How synchronous learning changes the workload of teachers: Experiences learned from expanding countries

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ABSTRACT

The Impact of synchronous Learning on Educators' Workload The coronavirus outbreak, particularly in the Republic of Indonesia and the Russian Federation, has fundamentally altered the teaching and learning process. The in-person teaching and learning process transitions to an online format. Educators and learners must be prepared for execution. Educators must adapt their instructional methods for online platforms to ensure the continuity of teaching and learning. This presents significant obstacles and obligations, particularly for educators who are initiating the online teaching process. This study aimed to ascertain if Synchronous Learning exacerbates the physical, mental, and financial burdens on teachers. The employed methodology was quantitative, utilizing an online-distributed questionnaire as the tool. The research samples comprised 20 educators employed at private senior vocational institutions in Indonesia and Russia. The teacher burdens variable indicates that the average responder perceives the burden as high, as seen by an average value of 0.730, which falls within the range of 0.501 to 1. This concludes that Synchronous Learning significantly increases instructors' workloads. It proves that synchronous learning imposes additional physical, emotional, and financial burdens on teachers.

Keywords: Instructors, synchronous learning, pandemic, overwork

INTRODUCTION

Throughout the Covid-19 epidemic, educators significantly contributed to the preservation of educational continuity. Always acknowledge their function and role. Do not assume that the teacher has ample leisure time, as the government policy has transitioned the educational process to a home-based format. The researchers concludes that online teaching is significantly more challenging than in-person learning. teachers need to change the conventional teaching styles into more engaging, interesting and productive ways (Purwoko, 2017; Purwoko et al., 2019), and within the

context of the process of teaching English to speakers of other languages, the learning approach has a significant impact to capture the students' interest in the ESL classrooms. Educators must confront abrupt alterations in the educational process (Nurhidayah et al., 2022; Shintiani et al., 2022a). Increased energy, contemplation, and time dedicated to the Synchronous Learning process (Hazliza et al., 2016; Indra Kusuma et al., 2021; Sunjayanto Masykuri & Basuki, 2022). Educators are unfamiliar with the concepts of day and night. It was a day that consumed considerable time. Furthermore, educators who diligently fulfill their obligations (Adedoyin & Soykan, 2020; Maskuri et al., 2019; Shintiani et al., 2022b).

The government's implementation of "distancing" measures to mitigate the spread of the coronavirus affects educators' instructional strategies. In traditional education, a teacher and students often engage with one another within a single classroom setting. Nonetheless, the government, by directing educators and pupils to engage in remote learning, is implementing measures to enforce movement limitations aimed at mitigating the spread of the coronavirus (Ermayani et al., 2021; Indra Kusuma et al., 2021). Numerous narratives exist regarding how educators can effectively present science to their kids utilizing diverse methodologies.

The epidemic necessitates that educators acquire numerous skills rapidly, as instruction previously designed for in-person delivery must abruptly transition to remote learning. Undoubtedly, anyone unaccustomed to it would falter. Educators are obligated to implement several instructional strategies in a prior environment (Prihatini et al., 2023; Seman et al., 2017; Sunjayanto Masykuri et al., 2024). Achieving perfection is unattainable without attempting them. Educators should design lessons appropriately; if the outcomes are unsatisfactory, they may be reattempted in the subsequent session.

Instructing during a pandemic would undoubtedly differ significantly from conventional education; educators must adapt to the circumstances. Reestablish the foundation for learning to be attained. Instructing during this epidemic is exceedingly challenging and perplexing, particularly when conducted without adequate preparation.

It is essential to structure synchronous learning to be as meaningful as any classroom learning experience.

Distance learning has suddenly become a challenging and exhausting circumstance for educators (Al Maroof & Al Emran, 2018; Cho et al., 2015; Hayati et al., 2022). Maintain openness and flexibility in instruction, and do not become overwhelmed by unmanageable demands. Students require assistance to engage with this system effectively. Particularly if pupils experience unreliable internet connectivity. Consider these options and ensure the assignment is adaptable and significant. The researchers seek to determine whether the learning process affects the teacher's workload. What is the remedy if the learning process exacerbates the teacher's burden?

