

ENHANCING STUDENTS' LEARNING EXPERIENCES USING INFOGRAPHIC- BASED MATERIALS AND TASKS

Bontisesari¹, Muchlas Suseno², Irma Rasita Gloria Barus³

Faculty of Language and Arts
State University of Jakarta^{1 2}
Jakarta, Indonesia

bontisesari_1212821008@mhs.unj.ac.id¹
muchlas-suseno@unj.ac.id²

College of Vocational Studies
IPB University³
Bogor, Indonesia
irmabarus@apps.ipb.ac.id³

Abstract

In facing the new normal, there are still challenges faced by teachers and learners in conducting the teaching and learning process in online classrooms, such as encouraging learners to actively contribute to their online learning experience and increase their learning autonomy. According to the constructivist learning theory, it is necessary to accommodate active learning for students, including in remote teaching, so that they can construct knowledge and gain values from the learning process. Therefore, this case study attempted to propose a teaching strategy to enhance students' learning experience by using Infographics, both as learning materials and as a task for students to work on. This study used a Learning Experience Survey on 42 students of the Computer Engineering study program of IPB Vocational School taking the *Integrated English* subject. Research findings on learners' responses showed that the use of infographic-material supports the students' learning autonomy through asynchronous learning process, while the use of infographic tasks stimulated students' creativity and motivation. The study implies that using Infographics as a digital tool to both teach and learn helps students obtain an insightful learning experience, enhance their digital literacy, and increase their motivation in learning English.

Keywords - *learning experience, digital infographics, learning materials, students' creativity, technology in education*

Introduction

The pandemic has brought the teaching and learning environment to significant changes, including in the Indonesian context. During this critical period, teachers have been adapting to the dynamic of emergency remote teaching; however, there are still challenges faced by both teachers and students in the process. As found by Hakim, one of the problems students have in learning online is low motivation (2020). Therefore, teachers are strongly encouraged to be creative and flexible in facilitating learners to gain knowledge and develop their skills amidst the situation. In an attempt to contribute to this matter, there are two strategies that have potential in supporting teachers in conducting the teaching and learning process in online classrooms and improving learner motivation; i.e., by adopting technology in the learning process and promoting collaborative learning.

Firstly, technology has become inseparable with teaching and learning; hence, continuous exploration needs to be conducted to make use of technology in English Language

teaching and learning. According to Lin et al., one of the key issues in the current educational model is to design teaching activities for digital learning by using technological tools (2017). Technology has played an essential role in today's language education; hence, to accommodate the needs of 21st century learners, the teaching process is oftentimes inseparable from the use of digital application. Moreover, technology has enabled teachers to explore their teaching environment to enhance the process of language learning making technology an important tool to facilitate the learners (Ahmadi, 2018). Therefore, today's EFL classrooms have been familiarized with the use of technology. According to Famularsih, in this pandemic situation, the most preferred online learning application among students is WhatsApp Group as it takes less internet data (2020). However, in terms of its functions, students can use it mainly for communicating and sharing files, and it might not be sufficient to stimulate their learning motivation and to develop their 21st century skills, especially creativity and collaboration. Hence, there is a need for more advanced technological tools to support remote teaching and learning.

Secondly, according to the *Performance Indicators* of Indonesian Universities (IKU) Point 7, the universities are encouraged to promote a Collaborative based learning as one of the means to develop essential 21st century skills including communication, collaboration, critical thinking, and creativity (Direktorat Jenderal Pendidikan Tinggi). The main highlight is on the ability of collaborating with both pair and team in accordance with the principles of *Merdeka Belajar* (Freedom to Learn) in which the lecturers only function as facilitators, and learners are the center of the learning process. Subsequently, it is important to integrate collaborative-based learning in the teaching and learning process, so that students can actively contribute to their own learning and stimulate their learning autonomy. Dornyei classified some practices to promote learner autonomy, including resource-based approaches and technology-based approaches (2001 in Xhaferi & Xhaferi, 2011). Resource-based approaches highlight the independent interaction with learning materials by suggesting various ways in using and providing learning materials, while technology-based approaches highlight the independent interaction with educational technologies by developing control over the learning process as well as promoting collaboration between class members. Therefore, in an attempt to implement these at a higher education level, this study utilized infographics as learning materials as well as a collaborative task to enhance the students' learning experiences of the Vocational Higher Education Program of Bogor Agricultural University.

