Contesting Perspectives on the Implementation of ICT in English Teaching: a Case of Higher Education in Indonesia

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Abstract
This study investigates students’ opinions in the application of ICT in English teaching. The data were obtained using questionnaires for students, and interviews for lecturers to investigate their perceptions regarding experience and expectations. Data from other stakeholders were also used, including alumni interviews. The results indicated that there was a gap between expectations and experience. It was also found that the highest expectation from students was the presence of the lecturers to guide the learning, and not the provision of ICT. In addition, the expected outcome from the implementation of ICT in English teaching was the adequate level of English. It can be concluded that the implementation of technology in Higher Education English teaching and learning should not override the humanistic and practical aspects of the twenty-first-century English education.

Keywords: 21st Century English education, ICT implementation, perceptions
1. Introduction

In light of the vision derived from ASEAN Economic Community 2025 (AEC) in creating a competitive, innovative, and dynamic community, English is increasingly becoming more important for both formal and non-formal means of communication. In response to this latest regional and global development, higher education institutions in Indonesia aspire to prepare competitive graduates via good skills in English. In accordance, universities strive to develop their English teaching and learning. These are done by the adaptation of ICT in the teaching-learning process.

In Indonesian context, the government also imposes the incorporation of TOEFL as a tangible output of English teaching beside the rigorous application of ICT in education. It is well understood that initially TOEFL is administered to assess English competency of individuals aiming to continue their study in the United States. However, Indonesian government uses the test to measure English proficiency in university level prior graduation. Despite the notion that this test could not measure the real language abilities (Suryaningsih, 2014) the preference remains. With TOEFL score Indonesian graduates are expected to be admitted in the global companies (Wayan and Susanti, 2014). Under this stance, TOEFL courses become included in the curriculum for the teaching and learning of English by the universities since 2010. In effect, university students are trained to master the speaking, reading, writing, and listening components of TOEFL tests. It is therefore important to revisit the policy, the materials used and the approaches applied in English education in universities.

Students at present have different caveats, which often be related to the twenty-first-century learners. One of these challenges is the disruptive attention due to the overflowing of information through the Internet. This generation, often identified as generation Z (Hansen & Leuty, 2012), occupied the end of the young people spectrum, beginning from the Silent Generation (1925-1946), Baby Boomers (1960-1980), Generation X (1960-1980), Generation Y (1980 – 1995), Generation Z (1995 – 2010), and Generation Alpha (2010 – 2025). Generation Z who was born between 1995 and 2010 is known as post-millennials/digital natives/social media Savvy. In their early 20s – are heavily connected to advanced technology such as the internet, mp3 players, short messages services, mobile phones, PDAs, YouTube, iPads, social media such as Facebook, Twitter, Line, LinkedIn (Kapil and Roy 2014, West 2014). Due to fact that information technology has been surrounding them since they were born, Generation Z is said to be hypertext-minded, and they prefer having something from the web rather than hard copy. They are also naturally lacking communication skills (Salleh, Mahbob, & Baharudin, 2017).

The communication skills’ challenges of Generation Z – deemed to be the twenty-first-century skills and competencies and applied in the education field by some experts. Voogt & Roblin (2012) mentioned that the areas of the twenty-first-century skills comprised of collaboration, communication, ICT use as well as social and cultural awareness (including citizenship). Griffin and Care (2012) divided the skills into two areas, i.e., skills for learning as well as career and life skills area. The former refers to critical thinking, problem-solving, creativity and innovation, collaboration and communication. The latter addresses various skills that are flexibility and adaptability, initiative and self-direction, social and cultural skills, productivity and accountability, leadership and responsibility.

