Classroom as the learning platform and other Google Applications such as Google Drive, Google Docs, Google Slides, and Google Form. To make teacher-student and student-student communication easier, faster and more practical they used WhatsApp group. In addition to technology use, the teacher incorporated the development of the 21st century skills including (1) critical thinking and problem solving, (2) communication, (3) creativity and innovation, and (4) collaboration into the project work.

Table 1 below presents the detailed information of the project. It includes core teaching materials, project work, learning outcomes, learning objectives, learning materials, teaching methods and strategies, teaching and learning media, tools, and sources.

<table>
<thead>
<tr>
<th>Core materials/topic</th>
<th>Recount Text-Biography</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project work</td>
<td>A four-week project - producing biography texts using Interactive Learning Logs</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Students learning outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Through a group work, students are able to identify general and specific information in a biography correctly.</td>
</tr>
<tr>
<td>2. Through a project activity, students are able to produce a biography of their family or teachers (one role model) accurately and appropriately.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning objectives</th>
<th>Week 1</th>
</tr>
</thead>
</table>
| Given learning materials and having learnt about biography texts through interactive learning logs, students are able (1) to name the communicative purpose, generic structure, and linguistics features of biography texts; (2) to differentiate the communicative purpose, generic structure, and
linguistics features of four types of biography texts; (3) to complete a biography text with adverb of time; (4) to identify and rewrite three sentences using past perfect tense, simple past tense, and past continuous tense; (5) to name the main idea of a biography text; and (6) to identify specific information and moral values of a biography text.

Week 2
Given learning materials and having learnt about biography texts through interactive learning logs, students are able (1) determine the concept and criteria for the characters of a biography; (2) design a project plan of making a biography text including before, during, and after the project; (3) design a group work plan of making a biography text including what, who, where, when, and how to complete the project; and (4) collect data for the project of making a biography text.

Week 3
Given learning materials and having learnt about biography texts through interactive learning logs, students are able create both spoken and written biography texts based on the collected data.

Week 4
Given learning materials and having learnt about biography texts through interactive learning logs, students in group are able to present the biography texts.

<table>
<thead>
<tr>
<th>Learning Materials</th>
<th>Concept of biography</th>
<th>Communicative purpose of biography</th>
<th>Generic structure of biography</th>
<th>Linguistic features of biography</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching Methods</td>
<td>Communicative Language Teaching</td>
<td>Project-based Learning</td>
<td>Question-Answer, Discussion, Presentation</td>
<td></td>
</tr>
<tr>
<td>Teaching and learning tools</td>
<td>laptop, LCD projector, smartphone, tablet</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Learning Management System</td>
<td>Google Classroom</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Media</td>
<td>WhatsApp, Instagram, Youtube</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Online Apps</td>
<td>Google Drive, Google Form, Google Slides, Google Docs, Video Editor</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teaching and learning sources</td>
<td>Movie - Fresh off the Boat</td>
<td>Documentary film - Will Smith</td>
<td>Comic - Albert Einstein</td>
<td>Book - My Name is Malala</td>
</tr>
</tbody>
</table>

### B. Contribution of teachers’ use of technology and project work towards student autonomous learning

The present study focuses on exploring how teachers’ innovation promotes learner autonomy. Innovation in this research is used to refer to the teacher’s technology use which was integrated into the students’ project work intended to develop students’ 21st century skills. In view of this, the Autonomous Learner Model (ALM) developed by Betts and Kercher (1999) [1] was employed to evaluate how the teacher’s innovation contributed to the development of the learner autonomy.

In reference to the observation and confirmed with the interview, it was found that the teacher participant used almost the same
technology as the students did in terms of the devices, course management system, social networking sites, and online applications. The result can be seen in table 2 below.

Table 2: Teacher and students’ technology use for learning purposes

<table>
<thead>
<tr>
<th>Technology</th>
<th>Teacher</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Devices</td>
<td>laptop, tablet, smartphone</td>
<td>laptop, smartphone</td>
</tr>
<tr>
<td>LMS</td>
<td>Google Classroom</td>
<td>Google Classroom</td>
</tr>
<tr>
<td>Social Media</td>
<td>WA, Youtube, Line, Email, Facebook</td>
<td>Instagram, WA, Line, Youtube, Email, Facebook, Twitter</td>
</tr>
<tr>
<td>Applications/Word Processors</td>
<td>Google Drive, Google Form, Google Slides, Google Docs, Kine Master (Video Editor), Google Translate, E-dictionary, Games, TED, Word Pad</td>
<td>Google Drive, Google Form, Google Slides, Google Docs, Kine Master (Video Editor), Google Translate, E-dictionary, Games, TED, Word Pad</td>
</tr>
<tr>
<td>Others</td>
<td>The Internet</td>
<td>The Internet</td>
</tr>
</tbody>
</table>

The teacher used varied devices and Google Applications to facilitate students working on the project which was producing biographies including comics, books, documentaries, and movies. The students worked in groups and each group was assigned to complete one type of biography. To facilitate students’ group work, the teacher created an Interactive Learning Log saved in and distributed through Google Drive. Using Google Slides, the students completed each week’s task. The reasons of using Google Slides was to enable group members directly contribute their ideas and do revising and editing. Besides, the teacher could put her feedback online as well.

