

# DIGITAL NATIVE'S VOICES ON ONLINE PLATFORM IN BLENDED LEARNING

#### Masyhud<sup>1</sup>, Laela Hikmah Nurbatra<sup>2</sup>

University of Muhammadiyah Malang, Indonesia <sup>1</sup> masyhud863@umm.ac.id, <sup>2</sup> nurbatra@yahoo.com

#### Abstract

Teachers are required to provide digital learning environment which is fit with digital native learners. Moreover, Digital environment offer various online platforms which can be accessed by digital native learners. Therefore, the aim of this research is to investigate the digital native's voices on online platforms in blended learning. In regard with the concern, the current research applied a survey research which involves a hundred and fifty two students of English Language Education Department at one of Universities in East Java. In case of instrument, researchers used survey in form of online questionnaire with close-ended questions and rating scales to collect the data. Survey relies on closed-ended questions often use ratings scales. In addition, this research confirmed that the students they cannot decide their position on the function of blended learning along their learning process, 47,4% respondents answered "Maybe". They also preferred to use Googleclassroom as their learning platform than other platforms. Moreover, Interaction between teacher and students is the main concern in blended learning with 69,6% respondents.

Keywords: Digital Native; Online Platform; Blended Learning

#### **INTRODUCTION**

The existence of Internet and multimedia technology as the core of information technology in education has became an fundamental instrument for teaching and learning. Moreover, Internet leads to exposed and updated information which easily accessed by society, so information literacy is required by people especially students who are massively attached with digital information in order to instruct them to meet their learning needs. Information technology is a needed advanced system of modern teaching and learning as imperative icon of modernization of education (Pavlović, Ranðić, & Paunović, 2014). Therefore, internet derives teaching and learning process into borderless and timeless condition which might all parts be preceded based on their needs. It can be called as mobile learning. It brings the mobility, convenience and interactivity with high flexibility of the purpose of time, site and setting (Ayu, 2020).

Globally, the demand for internet in education is increasing. It decreases the cost of building new facilities which still have limited capacity. Surani & Hamidah (2020) claimed that online learning is attractive solution for academic institutions to deal with the inadequate building. Moreover, Motiwalla (2007) in his research highlighted more on the use of internet related to the support the educators to cope the big numbers of students with the devices that can be purposed in the internet to reinforce the mobile learning. Many tools can be acquired in online learning which allows students to meet their own engagement in learning. Agung & Surtikanti (2020) suggests that the effective tools lead students to engage their appropriate learning path. In addition, Ooi, Hew, & Lee (2018) examined the students' satisfaction to mobile devices. Several satisfactions are identified. The students is another usefulness of mobile devices. Furthermore, The students' sustained use is last identified contentment of mobile devices.



Williamson, Eynon, & Potter (2020) enlighten more the position of mobile learning on the students' knowledge and experiences. They confirmed that mobile learning supports learning, providing learning experiences, and delivering thoughts. As a result, online learning supports may be incorporated with the students' learning process in the classrooms which administers direct satisfying impact on students' progress in term of materials or practices.

Online learning also promotes challenges for students. The equality access for online learning is one of essential issue in online learning. Students who live in rural have limitation access to online learning due to the internet connection. This situation happens to Ghananian students. Moreover, it leads to the students' barriers in operating online learning devices (Owusu-Fordjour, Koomson, & Hanson, 2020). Yusuf & Ahmad (2020) add that online learning provides less concentration for student or even they do not attend the class session. They just put their name on the screen, but they do other activities while they have online class. The teachers cannot control the students' participation in the class. They might have internet connection limitation when they do online learning, so they decide to turn off their camera.

One of the best solutions to bridge the importance of internet and the students' barriers in online learning is blended learning. Blended learning is the integration of mainstream classroom to the online learning platform (He & Zhao, 2020). They further stated that blended learning has been increasingly adopted in higher education institution. Some other researchers also regarded blended learning as a hybrid between traditional teaching with electronic supplements (Lin, Huang, & Ko, 2020). From those perspectives, it can be inferred that blended learning is the pedagogical practices which bridge the online and offline learning. In accordance to that, blended learning requires adequate technological supports in order to achieve the learning objectives. Moreover, effectiveness of blended learning indeed depends on the ability to facilitate its inquiry of learning and the community building (Garrison & Kanuka, 2004). It is supported by the argument of Lakshmi & Lakshmi (2020) who stated that if the learning is evidenced to bring improvement on the students' knowledge and skills compare to the mainstream type of learning (Kanika & Kaur, 2020). Therefore the advocates of blended learning also believe that it is the appropriate learning practices in this 21<sup>st</sup> century.