LITERATURE REVIEW

Synchronous Learning initially gained recognition due to the advent of electronic-based learning (e-learning) introduced by the University of Illinois via a computer-based learning system. Synchronous Learning is a system that enables students to acquire knowledge more extensively and diversely. This technology enables students to learn at any time and from any location, unrestricted by distance, space, or time constraints. The investigated learning material is diverse, encompassing not only verbal forms but also visual, auditory, and kinetic elements (Van Wart, 2022). During the COVID-19 pandemic, the field of online teaching and learning had tremendous growth (Harangi-Rakos et al., 2022; Johnson et al., 2020; Parker, 2021). This growth has been steady since the year 2000 (Johnson et al., 2020). In spite of the fact that there will undoubtedly be a significant reduction in the number of people affected by the pandemic, it is highly probable that the long-term trajectory of expansion of synchronous learning will have been significantly accelerated (McKenzie, 2021; Ulum, 2022). Synchronous learning fundamentally differs from traditional learning methods. synchronous learning prioritizes students' diligence and forethought in acquiring and processing the information provided online.

E-learning is defined as instructional content or learning experiences delivered or facilitated by electronic technology (Van Wart, 2022). Consequently, synchronous

learning necessitates interactive connection between students and professors using information and communication technology, including computer media with internet access, telephones, or fax machines. The utilization of this medium is contingent upon the organization of the educational content and the nature of the communication necessitated. Transcripts of conversations, illustrative information, and written documents that connect Synchronous Learning or web-based education, demonstrating examples. The complete text is characteristic of significant educational resources available online. Enhanced communication sometimes incorporates visual aids such as whiteboard images, occasionally integrated with discussion sessions and video conferencing, catering to students who prefer alternative mediums for engaging with unprinted messages. synchronous learning is characterized as a substantial aggregation of interconnected computers that enables numerous users to share extensive resources (Song et al., 2004; Sunjayanto Masykuri et al., 2022, 2024). Synchronous learning encompasses hardware components (infrastructure) consisting of a network of interrelated computers capable of transmitting data in many formats, including text, messages, pictures, or audio. Synchronous learning can be characterized as a collaborative computer network interconnected with other global computer networks (Kitao, 1998). Nonetheless, the concept of Synchronous Learning pertains not solely to hardware; it also encompasses software in the form of data that is transmitted and stored, accessible at any time. Multiple computers can be interconnected to establish a sharing function known as a network (networking). The network sharing feature encompasses not only essential resources, such as printers or modems, but also data and specific application programs.

Educators' responsibilities

Educators are professionals whose primary responsibilities include instructing, mentoring, guiding, training, assessing, and evaluating students. The primary responsibilities of the educator are executed within the early childhood education unit and formal education ranging from kindergarten to secondary school. A teacher performs five primary activities in the execution of his responsibilities. The primary activity involves the planning of learning or guidance, executed through

activities such as curriculum and syllabus review, guidance, and special needs programs within educational institutions. This includes the organization of annual and semester programs pertinent to their specific domains, as well as the development of a Learning Implementation Plan or guidance implementation plan in accordance with process standards. The secondary primary activity involves facilitating learning or supervision via intra-curricular, co-curricular, and extracurricular activities. The second action involves the execution of the lesson plan.

In Russian Federation, the primary activity is to evaluate the outcomes of learning or instruction. Assessment is the process of gathering and analyzing information regarding learning outcomes or guidance effectiveness. This assessment exercise evaluates the attainment of student learning outcomes in three dimensions: attitudes, knowledge, and skills. In Indonesia, the primary activity involves instructing and mentoring students. Educators can guide and train pupils through co-curricular and extracurricular activities. Primary Responsibilities of Educators as Outlined in Permendikbud 15 of 2018. The primary action involves executing supplementary tasks associated with the implementation of principal activities in alignment with the Teacher's Burdens. The supplementary responsibilities undertaken by the educator are commensurate with the instructional workload. Additional assignments from the teacher are equivalent to in-person teaching hours each week (*Permendikbud-No-15-Tahun-2018*, 2018).

METHODS

The employed research methodology is qualitative. The quantitative research technique is a methodical, organized, and structured approach characterized by clarity from the inception to the formulation of the research design (Sandu Siyoto, 2015). Another definition states that quantitative research involves extensive investigation using numerical data, encompassing data gathering, interpretation, and presentation of conclusions. The research would be enhanced in the conclusion stage if supplemented with photographs, tables, charts, or other visual representations. visual representations, including photos, tables, charts, or alternative formats.