Students' learning experience is essentially the nature of engagement between students and the teaching and learning process. According to Benckendorff *et al.*, the notion of learning experience has emerged in reforms to the higher education system and broader social and technological trends (2009). This study focused on the student dimension of learning experience to unveil their satisfaction and reflection in using a supporting learning tool; i.e., infographics as learning materials and tasks.

Scholars have noticed the advantages of incorporating infographics in the educational process, with special emphasis being placed on the benefits of infographics for better English language teaching and learning. An infographic is a collection of images, charts, and minimal text that provides easy-to-understand information of a certain topic. Infographics can assist students to share their ideas and opinions fluently. Hence, teachers can make use of infographics as a useful teaching tool to allow students to interact with data in written and spoken words. In addition, Kornius highlights the advantages of incorporating infographics in the educational process to promote better English teaching and learning (2019). He further argues on ways to give opportunities for students to create their own infographics to improve their language skills and competences. Hence, considering the potential of infographics in English Language education, more research in this topic is needed to demonstrate ways of incorporating infographics in the classroom in relation to classroom instruction and learning assessment.

To answer this matter, this study aimed to conduct a case study in using infographics-based materials and tasks to enhance students' learning experiences, specifically in the context of English remote teaching. According to Yuruk et al, the use of infographics successfully facilitated the teaching and learning process by stimulating their learning awareness (2019). Being aware of the learning process means the learners have control on their learning; hence, it will build autonomous and independent learners. There have been a number of studies on the use of infographics in the classroom.

Bicen & Beheshti carried out a study of students' perception of using infographics as an instructional design (2019). They revealed that infographics resulted in engaging learning processes which helped learners in understanding concepts through its functions in simplifying complex information and building their confidence in their autonomous learning. Meanwhile, Wijaya and Karyawati conducted a study on the use of infographics as students' projects in language classrooms to improve the learners' 4Cs; critical thinking, communication, collaboration, and creativity skills (2021). The findings showed that the projects of creating infographics indeed support the improvement of 4Cs skills of the students. While this study also attempted to use infographics in the teaching and learning process by applying collaborative based learning, this study conducted research on a non-English department which may contribute to different findings. Not only as a project, but the infographics were also used as an alternative in presenting learning materials for students, so that students can learn independently.

Another study conducted by Pertiwi and Kusumaningrum in which they conducted a study on infographics projects to help students in speaking activities (2021). The research concluded that the infographic projects were able to support the speaking skill development. There was a positive improvement on their speaking skills and the project allowed students to establish teamwork, creativity, critical thinking and communication skills (Pertiwi & Kusumaningrum, 2021). The findings showed that the study contributed to the improvement of students' ICT in using digital apps. Meanwhile, this study focused on enhancing students' learning experience covering more than the technical skills.

There are still potentials in the research of using infographics as a teaching and learning strategy as suggested by Chicca and Chunta (2020). Despite the usefulness of infographics in facilitating the learning process, they are still not commonly and widely used because of the teachers' lack of familiarity in using this technology. Yarbrough also highlighted the implementation of infographics to support online visual learning for learners (2019), while Martin et al. demonstrated the importance of infographics as a learning medium to summarize the learning materials (2019). Hence, this study attempted to give an illustration of using infographics in teaching English language at a higher educational context. This study aimed to examine the learning experiences of Bogor Agricultural University Vocational Program students in perceiving the use of infographics as learning materials and tasks. The research question of this study was: “to what extent the use of infographics enhance students' learning experiences?”. This study may contribute to the field of English language studies, and both learners and teachers in learning and teaching English efficiently. It is expected that the use of infographics in this study may promote students' active and autonomous learning.

Methods

This research adopted descriptive qualitative design concerning the study of experiences from the perspective of learners. A case study was employed to investigate how infographics helps enhance students' learning experience. This study was conducted at the Vocational School of Bogor Agricultural University. The participants were 42 students of the Computer Engineering

study program who were in the fifth semester in the academic year of 2021-2022. The participants were in the Integrated English class. The ages of participants ranged from 19-21, consisting of 15 males and 27 females.