People who attached firmly with technology and online platforms can be called as digital native. Brumberger (2011) defines also digital natives as learners who have high visual literacy. They are aware with images, texts and sounds at the same condition and situation which can be obtained modern technology such as gadget, internet and television. They have been accustomed to do many tasks at the same time. Moreover, learners who can obtain information fast can be classified as digital natives also (Helsper & Eynon, 2010). They can access and internalize much information from different sources due to various media can be accessed easily. Hence, in digital era, there is no information barrier which can be destruction for learners to be digital natives. They can access freely the media information they want. Furthermore, digital natives has ability to create visual communication (Gallardo-Echenique, Marqués-Molías, Bullen, & Strijbos, 2015). So, they cannot only obtain information fast but they can also create their own tool to communicate among them visually. It simplifies the process of their communication which may not pursuit time and place barrier. In conclusion, millennial learners can be classified as digital natives because of their ability to acquire information and their environment.

Digital native learners require the teachers to adjust with the digital native learner's need. Prensky (2009) classifies that digital native's requisite faster, less procedural, more in parallel and randomly access as their primary input. It means that digital native learners need learning environment which can make them accessing the materials fast and less procedural. Digital native's needs nurture dilemma for teachers as digital immigrant. They are used to accommodate with old learning environment. They can be asserted as digital immigrants



because they commonly not to use material from internet; printing the materials than working on the screen and preferring reading manually than online(Helsper & Eynon, 2010). However, the learning environment change has forced teachers to be adaptive with the digital environment which exceedingly depended on online platform as the tool or media. Therefore, the usage of multimedia technology in education is a necessary. Online platform is a tool to make the activities easier and more effective (Fraccascia, 2020), from this definition, it can conclude that teacher teach easier and students learn more efficient. The emergence of a new classroom form as Multimedia classroom can be acquired in learning process. More and more electronic equipment are used in the classroom, and more and more teachers are required to improve their operating ability in the teaching process (Huang & Benyoucef, 2013). The existence of blended and online learning, including 'flipped learning' as long as the operation of sufficient learning digital platforms is the attachment of much concerns in the students' social boarders. There is growing interest among students who can assume as "millennial generation". They identically close with technology and online platforms. They might generate greater participation and interaction between students and students or between students and teachers. E-learning constructs the learning instruction to equip the absence of students' activities in the classroom. The long distance teachers and students interaction can be administered by E-learning resources (Moore, Dickson-Deane, & Galyen, 2011). And due to this urgency, teachers must aware the changes of their students' environment from conventional environment into digital environment.

Some researches on digital native learners have been conducted. Some focused on assessing learner's attachment on digital (Brumberger, 2011; Thulin & Vilhelmson, 2019; Wang, Sigerson, & Cheng, 2019). Brumberger (2011) highlight learner's literacy on digital information. He found that learners really attached with technology and visual information, but they are not principally skilled at generating and constructing visual information. Another interesting finding was displayed by (Thulin & Vilhelmson, 2019). They focused on examining how young digital natives associate with digital media in their daily life. They took Swedish young people, starting from 15-24. They covered that young people spent their time with digital media when they were at home, travel less and be alone. It means that digital native learners may tend to work individually than they should deal with group activities. Wang, Sigerson, & Cheng (2019) tried to perform digital native's attachment from their association between digital nativity and addiction to Information Technology (IT) attributes. The result showed that digital nativity and IT attributes addiction is correlated each other.

Current notion on digital native learners has not been widely reviewed so that this research tried to focus on digital native's voices on online platform in blended learning which is inevitable in this digital era. Specifically, the study will examine the digital native's perspective on online platforms in blended learning. Mostly they focused on digital native's attachment and literacy. They never serve another sight of digital native which can come from what online platforms are they really closed to. The results of the current study will contribute much beneficial impact on teaching and learning. It can provide an insightful input for teachers to formulate appropriate digital media which can be adopted from digital native friendly user online platforms. Teachers will attain successful teaching and learning process if they can identify digital native learner's online platforms.