The objective of quantitative research encompasses the variables under investigation, their interrelations, the persons involved, and the study's geographical context (Creswell, 2014). The quantitative research method is a methodical, planned, and structured approach characterized by clear requirements from inception to the formulation of the study design.

Conduct research in a vocational institution in West Jakarta. The aim of this research is to quantify physical, mental, and financial stresses. The participants in this study were educators at the institution. This study utilizes both primary and secondary research data. Primary data is acquired from questionnaires administered to selected respondents. The research instrument employed consisted of questionnaires to assess loads, together with Excel software for data processing. The values derived from this population are referred to as parameters.

The author collected 20 samples from the population. The population comprises all study subjects, whereas the sample constitutes a subset of the population. Comprehending Samples As per specialists. The sample constitutes a segment of the population whose attributes are subject to examination states that a sample represents a portion of the entirety and embodies the characteristics of a population (Djarwanto, 1994; Sugiyono, 2008).

According to Arikunto, a sample constitutes a segment or representative subset of the population under investigation. If the research is conducted on a subset of the population, it is classified as a sample study (Arikunto, 2006), he researchers employed the Guttman Scale in the study. In the social sciences, the Guttman or "cumulative" scale quantifies the extent of an individual's favorable or negative attitude towards a specific topic (Singarimbun & S, 1989). The Guttman scale is one of the three unidimensional scales, alongside the Likert scale and the Thurstone scale. The Guttman scale, also known as cumulative scaling or scalogram analysis, is constructed of elements that can be arranged in a hierarchical order. It exemplifies the respondents' extreme attitudes, whether either favorable or negative, toward the subject at hand.

FINDING AND DISCUSSION

There is the online questionnaire by the researchers asking for the product and service. It was about how often they pay more attention for physical, mental, and financial determination.

Table 1. Statistical Product and Service Solution Data

Respondent	Question 1	Question 2	Question 3	Mean
1	No	No	No	0,4
2	Yes	Yes	Yes	1
3	Yes	No	No	0,4
4	Yes	Yes	Yes	1
5	No	Yes	Yes	0,8
6	No	Yes	Yes	0,6
7	Yes	Yes	Yes	0,8
8	Yes	Yes	Yes	0,6
9	No	No	No	0,4
10	Yes	No	Yes	0,6
11	Yes	Yes	Yes	1
12	No	Yes	Yes	0,4
13	Yes	Yes	Yes	0,8
14	Yes	Yes	Yes	1
15	No	Yes	No	0,4
16	Yes	Yes	Yes	0,8
17	Yes	Yes	Yes	1
18	Yes	Yes	Yes	1
19	Yes	Yes	Yes	0,8
20	Yes	Yes	Yes	0,8

Questions:

1. Does Synchronous Learning increase your burden physically?
2. Does Synchronous Learning increase your burden mentally?
3. Does Synchronous Learning increase the financial burden in supporting Synchronous Learning?

Table 2. Descriptive average Teacher' Burdens variables

	N	Minimum	Maximum	Mean	Std. Deviation
Average Teacher Burden	20	0.4	1.0	0.730	0.2364
Valid N (listwise)	20				

The statistical test data regarding that the teacher did overwork during the pandemic. The minimum score is 0,4 and maximum 1. The validity is 20.

Table 3. Frequencies of answers to each item

		Item1	Item2	Item3	Item4	Item5
N	Valid	20	20	20	20	20
	Missing	0	0	0	0	0
Mean		0.65	0.85	0.85	0.60	0.70
Std. Deviation		0.489	0.366	0.366	0.503	0.470
Minimum		0	0	0	0	0
Maximum		1	1	1	1	1

In table 2 and 3, there are 5 items used by the teachers to indicate the burden. The statistic shows that the validity is in maximum score.

Table 4. Frequency Table of Item 1

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	7	35.0	35.0	35.0
	No	13	65.0	65.0	100.0
	Total	20	100.0	100.0	

The table 4 is about frequency of the teachers' activity. The data is found that many countries have different condition.

Table 5. Frequency Table of Item 2

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	3	15.0	15.0	15.0
	Yes	17	85.0	85.0	100.0
	Total	20	100.0	100.0	

From the statistical test data regarding the effect of synchronous learning on the teacher terms of physical, mental, and financial, it can be seen in this radar chart 1.