The instrument used in this study was a student questionnaire containing items concerning the participants' learning experiences in using infographics as a learning material and task. The instrument was validated through a pilot study. The use of this instrument also follows what Pat-El suggested that students are tested and proceeded with a questionnaire survey to understand the opinions about digital learning (2012).

There are three stages conducted in this study. The first was introducing infographics as learning materials. The contents of the topics were made into infographics and shared with learners after class session. The infographics were used as supplementary learning material to promote asynchronous and autonomous learning. The second was a collaborative task in which students had to work in groups to create infographic products based on the previously assigned topics. The task had three steps: 1) outlining the task; 2) digitizing the task using infographics; and 3) presenting the task. The students developed the chosen topic by brainstorming with the group members and arranging the content. The students then transformed the text content into visual products of infographics using Canva application, one of the most user friendly and accessible digital learning tools for learners. Next, the students carried out an oral presentation of the products.

After the task was conducted, the last stage was distributing questionnaires to investigate the students' perceptions on the use of infographics as learning materials and tasks at the end of the semester. Using Likert Scale, the students were asked to check *highly agree*, *agree*, *neutral*, *disagree*, and *highly disagree* against the statements on the use of infographics. There were also additional open-ended questions where the students could elaborate their responses. Moreover, the researchers used four data analysis techniques based on Miles, Hubberman, and Saldana (2014) namely data collection, data condensation, data display, and conclusion drawing or verification.

Findings and Discussions

In an attempt to propose a learning strategy implementing these approaches to promote learner autonomy, this study used Infographics as learning materials and tasks for students of Bogor Agricultural University Vocational Program. To start with, based on the figure below, it is found that 83% of the participants had never used infographics as learning media before the research; while 18% of them had. This shows that the use of infographics can still be considered as a current teaching and learning strategy, particularly in online learning setting and context.

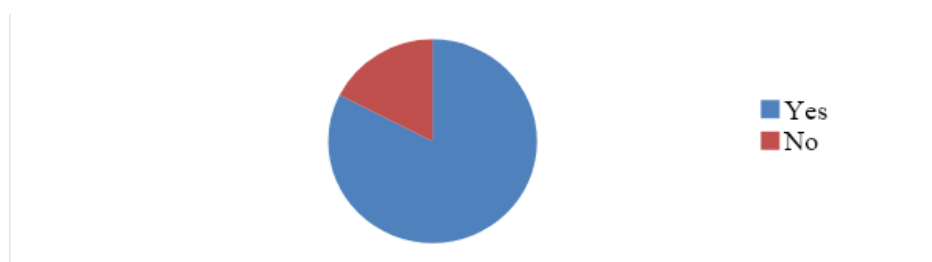


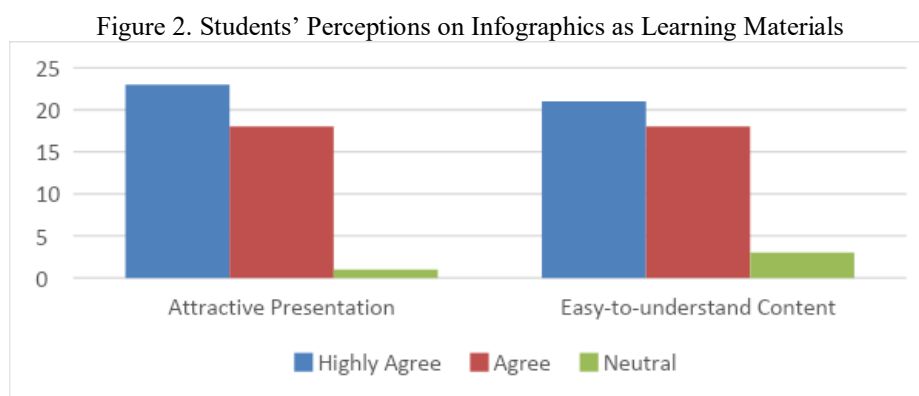
Figure 1. Using infographics as learning media

Furthermore, the findings and discussions are divided into two sections: 1) the use of infographics as learning materials and 2) as a learning task. The first section covers the use of

Infographic-based learning materials containing the lessons taken from the coursebook In addition, the infographic-based learning materials were also used as models for students to create their own in a form of collaborative task. Hence, the second section covers students’ reflections after finishing the task. The data are presented and interpreted in a qualitative manner to identify the themes of the students’ general responses towards the use of infographics as learning media in the *Integrated English* course.