# METHOD

The current research applied survey which is the most appropriate to identify and describe the trends in a population. In addition, the design is applied to investigate the participants anonymously (Klassen, Creswell, Plano, Clegg, & Helen, 2012). In particular, cross-sectional survey design which means that the data collection process was conducted by the researcher at

Volume 6, No. 6, November 2023 pp 1116-1125



one point in time. As stated by Klassen, Creswell, Plano, Clegg, & Helen (2012, the crosssectional study is the one which examine the current beliefs, opinions, attitudes and practices. Indeed, this type of research involves numerous participants. Hence, this research involved 156 English Language Education Department students. Moreover, Google form was equipped in collecting the data.

In case of instrument of research, researchers used survey in form of online questionnaire with close-ended questions and rating scales to collect the data. Survey relies on closed-ended questions often use ratings scales (e.g., Likert-type scales, semantic differential items, or feeling thermometers). Ratings scales can provide plenty of responses which eliminate time consuming to take survey.

# **RESULTS AND DISCUSSION**

### Results

The present research provided several questions related to blended learning, starting from digital native's response on blended learning till the challenges. The result of the survey will be elaborated below.

The first question concerned on digital native's satisfaction on blended learning. Most of the responses show that they are in between whether they are happy or not with blended learning. There were 47,4% responses answered "Maybe", 34,1% answered "Yes", and 18,5% answered "No". The students' satisfaction diagram is presented in the following figure:





From the first finding, it is indicated that the majority students were not sure whether the blended learning satisfy them. However, looking at the comparison between those who satisfied and those who are not, it is clear that more students were satisfied with blended learning. It against the view of Hrastinski (2020) who stated that there was no effect of blended learning on the students' satisfaction. Satisfaction in this context is defined as an attitude of each user as a measure of the users' expectation and the perceived performance of the system (Yawson & Yamoah, 2020).

The second findings concerned on the internet platforms used in blended learning. The data revealed that the most accessed by digital natives were google classroom (85,2%), Whatsapp, (72,6%). Zoom meeting is the next most accessed platform with 69,6% responses. 68,9% responses administered Google meet. The next is Edmodo, 6,7% and Schology 2,2%. The last is other applications with 14,1% responses. The findings are illustrated in the following figure:





The finding is in line with the results of Pham & Ho (2020) who stated that Google classroom is preferred in the online classes in Vietnam context. Furthermore, the blended learning approach has been encouraged in Vietnamese Higher Education, with the support of internet, and laptop during the outbreak of COVID 19. The chosen platforms are existed in virtual classroom which is inevitable in the COVID 19 pandemic. The purpose for choosing and using such applications are for safety reason, because the universities try to keep the students and faculties safe from the COVID 19 (Tang et al., 2020). In addition, Zoom is the popular learning platform in the online classroom (Halter, 2020)

Next, this research also questioned digital native's voices on the most satisfying platform in Blended learning. As alike as previous concern result, Google classroom got highest response with 54,1% responses. The next is Zoom meeting, 29,6% responses. Furthermore, 11,1% answered Whats app as most satisfying platform. The results are presented in the figure below:





Referring to the findings which revealed that most students are satisfied with Google Classroom, it is believed that the digital natives are reliance to any services provided by Google. As stated that today's students think that their main source for studying is Google (Ashour, 2020). He further contended that the digital natives also spend significant amount of time on screen, shifting from one application to others with the use of technology.

The challenge on blended learning is the last topic concerned on the present study. The students responded inversely. The biggest challenge is teacher and student interaction with 69,6% responses. The next is lack of understanding the materials given by the lecturers with 68% respondents. Moreover, 59,3% respondents worried on time management. They felt confused to manage their time. Internet connection becomes further problems for digital natives in implementing blending learning. There were 51,9% responses. However, Unexciting activities and financial supports have nearly similar responses, 43% responses and 42,2% responses. Interestingly, digital skills and student interaction were placed as the simplest problems for



digital natives with 33,3% responses and 31,9% responses. The detail can be examined in figure 4.



Figure 4. Challenges in blended learning

In blended learning, the face to face interaction needs to be conducted to have in-person interaction. As the study was conducted before the pandemic started, students had proper opportunities to meet the teacher in person. However, because of the pandemic and the shift to online teaching, some students find it challenging to learn in virtual modes. From the data, it is indicated that the students valued the teacher and student interactions because even in online learning, the interaction can be done by the use of technology (Ashour, 2020). However, he also further contended that the teachers therefore need to acquire the necessary skills and knowledge on how to engage with students in blended learning. Interestingly, connection also become of the challenges in the blended learning. It happened due to the fact that the students live in the remote areas with inadequate quality of internet connection. It is reported that in Vietnamese context, the students who live in the rural, coastal or mountainous areas have difficulties in the connection (Pham & Ho, 2020).