Table 4. Frequency Table of Item 3

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	3	15.0	15.0	15.0
	Ye	17	85.0	85.0	100.0
	Total	20	100.0	100.0	

From the statistical test data regarding the effect of synchronous learning on the teachers' burdens in terms of physical, mental, and financial, it can be seen in this radar chart 1:
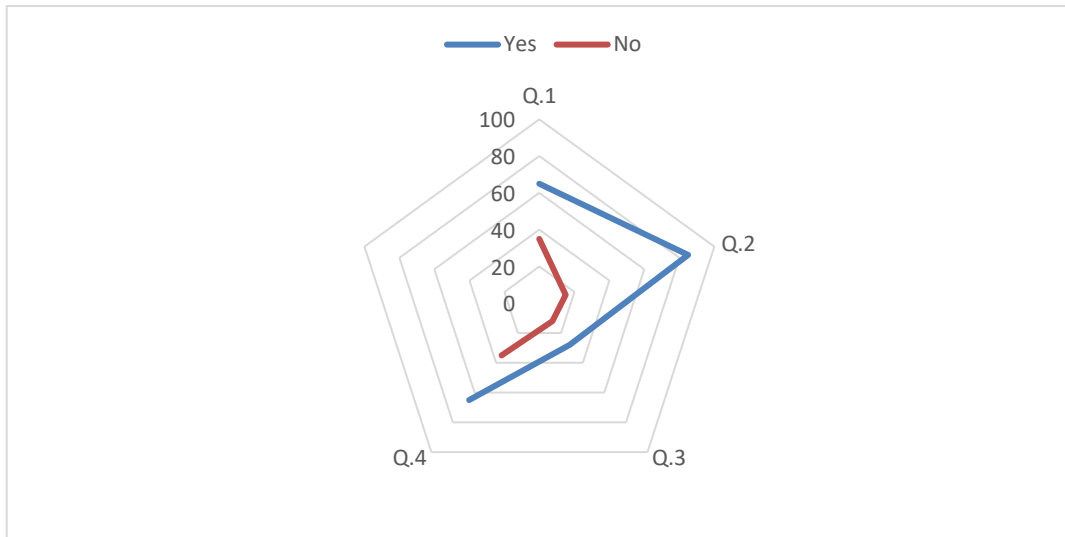
Chart 1. The effect of Synchronous Learning on the teachers' burdens

Note

Q.1. Does Synchronous Learning increase your burden physically?

Q.2. Does Synchronous Learning increase your burden mentally?

Q.3 Does Synchronous Learning add to the financial burden of supporting Synchronous Learning?

Statistical descriptive analysis

This analysis is to determine the description of variable data such as mean, minimum value, maximum value, and standard deviation. This study was used to determine the effect of Synchronous Learning on teachers' burdens.

The following is presented descriptive statistics about the average respondent's answers, which are as follows:

Table 1.1

Descriptive Statistics of Variable Mean

Variable	N	Min	Max	Mean	Decision
Teacher's Burden	20	0,4	1,0	0,730	High

(Source: Processed data, 2021)

The scale range for respondent assessment uses the following formula:

RS = Maximum Value – Minimum Value

Number of classes

$$= \frac{1 - 0}{2}$$

= 0,5

Scale Range: 0 - 0,500 = Low, 0,501 - 1 = High

Based on the scale range above, the average respondent's answer is as follows: Teacher Burden Variable, the average respondent's answer states that the burden is high because the average value of 0.730 is in the range 0.501 - 1. With this, it is concluded that the effect of Synchronous Learning makes teachers' burden high. It is the same condition as in disrupted university that met unexpected activities during pandemic. It gave negative impact for both students and teachers (Mosleh et al., 2022). The report has been mentioned that almost 93% of teachers suffered significant increases in stress and exhaustion over the change to online teaching. Most teachers felt different levels of stress over the abrupt change to online teaching, a conclusion supported by Cipriano, Rappolt-Schlichtmann (Cipriano C & Brackett, 2020; Schaffhauser D, 2020).