The use of infographics as learning materials

Students’ perception on the use of infographics as learning materials contain five statements to be answered by the students which are divided into two figures. The figures below reveal students’ perception on: 1) Presentation of Infographics as Learning Materials (visual and content); 2) Benefits of Infographics as Learning Materials.



Firstly, an attractive presentation includes the design, colors, text placement which all represent the visual aspect of the material. This is essential as it functions to capture the learners’ first sight and impression; meanwhile, easy-to-understand content deals with the texts presented in infographics and how the lesson in coursebook is interpreted and compiled in the form of infographics. Based on the data, half of the participants highly agreed that the presentations of infographics were attractive (23, 54%) and easy to understand (21, 50%). This shows that half of the group thought that the display of infographics given was able to grab their interests and provide easily processed information. There were 3 students (7%) who responded to be neutral on this matter.

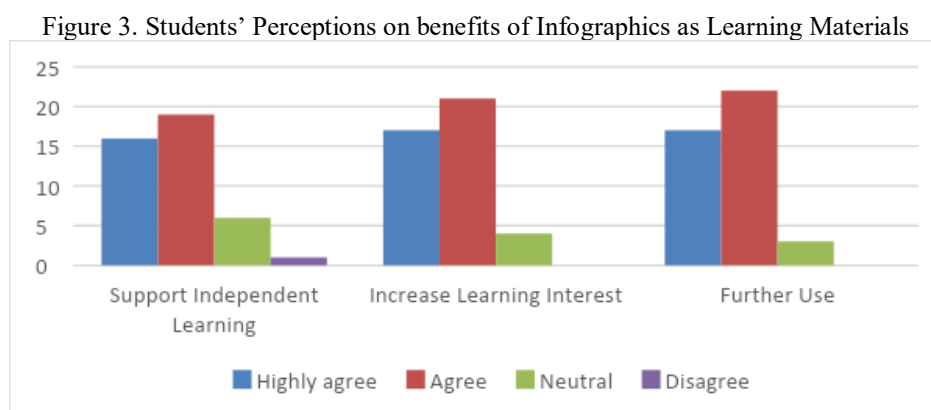


Figure 3 illustrates students’ responses towards the benefits in being provided with infographics as the learning materials. The first statement is whether the students think that the

use of infographics is able to help them learn independently. The results show that 38% of students highly agreed to this statement, 45% agreed, 15% answered neutral and 2% disagreed. This indicates that the majority of students believed that the infographics are able to support their learning outside the classroom. By providing them with infographics, they can review the materials anywhere and anytime; thus, this represents the nature of asynchronous learning. In addition, as opposed to the coursebook containing a lot of information; the use of infographics as learning materials has simplified the content of the lesson and topic, so that students can directly access the key points of the lesson or unit to organize their thoughts and understand the concept of the lesson better. 2% of students who disagreed probably still needed the presence of a lecturer to explain the content in the infographics, so that they could fully understand the materials being delivered. However, in overall trends, the infographics are suitable to support learners as an additional learning material and to assist their autonomous learning by simplifying the lesson into smaller units and presenting them in visually attractive infographics.

The second statement is whether the students find the use of infographics to increase their interests in learning. This also deals with their motivation in learning independently. The results show that 40% highly agreed, 50% agreed, and 10% answered neutral. Similar to the first statement, the majority of students believed that the use of infographics had raised their interest in learning. In the teaching and learning process, students' interest plays an important role as it affects the behavior of students in receiving or resisting information shared with them. Through the visual aspects of the infographics and the way the content of lessons is presented differently from the rigid structure of the coursebook, it is believed that these factors contribute in raising students' interests, so that they have more initiatives and motivations to learn and to be responsible for their own learning progress.

The last statement is about the students' responses regarding further use of infographics. The figure shows that 40% of students highly agreed, 52% agreed, and 8% answered neutral. The results show a positive attitude towards the use of infographics as the majority agreed on its further use. Referring to the 83% of students who had never used infographics before, 92% agreed that they want to use it in the future. This indicates that the students felt the benefits of the learning. The findings are in line with Yarbrough's study stating that the students perceived the use of infographics as a valuable learning experience and developed their preference in using infographics as a learning tool (2019). In addition, Martin et al. also found that infographics are preferred by learners as it reduced the anxiety and learners' cognitive load compared with the traditional text material (2019).