The paper aims at providing input for a twenty-first language curriculum for university students, especially for Generation Z, based on the perspectives from students, alumni, lecturers, and industries to ensure that the curriculum used is the one expected and needed as stated by Barber, Deale, and Goodman (2013).
2. Literature Review

Previous research in education and technology noted some caveats in the implementation (Kapil et al, 2014). This study was based on earlier findings by Griffin and Care (2012) and added various points, i.e., collaboration, critical thinking, problem-solving skills, and self-regulation. Van de Oudeweetering and Voogt (2018) conducted research using twenty-first-century competencies applied in the curriculum in the Netherlands involving 2,804 primary and secondary teachers to investigate the class’ activities supporting the competencies. The results showed that the teachers have applied the twenty-first century competencies (ICT-skills, media literacy, information literacy, problem solving, creativity, communication, critical thinking, socio-cultural, self-regulation, and collaboration) which were classified into 40 activities and grouped into six (6) dimensions, which are digital literacy, innovative thinking, critical thinking, (digital) citizenship, self-regulation learning, and (computer-supported) collaboration (Table 1).

To achieve the goal that the graduates should be able to work in the global industries in various occupancies, university should be able to provide a curriculum that is suitable for the students in the present and in the future, especially for Generation Z. In these efforts, the university in China uses English for Occupancy Purpose (Chan 2014) in which he suggested that more simulated situations in the workplace should be added to the program. Xie (2016) supported the suggestion by showing that one of the factors that support students to strengthen their communicative competence in their workplace is the case study in groups using the tailored materials taken from the real workplace.

<table>
<thead>
<tr>
<th>Dimensions</th>
<th>Competences and examples of classroom activities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Digital literacy</td>
<td>ICT skills: Use digital technologies</td>
</tr>
<tr>
<td></td>
<td>Media literacy: Integrate information from the internet in schoolwork</td>
</tr>
<tr>
<td></td>
<td>Information literacy: Select internet sources using relevant content criteria</td>
</tr>
<tr>
<td>Innovative thinking</td>
<td>Problem Solving: Think of different ways to solve a problem</td>
</tr>
<tr>
<td>Critical thinking &amp;</td>
<td>Creativity: Study Topics out of own interests</td>
</tr>
<tr>
<td>Communication</td>
<td>Communication: Participate in different communicative situation</td>
</tr>
<tr>
<td>(Digital) Citizenship</td>
<td>Critical Thinking: Understand each other’s opinion by asking questions</td>
</tr>
<tr>
<td>Self-regulated</td>
<td>Socio-Cultural Competence: Collaborate with students from different (social, cultural, ethnic) backgrounds</td>
</tr>
<tr>
<td>learning</td>
<td>Self-Regulation: Understand the responsibility for their outcomes and consequences of their work</td>
</tr>
<tr>
<td>(Computer-Supported)</td>
<td>Collaboration: - Ask and give help in collaboration</td>
</tr>
<tr>
<td>Collaboration</td>
<td>- Negotiate in teams on strategies to achieve a goal</td>
</tr>
<tr>
<td></td>
<td>- Take responsibility as a group for the outcome of collaborative work</td>
</tr>
</tbody>
</table>

Source: Van de Oudeweetering and Voogt (2018)
3. Research Method

To reach the aim of the research, the present study collected the input from the students and the lecturers regarding the implementation of ICT in English for Academic Purposes classes. These were classes from Bina Nusantara University, Jakarta, Indonesia. This university was ranked the best private university in the country and was among the 5-star QS universities in the world (ranked).

There were 189 students from 4 classes being involved in a survey. The student survey used 13 questions to elicit responses adopted from Van de Oudeweetering and Voogt (2018). In the questionnaires, students gave their opinions using a scale of 1–5 in which five (5) indicates their positive and high expectation, while a score of one (1) shows their negative and low expectation. There were two main elements to be surveyed: (a) students’ experience, and (b) students’ expectations. Results of the survey were tabulated and further dispersed into Cartesius diagram for more detailed clustering of needs.

Data from lecturers were collected by asking three questions: (1) lecturers’ opinions on the usefulness of ICT, (2) lecturers’ opinions regarding the future of ICT, and (3) lecturers’ opinion on the ideal implementations of ICT. To narrow down the contexts, the researchers asked the lecturers to project the skills required by students for being recruited in the global companies in the present and future. All ten lecturers identified TOEFL scores as the companies were looking for in graduates’ English competencies.