CONCLUSION

The statistical descriptive study of the scale range indicates that the average response from participants is as follows: The teacher burdens variable indicates that the average responder perceives the burden as high, as seen by an average value of 0.730, which falls within the range of 0.501 to 1. This concludes that Synchronous Learning significantly increases instructors' workloads. The writer presents ways to alleviate the challenges faced by educators: Collaboration among educators via teacher organizations, such as Teacher Working Groups for elementary school instructors and Subject Teacher Consultations for junior and senior high school/vocational educators, to create engaging and interactive presentation materials for Synchronous Learning platforms. Schools ought to create a PJJ guidebook for parents to assist their youngsters with home study and provide strategies for conserving internet data. Educational institutions are required to cover internet expenses for educators to facilitate the online teaching and learning process. Whether one approves or disapproves, remote employment must be prepared for reality. Educators ought to design learning strategies

that are accessible for both them and their pupils. Educators must be capable of forgiving themselves for their shortcomings while conducting remote instruction. Rather than assigning blame to oneself, it is more advantageous to concentrate on enhancement to rebuild pupils' trust in the educator. Educators ought to concentrate on aspects within their control. The Covid-19 epidemic necessitates that individuals adapt in innovative manners. Regretting the past is merely a futile endeavor. The educator should endeavor to maintain mental composure. Regulate what is manageable; if it is uncontrollable, permit its course. Educators must prioritize their own mental health. Self-forgiveness and future-oriented attention are vital strategies for online instruction. Integrate this into their habit to alleviate feelings of shame stemming from imperfection.

REFERENCES

Adedoyin, O. B., & Soykan, E. (2020). Covid-19 pandemic and online learning: The challenges and opportunities. *The Challenges and Opportunities. Interactive Learning Environments*. https://doi.org/10.1080/10494820.2020.1813180

Al Maroof, R. A. S., & Al Emran, M. (2018). Students acceptance of Padlet: An exploratory study using PLS-SEM approach. *International Journal of Emerging Technologies in Learning*, *13*(6), 112.

Arikunto, S. (2006). *Research Procedure, A Practical Approach*. PT Rineka Cipta, Jakarta.

Cho, Y. H., Caleon, I., & Kapur, M. (2015). *Authentic Problem Solving and Learning for Twenty-First Century Learners* (pp. 3–16). https://doi.org/10.1007/978-981-287-521-1_1

Cipriano C, R.-S., & Brackett, M. A. (2020). *Supporting school community Wellness with Social and Emotional Learning (SEL) during and after a pandemic*. Edna Bennet Pierce Prevention Research Center.

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative and Mixed Methods Approaches* (4th ed.). Thousand Oaks, CA: Oaks.

Djarwanto, D. (1994). *Pokok-pokok Metode Riset dan Bimbingan Teknis*. Liberty.

Ermayani, T., Nurhadi, R., & Masykuri, E. (2021). *The Problems of Digital Da'wah during the Covid-19 Pandemic*. https://doi.org/10.4108/eai.18-11-2020.2311673

Harangi-Rakos, M., Stefanescu, D., Zsido, K. E., & Fenyver, V. (2022). Thrown into deep water: Feedback on student satisfaction—A case study in Hungarian and Romanian universities. *Education Sciences*, *12*(1), 36. https://doi.org/doi:10.3390/educsci12010036

Hayati, A., Hadi, M. S., & Izzah, L. (2022). Online Based Innovative Education (VOA Learning English) to Build English Students' Listening Skills. *Scripta : English Department Journal*, *9*(1), 44–54. https://doi.org/10.37729/scripta.v9i1.2159

Hazliza, H., Munira, S. M. N., & Zarina, M. (2016). Teachers' challenges in the implementation of frog virtual learning environment. *Asia Pacific Journal of Educators and Education*, *31*, 115–129. http://dx.doi.org/10.21315/apjee2016.31.7

Indra Kusuma, Ngafif, A., & Masykuri, E. S. (2021). E-Learning Usage Analysis in English Language in Universitas Muhammadiyah Purworejo. *Scripta : English Department Journal*, *8*(2), 35–44. https://doi.org/10.37729/scripta.v8i2.1136

Johnson, N., Veletsianos, G., & Seaman, J. (2020). U.S. faculty and administrators' experiences and approaches in the early weeks of the COVID-19 pandemic. *Online Learning*, *24*(2), 6–21. https://doi.org/doi:10.24059/olj.v24i2.2285

José Miguel Orellana Parapi; Lilis Imas Maesaroh; Basuki Basuki; Edi Sunjayanto Masykuri. (2020). Virtual Education: A Brief Overview of Its Role in the Current Educational System. *Scripta : English Department Journal*, *Vol. 7 No. 1 (2020)*, 8–11.