To discuss the findings represented in Figure 2 and 3, the students' descriptions on their learning experience in using infographics are explored more based on their written statements. 14 of the students highlighted the use of infographics to support the asynchronous learning; they believed that the attractive, simple and clear organization of the content helped them understand the materials better, easier and faster. In line with the figure showing that the use of infographics increase the students' interest, some students argued that the infographics made the learning fun due to the illustrations and examples. In contrast to the notion of asynchronous learning, 19 of the students reflected that they might need infographics to be used during the teaching and learning session as well, rather than only after the session ended. They needed verbal explanations on the infographics from the lecturer to ensure thorough comprehension. Therefore, they suggested that the infographics can be used both in asynchronous and synchronous learning to make the learning more enjoyable. The table below shows some of the responses of the students.

Table 1. Students’ perceptions on Infographics as Learning Materials

<i>Menerapkan media infografis dalam media pembelajaran mempermudah para mahasiswa untuk lebih memahami materi. (FA)</i> (implementing infographics as learning media made students understand the materials easier)
<i>Penggunaan media infografis ini harus terus dilakukan untuk memberikan variasi dalam media pembelajaran. (MS)</i> (the use of infographics should be conducted continuously to provide variation in learning media)
<i>Bagi saya, meringkas materi dengan membuat infografis lebih mudah untuk dipahami karena sudah terkonsep dengan baik. (RA)</i> (in my opinion, summarizing the materials in infographics form is easier to understand as it is conceptualized well)
<i>Banyak informasi yang didapatkan serta konsumsi waktu sedikit karena materi telah di rangkum. (AD)</i> (a lot of information can be obtained with small amount of time because the materials have been summarized)
<i>Membaca lebih mudah karena lebih tertata dan rapi serta tidak membosankan. (AN)</i> (reading feels easier because the content is organized and neat, so that it does not feel boring)

The use of infographics as tasks

Infographics were used as learning tasks for students, so they can freely produce and modify the processed information into visual images. The data are divided into two figures covering the benefits or advantages they felt during the task completion and after finishing the task.

Figure 4. Students’ Perceptions on Infographics as Learning Task

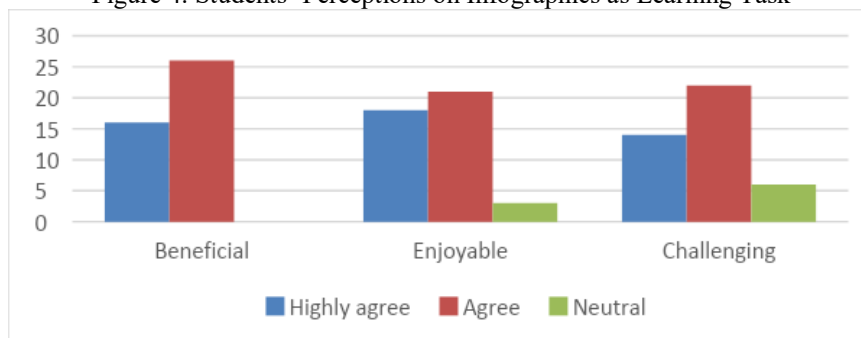


Figure 4 demonstrates how students perceived the infographics as a learning task to be beneficial, enjoyable and challenging. The results show that 62% agreed and 38% highly agreed that the task is beneficial for the learners. The benefits include gaining new skills in designing visual forms of text and processing knowledge and information in a simple manner. This is in line with the other two results in which 50% and 43% of students agreed and highly agreed that conducting the task in creating an infographics was fun and enjoyable. This is because the infographics allows learners to experiment with combination of colors, text placement, and illustrations making much less restricted learning process. 52% and 33% of students agreed and highly agreed to the notion that the infographics task is challenging. This relates to the troubles they faced in completing the task and the amount of effort they had to put in it. 14% answered neutral in seeing the infographics task as challenging. This is related to the experience some students already had, so that they did not encounter significant problems in undergoing the task.