In regard to the interview to some students, when asked about their feelings of using technology during learning, they stated that they felt excited. Despite the fact that they have used technology for communication and obtaining information outside classroom, they rarely used it inside classroom for learning purposes. They further said that they could explore themselves the links for more learning materials and sources. This is in accordance with the teacher’s statement that “the students also learnt how to maximize technology for their learning since it is their first learning experience to use Google Apps for learning purposes” (Teacher’s interview, October 31, 2018). This finding is in parallel with Gandhimathi and Anitha (2015) [26] that “learners are pleased if the teacher guides them in using their laptops, I-pads or mobile phones to practice English when they are commuting or in their spare time.”

The analysis of the data gathered through observation and document review using the framework of Autonomous Learner Model (ALM) developed by Betts and Kercher (1999) [1] can be presented in table 3 below.

Table 3: Realization of Student Autonomous Learning

<table>
<thead>
<tr>
<th>Dimensions of ALM</th>
<th>Description</th>
</tr>
</thead>
</table>
| Orientation       | • The teacher introduces the project and devices as well as applications used for completing the project.  
|                   | • Students build their basic understanding of the instruction & explore the use of technology for collaborative work on the project. |
| Individual Development | • The teacher introduces the basic steps of using the learning toolkits.  
|                    | • Students explore themselves by watching the tutorial on Youtube. 
|                    | • Students explore more materials in the Internet.                         |
Students explore more sources in the Internet.

**Enrichment**
- Students explore more examples through various sources and devices.
- Students develop the project through various activities including survey, interview, reading references, writing summaries, and mapping ideas.
- Students develop the project through discussion.
- Project work on “biography” provides students with inspiring models of how someone is successful in his field.

**Seminars**
- To complete the project, individual member has his/her own task and responsibility which they have to deliver in group discussion.
- Students in groups present the project draft which requires peer-feedback.
- Students in groups do revising and editing.
- Students in groups design product presentation.

**In-depth study**
- Students in groups present the final product.
- Students in groups submit the final product.
- Students are involved in peer-assessment and self-assessment.
- Students self-monitor during and after the project.
- The teacher assesses students’ learning on the process of completing the project.
- The teacher assesses students’ learning on the product – biography.
- The teacher assesses the development of students’ 21st century skills such as critical thinking, creativity, communication, collaboration, and literacy.

Based on table 3, it can be inferred that the teacher has developed student autonomous learning. The ‘orientation’ dimension was realized in the activities when the teacher introduced the topic that was about recount text - biography and delivered the teaching and learning materials. In addition, the teacher also presented the description of the project including the devices, materials, procedures, media, and sources.

Next, the ‘individual development’ dimension was revealed in the activities when the students themselves determined the concept and criteria for the characters of a biography they planned to make; designed a project plan of making a biography text including before, during, and after the project; designed a group work plan of making a biography text including what, who, why, where, when, and how to complete the project; and collected data for the project of making a biography text.

The ‘enrichment and seminars’ dimensions were uncovered in the activities when the students involved in the discussion of completing the project draft, presenting the draft, providing feedback, as well as revising and editing the draft.

The ‘in-depth study’ was seen in the activities when the students in groups presented the final product and submitted the product which was biography text in the forms of movies, documentaries, comics, and books. During and after completing the project, the students were noted to undergo the development of the 21st century skills such as critical thinking, creativity, communication, collaboration, and literacy. It can be inferred from the students’ group discussion and the overall project work. This in accordance with Bell (2010) [27] asserting that “Project-Based Learning promotes social learning as children practice and become proficient with the 21st century skills of communication, negotiation, and collaboration.”

Through the teacher’s use of technology and project work, the students seemed to develop their learning autonomy. It can be noticed from the overall activities during the four-week-project that the students were able to determine the who, what, why, when, where, and how; for examples, ‘who’ (determining and choosing the characters for the biography), ‘what’ (determining aspects of the characters need to explore, materials to include), ‘why’ (presenting rationales of their choices of characters), ‘when’
(determining the time line for individual work and group work, completing the draft, presenting the draft, completing the revised version), ‘where’ (determining the place to execute each step of the overall activities), and finally ‘how’ to accomplish the required tasks (determining the methods, strategies, and media). This finding is in conformity with the term autonomous learning defined by Lengkanawati (2017) that it refers to “the students’ ability in taking charge of one’s own learning by making himself capable of making his own decision in determining learning objectives, defining the contents and his progress, selecting methods and techniques, monitoring the procedure of acquisition and evaluating what has been acquired”.

IV. CONCLUSION AND PEDAGOGICAL IMPLICATIONS

The present study comes to a conclusion that the integration of technology into the students’ project work seems to contribute to the development of student autonomous learning. Besides, at the same time, the aim of the teacher’s use of project work to develop students’ 21st century appears to be achieved. This is shown through the whole processes and the product resulted from the project.

Based on these findings, the pedagogical implications that can be addressed are that teachers should develop their technological literacy in order that they can better facilitate learners for instructional purposes. Next, teachers should provide learners with more opportunities to use technology for learning purposes both inside and outside classrooms. To stimulate autonomous learning, teachers should facilitate students with varied technology use and other innovative teaching and learning methods, strategies, and media.

REFERENCES