In regards to the early assumption on the importance of TOEFL, thirty job advertisements from jobstreet.com were observed to identify job providers and industries’ perspectives on the required skills. Employers were also contacted, including alumni of BINUS University, to provide some knowledge regarding English communication in the workplace.

All the data collection was administered during a regular English class period of 2017 and 2018 academic year with the help of the lecturers teaching in the same class. The data for the lecturers, the alumni, and the industries were obtained in the same period.

The statistical analysis, i.e., the means that were used to examine the extent to which the students’ characters comply with the twenty-first-century competence either reality or in expectations, and the most expected aspect in the students’ perspectives regarding the process of teaching and learning English in the future is used. To find the gap between the student’s experience and their ideal perceptions based on the twenty-first-century competence.

Meanwhile, the qualitative analysis was used to investigate the verbal answers of the students in the questionnaires as well as the interview from lecturers and alumni regarding their perceptions the use of English studied in the classroom and English teaching in the future. The content analysis is used to deal with the qualitative data from the students’ answer regarding the reasons of the importance of the English they studied and their suggestions on the process of teaching and learning in the future. The results of the lecturers and alumni interviews and the global industry requirements were categorised, tabulated, and summarised.

4. Findings

The results and discussions are divided into three parts, i.e., (1) the students' perceptions on the use of ICT in English; (2) the employees of the Global Industry World’s requirements and the alumni’s experience regarding English communication in the workplace; and (3) the implementation of their perceptions towards the twenty-first-century language curriculum.

4.1. The students' perceptions on the implementation of ICT

The expectation of the process of teaching and learning in the future and their practical experience
were obtained from students by using questionnaires. The questionnaires were distributed to 189 respondents together with the verbal question inquiring their suggestions about the teaching of English in the future, and students were to rate one to five to show their expectations. In this research, the average score for the expectation is 3.93. In terms of experience, the average score is 3.44, meaning that for the time being, the students’ expectation has fulfilled 78.60% of the requirements of the thinking of the complete twenty-first-century students who belong to Generation Z. The process of teaching and learning at the university, on the other hand, seems to go towards the twenty-century competence as experienced by the students, indicated by the average score of 3.44 or 68.8%.

The results of the study showed differences between the expectations of the students and the beliefs imposed by lecturers. The results can be seen in Table 2:

<table>
<thead>
<tr>
<th>No</th>
<th>Competence</th>
<th>Statements</th>
<th>Expectation</th>
<th>Experience</th>
<th>Variants</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Self-regulation</td>
<td>Lecturers make themselves available at any time when students have problems in learning a language</td>
<td>4.54</td>
<td>3.87</td>
<td>0.68</td>
</tr>
<tr>
<td>2</td>
<td>Digital, ICT, self-regulation</td>
<td>Lecturers use films and video</td>
<td>4.46</td>
<td>3.57</td>
<td>0.89</td>
</tr>
<tr>
<td>3</td>
<td>Digital, ICT, self-regulation</td>
<td>Students use language laboratory to practice</td>
<td>4.21</td>
<td>3.56</td>
<td>0.65</td>
</tr>
<tr>
<td>4</td>
<td>Fun, collaboration, socio-cultural awareness, communication</td>
<td>Lecturers use games in teaching</td>
<td>4.11</td>
<td>3.06</td>
<td>1.05</td>
</tr>
<tr>
<td>5</td>
<td>Digital citizenship</td>
<td>Students use social media to communicate with students</td>
<td>4.05</td>
<td>3.46</td>
<td>0.59</td>
</tr>
<tr>
<td>6</td>
<td>collaboration, socio-cultural awareness, communication</td>
<td>Students have group discussions</td>
<td>4.02</td>
<td>3.60</td>
<td>0.42</td>
</tr>
<tr>
<td>7</td>
<td>Self-regulation</td>
<td>Lecturers let the students try to overcome their problems in studying a language</td>
<td>3.91</td>
<td>3.59</td>
<td>0.32</td>
</tr>
<tr>
<td>8</td>
<td>ICT, self-regulation</td>
<td>Students to find related materials at from the Internet</td>
<td>3.90</td>
<td>3.56</td>
<td>0.34</td>
</tr>
<tr>
<td>9</td>
<td>Digital, ICT, self-regulation, information literacy</td>
<td>Ask students to find more information for specific topics and topics that interest them from the Internet</td>
<td>3.89</td>
<td>3.59</td>
<td>0.30</td>
</tr>
<tr>
<td>10</td>
<td>Self-regulation</td>
<td>Let students design their plan for studying and doing their assignments</td>
<td>3.69</td>
<td>3.23</td>
<td>0.46</td>
</tr>
<tr>
<td>11</td>
<td>collaboration</td>
<td>Students conduct a research in groups</td>
<td>3.68</td>
<td>3.33</td>
<td>0.35</td>
</tr>
<tr>
<td>12</td>
<td>ICT</td>
<td>Students use hard copy text book</td>
<td>3.41</td>
<td>3.26</td>
<td>0.15</td>
</tr>
<tr>
<td>13</td>
<td>collaboration, socio-cultural awareness, communication</td>
<td>Students make projects</td>
<td>3.20</td>
<td>3.02</td>
<td>0.18</td>
</tr>
</tbody>
</table>