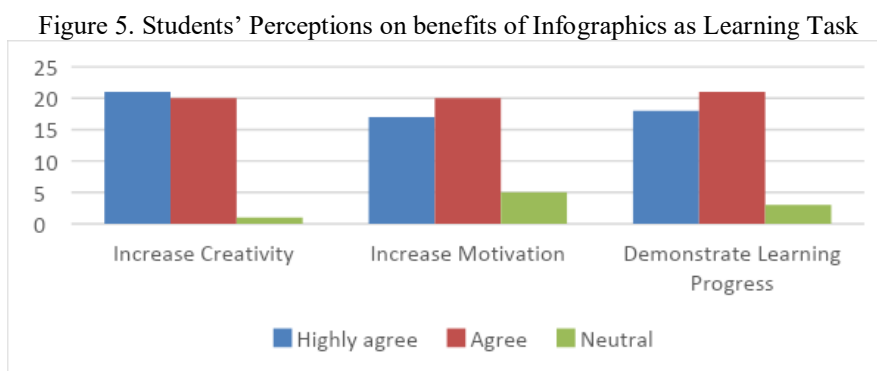


Figure 5 illustrates more benefits perceived by students in creating infographics as the learning task. 50% of students highly agreed and 48% agreed that the task increased and stimulated their creativity, making the total of 98% agreed with the statement. Out of the 6 statements, the notion of creativity is the most positively attributed to the students' learning experience. This is due to the features of infographics which have dominant visual aspects to make the learning process more exciting. Infographics also allows students to freely design and develop their content with less restrictions. The findings supported the research conducted by Jones et al. (2019) stating that the infographics projects in higher education improved the learners' engagement and increased their creativity and ability in decision making. The use of infographics also signifies the high order of thinking by creating and evaluating information. Hence, it also supported the findings of Wijaya and Karyawati on the effects of infographics projects on the learners' 4Cs skills (2021).

40% and 48% of students highly agreed and agreed that the infographics task increased their learning motivation. 12% answered neutral on this matter. It can be inferred that although the result is not as high as the creativity, the number is still significant by 88%. This indicates another positive attribute as the majority of students believed that using infographics as a learning task motivated them more. The findings are in line with a previous study conducted by Stockdale et al., in which they revealed that the integration of technology enhanced students' learning experience by motivating them to engage with the technological tool and perceive it as a meaningful and beneficial learning process (2019).

Lastly, 42% and 50% of students highly agreed and agreed that they were able to demonstrate their learning progress in completing the task. This means that the students were able to showcase both their hard and soft skills. Hard skills include their ability to design a content and their knowledge of English language to be displayed in the task. This may also contribute to raising students' motivation as they can apply what they learn into a finished and shareable learning product. In addition, the soft skills in conducting the task include teamwork and communication, time management, creativity, critical thinking and decision-making. These skills were stimulated during the task as the students also mentioned in the written description that they needed to figure out how to collaborate with their team members in an online setting and how to select and organize a wide source of information appropriately. This also exemplifies how 85% of the students perceived this task as challenging.

Furthermore, students were asked to describe difficulties they faced during the task completion. The most common difficulty mentioned by the student was in the visual design aspect. 13 students stated that they struggled on how to design the content, especially for those who tried this learning tool for the first time. Three students stated that they had no designing skills and were lacking creativity. In addition, five students raised the problem in conducting the work in groups. Some argued that the members who had no experience stayed passive and

did not contribute to the work, and some had difficulties in managing the teamwork due to the online setting, hence the interactions might be limited. Therefore, further assistance and monitoring is needed to ensure the collaborative work is conducted efficiently. Students can also learn from this experience on how to improve their communication among team members in which they can negotiate on dividing the roles within the group, so that all members can contribute equally. This is also expected as the participants are students of higher education levels.

Ten students had difficulties in organizing the content and producing their writing. This deals with their critical thinking skills as they had to carefully filter information they obtained online to present an efficient content. Lastly, only one student had difficulties in the use of application and internet connection, in which DF stated:

Untuk kendala yang saya alami yaitu dari segi jaringan internet dikarenakan menggunakan aplikasi editor yang membutuhkan data dan memori penyimpanan yang seringkali penuh.
(Problems that I encountered were the internet connection because the use of editing applications took mobile data, and my storage memory was often over capacity.)

This could be a consideration in arranging the task in the beginning, so that students with lack of access could be supported by students who had more accessible learning tools. This was also where collaboration played its important role in allowing students to work together in solving the problem and finishing the task.