#### Discussion

Numerous empirical studies have underscored the widespread satisfaction among students in the context of blended learning. Blended learning, characterized by the integration of traditional face-to-face instruction with online learning components, has garnered favor due to its adaptive nature and ability to cater to diverse learning preferences. Research by Means, Bakia, Shear, Toyama, & Lassete (2012) demonstrated that students often appreciate the flexibility offered by blended learning, enabling them to manage their learning pace and allocate time for deep comprehension of course material. The presence of digital platforms allows students to revisit lectures, access supplementary resources, and engage in collaborative activities, contributing to a sense of autonomy and empowerment in their academic endeavors (Graham, Woodfield, & Harrison, 2013). This enhanced autonomy, coupled with the tailored learning experience offered by blended learning, significantly influences student satisfaction and, consequently, their overall academic performance.

Moreover, students have expressed satisfaction with blended learning due to its potential to promote interactive and participatory learning environments. The seamless integration of technology facilitates real-time communication, collaborative group projects, and peer-to-peer engagement, which fosters an enriched learning experience (Garrison & Vaughan, 2008). Morover, Picciano (2002) confirmed that students value the interactive aspects of online components, appreciating the opportunity to engage in virtual discussions and debates that encourage critical thinking and a deeper understanding of the subject matter. This collaborative



aspect of blended learning enhances social interaction and peer-to-peer learning, elements that contribute significantly to the overall satisfaction and academic success of students within the blended learning paradigm. Consequently, students perceive blended learning as an effective educational model that seamlessly combines digital advancements with traditional teaching methods, enhancing their academic engagement and satisfaction.

Additionally, academic literature indicates that students express satisfaction with blended learning due to its potential to address individualized learning needs and preferences. The adaptability of blended learning allows students to tailor their learning experiences, accommodating diverse learning styles and varying levels of prior knowledge (Vaughan, Cleveland-Innes, & Garrison, 2008). Hew & Cheung (2014) added that the ability to access a wide array of online resources, multimedia materials, and interactive content aids in catering to individual learning paces and preferences. Furthermore, the personalization inherent in blended learning, wherein students have the autonomy to choose how and when they engage with online materials, aligns with theories of self-directed learning and enhances motivation and satisfaction (Knowles, 1975). Consequently, students perceive blended learning as a means to achieve a personalized, adaptable learning experience that meets their unique academic requirements, thereby contributing to their overall contentment and engagement with the learning process.

Blended learning has gained popularity in education. However, it brings a significant challenge regarding the interaction between teachers and students. In a traditional classroom setting, teachers have direct and immediate interactions with students, enabling real-time feedback and personalized guidance. In a blended learning environment, the online component may lead to a reduction in face-to-face interactions, making it harder for teachers to gauge students' comprehension, address queries promptly, and provide necessary support (Lapitan, Tiangco, Sumalinog, Sabarillo, & Diaz, 2021). The digital divide and varying technological proficiency among students can exacerbate this issue, further hindering effective communication and understanding.

Moreover, the shift to blended learning often introduces a sense of physical and emotional distance between teachers and students. The absence of regular face-to-face interactions can diminish the personal connection and rapport that are crucial for a conducive learning environment. Students might feel disconnected, unsupported, or overlooked, affecting their engagement, motivation, and overall learning experience (Meeter, Den Hartogh, Bakker, De Vires, & Plak, 2020). Teachers may struggle to maintain a sense of community and a conducive learning atmosphere, which is vital for fostering a positive and collaborative learning environment. Balancing the benefits of digital tools and online platforms with maintaining meaningful teacher-student interactions remains a critical challenge in the effective implementation of blended learning.

# CONCLUSION

Based on the statement above, a conclusion can be formulated as a mean that digital natives appreciate the existence of online platforms in blended learning as a part of learning process. Moreover, they love to use Google classroom when they had a blended learning. On the other hand, they have problems in blended learning such as teacher and student interaction, lack of understanding and time.



The results formulate some concerns on blended learning among digital natives. Digital native students are still confused to decide whether blended learning is administered their learning needs especially classroom setting or not. Therefore, teachers should consider other classroom settings like face-to-face class because they still assume that they need direct interaction between student and teacher. Moreover, blended learning should also formulate how to bridge student's barriers in understanding the materials. The teacher's role in monitoring the interaction and the student's understanding materials are the essential in blending learning.