Students did experience English studying using ICT and digital contents such as films, and materials from internet even though the frequency was not as expected. Regarding the students’ expectation in the process of teaching and learning, the first three highest score was the availability of the lecturers to help them at any time (4.54), the use of films and video (4.46) and the availability of language laboratory to practice (4.21).

These data indicated that students like to be independent, especially in the use of ICT. However, they would feel more confident if they have one more senior to guide them since Generation Z students are overprotected (Saleh, Mahbob, and Baharudin 2017) and dependent on the persons who are
considered as seniors. The use of film, video and language laboratory showed that the tendencies of the students to use ICT and self-regulation as the film and video could be used through watching films from various sources or the ones made by the students. In the Language laboratory, students can practice TOEFL by themselves using the exercises prepare for them, or they can search other online practices directed by the lecturers. The three lowest scores in this research were in the area of student's assignments in managing projects, in using hardcopy textbooks, and in researching groups which have the indicators of the use of ICT, collaboration, communication, as well as sociocultural awareness. The use of the hardcopy textbook relates to the students’ preference as the hypertext-minded generation to using the online text instead of hard copies (Salleh, Mahbob, & Baharudin, 2017).

In cartesius diagram, it is clear that there are only some items needed to be maintained in the implementation of ICT. Meanwhile, students regarded some execcisive actitivies when ICT was being used in the classroom (Figure 1). The formula is as follows:

\[ T_d = \frac{X_d}{X} \times 100\% \]

These results can be seen in Figure 1:

As shown in the diagram, there were areas students considered to be well implemented in the use of ICT, including: the use of laboratory (Question 3) and browsing the Internet for information (Question 9). The later was also regarded as the First priority as seen in Question 8: ICT, self-regulation. Students felt the provision of self regulation provided by technology as the essence of English teaching.

The data also showed the preference to have interactions and human interactions. While ICT gave access to materials and knowledge, students felt the needs to have some guidance (Question 1). Students experience communicating with other students as equally essential in their learning process, making them part of the digital citizens (Question 5). In addition, students felt the needs to also collaborated with other students (Question 11).

Overall, from the thirteen aspects of the twenty-first competence, ICT plays an important role. However, in using ICT, students still needed the guidance of the lecturers especially in selecting the
4.2. The lecturers' perceptions on the implementation of ICT

With the TOEFL materials given in the classroom, 50% of lecturers still held the opinions that ESP was required. ESP stands for “English for Special Purposes” in which English is provided following the subject matters have already been taken. There were 20% lecturers stated that TOEFL could still be useful for those who would continue their studies. In this case, all lecturers agreed that the English class should focus on communicative skills, especially for speaking and writing skills that would widely be required in the global industry.