The last discussion is on the overall learning experiences of the students in conducting a task using infographics as the learning media. There are three keywords represented in students' written statements on their learning experience; i.e., knowledge, creativity and skills. 20 students emphasized on the knowledge and information they could obtain from this task. They also argued that they were able to process information in a more effective way, understand the materials easier, and enrich their knowledge through this task. Meanwhile, 16 students described the improvement of creativity that they obtained through this experience. They mentioned that this experience indeed stimulated their creative thinking starting from gathering ideas, collecting information, displaying the content, and presenting the final result. In addition, 19 students, including the ones who highlighted knowledge and creativity improvement, stated that they had increased their skills especially in editing and designing the visual aspects, 3 students mentioned that they had learned new skills in this experience. The table below shows some of the responses of the students.

Table 2. Students' perceptions on Infographics as Learning Task

<i>Lebih meningkatkan minat belajar karena bisa meningkatkan kreativitas saya.</i> (it increased my learning interest as it also increased my creativity)
<i>Lebih senang saat mengerjakannya dan bisa lebih kreatif dalam memahami materi.</i> (it was exciting in doing the task and I could be more creative in understanding the materials)
<i>Seru, lebih tenang 92etika mengerjakan dan pikiran menjadi terbuka untuk membuat ide baru yang menarik.</i> (it was fun and relaxing when conducting the task, and my mind was opened to new and exciting ideas)
<i>Meningkatkan kreativitas, mengasah skill dalam menentukan pokok pembahasan, menambah pengetahuan.</i> (it increased my creativity, improved my skills in deciding the main discussion, and improved my knowledge)

Subsequently, the findings and discussions have demonstrated the students' learning experience in using infographics as learning materials and tasks. Among these factors, the students agreed that in general, the activities were helpful in learning English. This is followed by their motivation and interest in engaging with both the materials and task. Learning autonomy has been a trend in the education field. Xhaferi & Xhaferi stated that learning products as a task can increase learner autonomy and increase their engagement as it may encourage students to take more initiative and control of learning and to reflect on their learning (2011). Therefore, assigning the learners with a task involving infographics, in which they had to create their own infographics, is believed to increase their learning autonomy. In addition, Rokhani argues that autonomous learners develop on their intrinsic motivation as they take responsibility in their learning (2012). As the study presented some of the evidence in which students claimed that the use of infographics increased their interest and motivation, this may also indicate their control over their own learning. The significance of encouraging learner autonomy is to prepare students to be life-long learners. It is expected that by utilizing this learning media, students can manage their learning process so that learning can be more enjoyable and richer with knowledge.

Conclusions

In conclusion, this study has examined the learning experience of students of Bogor Agricultural University Vocational Program in perceiving the use of infographics as learning materials and tasks. In the context of remote teaching, Hakim mentioned challenges in the teaching and learning process including access to modern equipment, interrupted or weak internet connection, learners' low motivation level and attention deficit (2020). To provide an alternative, this study used infographics as learning materials. The students can download the materials and access the file offline, so that in implementing asynchronous learning, students do not depend on internet connection as they can access the files anytime. As the file is in a form of image (.jpg), the students can use their mobile phones without sophisticated features. In dealing with their low motivation level and attention deficit, the learning materials using infographics are presented in colorful visual mode to make them more interesting.

In using infographics as a learning task, the participants also showed positive attitudes based on the results and findings in which the highest trend is the chance of stimulating and improving their creativity in conducting the task. They also demonstrated positive feedback in terms of their learning motivation and learning progress as they see the use of infographics as something new, interesting and beneficial to support their learning process. Therefore, it can be concluded that based on the findings, the use of infographics as learning materials and tasks has enhanced student learning experience indicated by their positive attributes.

This study offers with a few suggestions concerning prospects for further research in using infographics in the ELT learning environment. Some participants mentioned that their learning process would be more enhanced if the infographic was embedded with additional features such as barcode or hyperlink to videos or other interactive online activities. This will lead to the recommendation of using multimodalities to facilitate and enhance the learning and teaching process, particularly in the context of online or blended learning.