## ACKNOWLEDGMENTS

Best gratitude of this research is addressed on Departement Penelitian dan Pengabdian Universitas Muhammadiyah Malang which supported fully the research.

### REFERENCES

- Agung, A. S. N., & Surtikanti, M. W. (2020). Students' perception of online learning during covid-19 pandemic: a case study on the english students of stkip pamane talino. *Soshum : Jurnal Sosial Dan Humaniora*, 10(2), 225–235. https://doi.org/10.31940/soshum.v10i2.1316
- Ashour, S. (2020). How technology has shaped university students' perceptions and expectations around higher education: an exploratory study of the United Arab Emirates. *Studies in Higher Education*, 45(12), 2513–2525. https://doi.org/10.1080/03075079.2019.1617683
- Bakia, M., Shear, L., Toyama, Y., & Lassete, A. (2012). Understanding the Implications of Online Learning for Educational Productivity. Washington, DC: U.S. Department of Education, Office of Educational Technology. In Office of Educational Technology, US Department of Education. Retrieved from https://www.sri.com/publication/understanding-the-implications-of-online-learningfor-educational-productivity/
- Brumberger, E. (2011). Visual literacy and the digital native: an examination of the millennial learner. *Journal of Visual Literacy*, 30(1), 19–47. https://doi.org/10.1080/23796529.2011.11674683
- Fraccascia, L. (2020). Quantifying the direct network effect for online platforms supporting industrial symbiosis: an agent-based simulation study. *Ecological Economics*, *170*(December 2019), 106587. https://doi.org/10.1016/j.ecolecon.2019.106587
- Gallardo-Echenique, E. E., Marqués-Molías, L., Bullen, M., & Strijbos, J. W. (2015). Let's talk about digital learners in the digital era. *International Review of Research in Open and Distance Learning*, *16*(3), 156–187. https://doi.org/10.19173/irrodl.v16i3.2196
- Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *Internet and Higher Education*, 7(2), 95–105. https://doi.org/10.1016/j.iheduc.2004.02.001
- Graham, C. R., Woodfield, W., & Harrison, J. B. (2013). A framework for institutional adoption and implementation of blended learning in higher education. *Internet and Higher Education*, 18, 4–14. https://doi.org/10.1016/j.iheduc.2012.09.003
- Halter, N. (2020). Teaching and technology at the university of the south pacific. *Journal of Pacific History*, 55(4), 537–547. https://doi.org/10.1080/00223344.2020.1808451
- He, W., & Zhao, L. (2020). Exploring undergraduates' learning engagement via BYOD in the blended learning classroom (EULEBYODBLC). International Journal of Information and Education Technology, 10(2), 159–164. https://doi.org/10.18178/ijiet.2020.10.2.1356