Ten per cent lecturers asserted that English for Presentation and Business English lessons given to students whose TOEFL scores were over 500 would be applicable in the global industry. The lecturers also recommended that the materials to be given should be based on the TOEIC or TOASTMASTER standards. To summarise, 80% lecturers believed that the English they taught, or TOEFL Lessons, was irrelevant to the global industries. This was due to the fact that TOEFL materials focused more on academic English and therefore ICT was used in very limited use to prepare for TOEFL tests.

Regarding the implementation of the TOEFL materials in the workplace, 20% of lecturers stated that the English lessons taught could be used in the international workplace. The reason was that the English lessons of TOEFL equipped students with four language skills related to the workplace’s needs, i.e., the ability to hear, write, speak, and read. The other 80% of lecturers argued that English lessons were not able to equip students when they work later since the TOEFL materials relate specifically to academic English. Dealing with the appropriate English materials for the international workplace, 70% lecturers put forward their arguments that the primary element in teaching English is the materials. According to them, in practice, English is taught more on theory, and that has no application in the workplace. That is to say, TOEFL lacks verbal communication and concerns more towards scholarly English passive communication.

The answers of the lecturers regarding the teaching of English in the future could be classified into three areas, i.e., technological support, the supply of materials, and the process of teaching and learning. In teaching a particular language, technology is used as a tool to practice the language skills or to interact with the English native speakers. For example, when assigning students to make penfriends, or doing assignments using the online materials provided on the website. One of the lecturer stresses that the content of the digital technology – such as videos – should be based on the real situation, e.g., contemporary films or songs, rather than particular songs created for a certain tense. Another suggestion is that the technology should be used to access interactive online games. In teaching and learning process, the lecturers suggested that the students study independently, through experience rather than being taught by the lecturers. In addition, the teaching should pay attention to the individual progress of learning. Generally, the students would prefer to have independent learning, so that they would know their mistakes through their own experience. The independent learning should be made in the process, and therefore, the hybrid method – where lecturers still guide the students in learning and monitor the students’ progress – should be applied.

4.3. The perceptions of industries on the implementation of ICT

Opinions regarding the importance of TOEFL in the workplace were classified into four groups, indicating their opinions that TOEFL: (1) is relevant in the workplace; (2) is important for further studies; (3) is a tool to measure one’s language ability; and (4) does not relate to the international workplace. The number of the students arguing that the English they studied – TOEFL – would be
useful in their workplace is 163 (87.63%), meaning that they had a high expectation and motivation to study TOEFL.

In order to find out the implication of the English used in the workplace, twenty alumni that were working at the international working place were interviewed. The results show that 35% of the alumni were interviewed in English when they applied for a job in a company, and 5% were asked to do a selection test using TOEIC. Then, 65% of alumni, even though they worked in the international companies, were interviewed using Bahasa Indonesia. During the interviews, no alumni reported that they were asked about their TOEFL scores, and most of the topics of the questions dealt with the personal matters or related to their job description in the intended company.

The other result that dealt with the language skills which are mostly used at the workplace showed that 60% of the alumni mentioned that the productive skills (writing and speaking) become the primary concern, and 40% of them emphasised receptive (listening and reading). From the alumni who emphasised productive skills, 40% of them stated that actually, all four language skills were needed, but the emphasis was on speaking, while 20% of the alumni emphasised on writing skills. However, the use of writing and speaking depend on the needs of companies and their positions. The data regarding the needs of English in the international companies were obtained from the acceptance requirements for English mastery for the positions of managers (15) and officers (15) advertised on the web site. For managers, 67% positions explicitly mentioned that applicants should be good at English especially in speaking and writing; 20% positions require fluency in English, and there are 13% requiring formal tests mastering of English that possesses TOEFL score of at least 475, and excellent in English for business. The positions of staff had the same requirements: 67% positions require speaking and writing skills; 20% require the fluency in English, or using the term “good communication in English”; and 13% needs a formal English test score of TOEIC; TOEFL, IELTS. The term “fluent in English and having adequate communication in English” can refer not only to the four English proficiency of reading, writing, listening, and speaking, but also to the language producing ability, i.e., speaking and writing skills.