References

- Ahmadi, M. R. (2018). The Use of Technology in English Language Learning: A Literature Review. *International Journal of Research in English Education (IJREE)*, 3(2), 115-125.
- Benckendorff, P., Ruhanen, L., & Scott, N. (2009). Deconstructing the Student Experience: A Conceptual Framework. *Journal of Hospitality and Tourism Management*, 16.
- Bicen, H., & Beheshti, M. (2019, October 20). Assessing Perceptions and Evaluating Achievements of ESL Students with the Usage of Infographics in a Flipped Classroom Learning Environment. *Routledge Interactive Learning Environments*, 29(1).
<https://doi.org/10.1080/10494820.2019.1666285>
- Chicca, J., & Chunta, K. (2020). Engaging Students with Visual Stories: Using Infographics in Nursing Education. *Elsevier Teaching and Learning in Nursing*, 15(1), 32-36.
<https://doi.org/10.1016/j.teln.2019.09.003>
- Direktorat Jenderal Pendidikan Tinggi. (n.d.). *Buku Panduan Indikator Kinerja Utama (IKU) Perguruan Tinggi Negeri*. Kementerian Pendidikan dan Kebudayaan.
- Famularsih, S. (2020). Students' Experiences in Using Online Learning Applications due to COVID-19 in English Classroom. *Studies in Learning and Teaching*, 112-121.
- Hakim, B. (2020). Technology Integrated Online Classrooms and the Challenges Faced by the EFL Teachers in Saudi Arabia during the COVID-19 Pandemic. *International Journal of Applied Linguistics & English Literature*, 9(5), 33-39.
- Jones, N. P., Sage, M., & Hitchcock, L. (2019, January 26). Infographics as an Assignment to Build Digital Skills in the Social Work Classroom. *Routledge Journal of Technology in Human Services*, 203-225. <https://doi.org/10.1080/15228835.2018.1552904>
- Korniush, H. (2019). Theoretical Evaluation of the Potential of Infographics as Powerful Tools in English Language Teaching. *Blended Learning & Technology-Enhanced Instructional Tools in the English Language Teaching (ELT)*, 147-155.
- Martin, L. J., Turnquist, A., Groot, B., Huang, S. Y. M., Kok, E., Thoma, B., & van Merriënboer, J. J. G. (2019). Exploring the Role of Infographics for Summarizing Medical Literature. *Elsevier Health Professions Education*, 5, 48-57.
- Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative Data Analysis: A Methods Sourcebook*. Arizona: SAGE Publications
- Pat-El, R. J. (2012). *Lost in Translation: Congruence of Teacher and Student Perceptions of Assessment As a Predictor of Intrinsic Motivation in Ethno Diverse Classrooms*. Leiden: Leiden University.
- Pertiwi, D. R., & Kusumaningrum, M. A. (2021). The Infographic Projects in Speaking Activities. *Journal of English Language and Language Teaching (JELLT)*, 5(1), 52-62.
- Rokhani, E. N. (2012). *Promoting Autonomous Language Learning to Higher Education Students*. Yogyakarta: State University of Yogyakarta.
- Stockdale, J., Hughes, C., Stronge, S., & Birch, M. (2019). Motivating Midwifery Students to Digitalise their Enquiry-based Learning Experiences: An Evaluative Case Study. *Elsevier Studies in Educational Evaluation*, 60, 59-65. <https://doi.org/10.1016/j.stueduc.2018.11.006>
- Wijaya, T. A., & Karyawati, A. (2021). Arrange it, Digitize it, and Present It: Using Infographics as 21st Century Learning Media for Language Classroom. *2nd IC-Ling: "Current Issues on*

Linguistics, Literature, Translation, and Language Teaching (p. 193). Surakarta: Islamic State University of Surakarta.

Xhaferi, B., & Xhaferi, G. (2011). Developing Learner Autonomy in Higher Education in Macedonia. *Procedia Social and Behavioral Sciences*, 150-154.

Yarbrough, J. R. (2019). Infographics: in Support of Online Visual Learning. *Proquest Academy of Educational Leadership Journal*, 23(2), 1-15.

Yuruk, S. E., Yilmaz, R. M., & Bilici, S. (2019). An Examination of Postgraduate Students' Use of Infographic Design, Metacognitive Strategies and Academic Achievement. *Springer Journal of Computing in Higher Education*, 31, 495-513. <https://doi.org/10.1007/s12528-018-9201-5>