- Helsper, E. J., & Eynon, R. (2010). Digital natives: Where is the evidence? *British Educational Research Journal*, *36*(3), 503–520. https://doi.org/10.1080/01411920902989227
- Hew, K. F., & Cheung, W. S. (2014). Students' and instructors' use of massive open online courses (MOOCs): Motivations and challenges. *Educational Research Review*, 12, 45– 58. https://doi.org/10.1016/j.edurev.2014.05.001
- Hrastinski, S. (2020). Informed design for learning with digital technologies. *Interactive Learning Environments*, 0(0), 1–8. https://doi.org/10.1080/10494820.2020.1815221
- Huang, Z., & Benyoucef, M. (2013). From e-commerce to social commerce: A close look at design features. *Electronic Commerce Research and Applications*, 12(4), 246–259. https://doi.org/10.1016/j.elerap.2012.12.003
- Kanika, & Kaur, H. (2020). Effectiveness of blended learning for teaching cardiac disorders on nursing students' learning outcomes and attitude. *International Journal of Scientific Research*, 9(1), 16–17. https://doi.org/https://www.doi.org/10.36106/ijsr
- Klassen, A. C., Creswell, J., Plano, V. L., Clegg, K., & Helen, S. (2012). Best practices in mixed methods for quality of life research. 377–380. https://doi.org/10.1007/s11136-012-0122-x
- Lapitan, L. D., Tiangco, C. E., Sumalinog, D. A. G., Sabarillo, N. S., & Diaz, J. M. (2021). An effective blended online teaching and learning strategy during the COVID-19 pandemic. *Education for Chemical Engineers*, 35(May 2020), 116–131. https://doi.org/10.1016/j.ece.2021.01.012
- Lin, C.-Y., Huang, C.-K., & Ko, C.-J. (2020). The impact of perceived enjoyment on team effectiveness and individual learning in a blended learning business course: The mediating effect of knowledge sharing. *Australasian Journal of Educational Technology*, 36(1), 126–141. https://doi.org/10.14742/ajet.4446
- Meeter, M., Den Hartogh, C. F., Bakker, T., De Vires, R. E., & Plak, S. (2020). College students 'motivation and study results after COVID-19 stay-at- home orders. *PsyArXiv*, 1–26.
- Moore, J. L., Dickson-Deane, C., & Galyen, K. (2011). E-Learning, online learning, and distance learning environments: Are they the same? *Internet and Higher Education*, *14*(2), 129–135. https://doi.org/10.1016/j.iheduc.2010.10.001
- Motiwalla, L. F. (2007). Mobile learning: A framework and evaluation. *Computers & Education*, 49(3), 581–596. https://doi.org/10.1016/j.compedu.2005.10.011
- Mutiara Ayu. (2020). Online learning: leading e-learning at higher education. *The Journal of English Literacy and Education*, 7(1), 47–54.
- Ooi, K. B., Hew, J. J., & Lee, V. H. (2018). Could the mobile and social perspectives of mobile social learning platforms motivate learners to learn continuously? *Computers and Education*, 120, 127–145. https://doi.org/10.1016/j.compedu.2018.01.017
- Owusu-Fordjour, C., Koomson, C. K., & Hanson, D. (2020). The impact of Covid-19 on learning the perspective of the Ghanaian students. *European Journal of Education Studies*, 7(3), 88–101. https://doi.org/10.5281/zenodo.3753586
- Pham, H. H., & Ho, T. T. H. (2020). Toward a 'new normal' with e-learning in Vietnamese higher education during the post COVID-19 pandemic. *Higher Education Research and Development*, *39*(7), 1327–1331. https://doi.org/10.1080/07294360.2020.1823945
- Picciano, A. (2002). Picciano (2002).pdf. Journal of Asynchronous Learning Networks, 6(1), 21–40.
- Prensky, M. (2009). H . Sapiens Digital : From Digital Immigrants and Digital Natives to Digital Wisdom Digital Wisdom. *Innovate: Journal of Online Education*, 5(3).
- Surani, D., & Hamidah, H. (2020). Students perceptions in online class learning during the covid-19 pandemic. *International Journal on Advanced Science, Education, and Religion, 3*(3), 83–95. https://doi.org/10.33648/ijoaser.v3i3.78
- Tang, T., Abuhmaid, A. M., Olaimat, M., Oudat, D. M., Aldhaeebi, M., & Bamanger, E. (2020).



Efficiency of flipped classroom with online-based teaching under COVID-19. *Interactive Learning Environments*, 0(0), 1–12. https://doi.org/10.1080/10494820.2020.1817761

- Thulin, E., & Vilhelmson, B. (2019). More at home, more alone? Youth, digital media and the everyday use of time and space. *Geoforum*, 100(January), 41–50. https://doi.org/10.1016/j.geoforum.2019.02.010
- Vijaya Lakshmi, D., & Sri Lakshmi, M. (2020). Integrated technological tools for effective blended learning. 2020 IEEE Bombay Section Signature Conference, IBSSC 2020, 163– 168. https://doi.org/10.1109/IBSSC51096.2020.9332223
- Wang, H. Y., Sigerson, L., & Cheng, C. (2019). Digital nativity and information technology addiction: age cohort versus individual difference approaches. *Computers in Human Behavior*, 90, 1–9. https://doi.org/10.1016/j.chb.2018.08.031
- Williamson, B., Eynon, R., & Potter, J. (2020). Pandemic politics, pedagogies and practices: digital technologies and distance education during the coronavirus emergency. 9884(May). https://doi.org/10.1080/17439884.2020.1761641
- Yawson, D., & Yamoah, F. A. (2020). Understanding utility essentials of e-learning management systems in higher education: a multi-generational cohort perspective. *Open Learning*, 00(00), 1–17. https://doi.org/10.1080/02680513.2020.1858778
- Yusuf, B. N., & Ahmad, J. (2020). Are we prepared enough? a case study of challenges in online learning in a private higher learning institution during the covid-19 outbreaks. *Advances in Social Sciences Research Journal*, 7(5), 205–212. https://doi.org/10.14738/assrj.75.8211