The ability of speaking and writing alone is insufficient; it must be complemented with reading and listening skills. One cannot possibly communicate verbally without any miscommunication if the person cannot listen well. Similarly, one may not have the ability to write, if he cannot read well. Passive ability (listening and reading) becomes the basis of the active ability (speaking and writing). Thus, by requiring the ability of speaking and writing, the company implies that the candidates have mastered the listening and reading ability. Meanwhile, companies requiring a level of English language proficiency based on formal English test are only 13%, and the required test is TOEFL 550 and IELTS of 6.5 (manager level), while the staff level is TOEFL score of 475. The implication of the findings as the input to the twenty-first language curriculum relates to the materials, the process of teaching and learning and the lecturers. The materials designed should enable students to have excellent English communication, particularly in speaking and writing in daily activities and business. On the other hand, the teaching of TOEFL is also judged to be necessary at least to help students in reading not only their textbooks but also in continuing their education.

5. Practical Applications

In the process of teaching and learning, due to the students’ nature as Generation Z, the use of ICT is indispensable as a tool in language learning. In this research, it is found out that students prefer studying using Language laboratory, video, and films. In this case, the institution should try to provide the Language laboratory with various interesting materials and video or other digital content for the students to learn by themselves. In line with the characteristics of Generation Z who live with technology and practicality, textbooks in the form of hardcopy should be replaced by the softcopy, so
that the materials can be accessed easily using the students’ computer or mobile applications. Despite the tech-savvy nature of the students, the role of lecturers is still vital especially in guiding the students to select the required application and to encourage them to work in groups when dealing with research or other projects related to the subjects they are studying. One example to support the independent study by using ICT suggested by ² is by giving the the link to the various selected resources from the website using the blog put them in the website and by encouraging the students to do the assignments.

All these stakeholders’ input can be the feedback in designing the language curriculum for Generation Z as the first step in designing the curriculum.

6. Conclusion and Implications for Further Research
While students have positive views and expectations that having TOEFL-preparation classes would help them in the workplace, lecturers, alumni, and companies have opposite views. In response to our questionnaire, students showed high expectation and belief that the TOEFL lessons offered by the university would be beneficial for them in their future careers. However, on the contrary, lecturers believed that the use of TOEFL as both admission test and as part of the curriculum is less useful for undergraduate students in their professional lives, due to the lack of communicative material and lessons. In terms of the right materials that equip students for future work, lecturers recommended English for Special Purposes, TOEFL, English for Presentation and English for Business, as well as TOEIC or Toastmaster. In line with the lecturers’ opinions, most of the university’s alumni also believed that that TOEFL material is not very useful in the workplace. According to their experiences, active language skills, i.e., speaking and writing, varied on the responsibilities of the positions held. Unsurprisingly, the expectations of the companies were the same as those of the alumni.

The views of the lecturers, alumni, and companies on the use of TOEFL as admission test and as part of the English curriculum reflect the current practices of English teaching in the field. Thus, a university that is aiming to prepare its graduates to work in global companies should pay attention to their feedback. The results of this study support previous research by Rollins (2003) and Ahmadi (2014) that found TOEFL as being inappropriate tool professional and business-related English lessons. However, we believe that TOEFL lessons still have its value in non-English speaking communities to leverage the levels of the students’ English. One implication that we can replicate is the study conducted in China by Chan (2014) and Xie (2016) that combined TOEFL-lesson classes with additional English lessons and interactive business simulations. By giving the opportunities for students to be excellent in their academic performance and ready for the international workplace, students will be able to show their competitive edge. Dealing with the students’ perspectives as Generation Z, students and lecturers agreed that the use of ICT is necessary. Even though Generation Z students are good at ICT and prefer ICT to accommodate their learning process, they still need a supervisor who is available to help them or to direct them in using the application of ICT for language learning. Meanwhile, students seem to be avoiding working in groups, especially when dealing with the subjects they studied. The experience of the students at the university where the research was conducted show that the process of teaching and learning have shifted towards the needs of the twenty-first-century student competencies and is still developing, especially in using ICT to induce collaboration, making the best of the students as digital citizens, and encouraging them to have more independent self–regulation.
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