Maskuri, E., Al Hakim, Y., & Supriyono, S. (2019). *Integrated Technology And Mutual Participation For Changing Communities Socially, Economically And Religiously*. https://doi.org/10.4108/eai.19-10-2018.2281307.

Masykuri, E. S. (2022). Technology effect of efl listening comprehension to teacher during pandemic. *Journal of English Teaching and Learning Issues*, *5*(1), 51–62.

McKenzie, L. (2021). Students want online learning options post-pandemic. Inside Higher Ed. *Inside Higher Ed.* https://www.insidehighered.com/news/2021/04/27/survey-reveals-positive-outlook-online-instruction-post-

Mohamad, M., Palani, K., Nathan, L., Sandhakumarin, Y., Indira, R., & Jamila, E. (2023). Educational Challenges in the 21st Century: A Literature Review. *International Journal of Academic Research in Progressive Education and Development*, *12*. https://doi.org/10.6007/IJARPED/v12-i2/16865.

Mosleh, S., Kasasbeha, M., Aljawarneh, Y., Alrimawi, I., & Saifan, A. (2022). The impact of online teaching on stress and burnout of academics during the transition to remote teaching from home. *BMC Medical Education*, *22*. https://doi.org/10.1186/s12909-022-03496-3

Noreiny, M., & Normaliza, A. (2017). Instagram in ESL classroom. *Man in India*, *97*(20), 107–114.

Nurhidayah, N. A., Tusino, T., & Masykuri, E. S. (2022). Students' Perception toward EFL College Teacher Pedagogical Competence in Teaching Writing. *Scripta : English Department Journal*, *9*(2), 209–216. https://doi.org/10.37729/scripta.v9i2.1475

Parker, J. (2021). Technology as integral to a new paradigm of adult education. *International Journal of Adult Education and Technology*, *12*(4), 37–46. https://doi.org/doi:10.4018/IJAET.2021100103

Permendikbud-no-15-tahun-2018. (2018). [Dataset]. https://peraturan.bpk.go.id/Home/Details/138191/permendikbud-no-15-tahun-2018

Prihatini, N., Sudar, S., Tusino, T., & Masykuri, E. S. (2023). The Impact of Using Blended Learning to Improve Reading Comprehension. *Scripta : English Department Journal*, *10*(1), 128–139. https://doi.org/10.37729/scripta.v10i1.2361

Purwoko, R. Y. (2017). Analisis Kemampuan Content Knowledge Mahasiswa Calon Guru Matematika Pada Praktek Pembelajaran Mikro. Jurnal Pendidikan Surya Edukasi (JPSE), 3(1), 55–65.

Purwoko, R. Y. (2017). Urgensi pedagogical content knowledge dalam meningkatkan kualitas pembelajaran matematika. Jurnal Pendidikan Surya Edukasi, 3(2), 42–55. https://doi.org/10.37729/jpse.v3i2.4338

Purwoko, R. Y., Nugraheni, P., & Instanti, D. (2019). Implementation of pedagogical content knowledge model in mathematics learning for high school. Journal of Physics: Conference Series, 1254(1), 1–6. https://doi.org/10.1088/1742-6596/1254/1/012079

Schaffhauser D. (2020). The Pandemic's Impact on Teacher, Parent and Student Attitudes. *The Journal Transformic Education through Technology*.

Seman, S. C., Yusoff, S. M. W., & Embong, R. (2017). Teachers challenges in teaching and learning for higher order thinking skills (HOTS) in primary school. *International Journal of Asian Social Science*, *7*(7), 534–545.

Shintiani, S., Sukarni, S., & Masykuri, E. S. (2022a). Teacher's Strategies of English Online Learning during COVID-19 Pandemic in SMA N 8 Purworejo. *Scripta : English Department Journal*, *9*(2), 172–181. https://doi.org/10.37729/scripta.v9i2.1470

Shintiani, S., Sukarni, S., & Masykuri, E. S. (2022b). Teacher's Strategies of English Online Learning during COVID-19 Pandemic in SMA N 8 Purworejo. *Scripta : English Department Journal*, *9*(2), 172–181. https://doi.org/10.37729/scripta.v9i2.1470

Singarimbun, M., & S, E. (1989). *Metode Penelitian Survay. LP3S*. LP3S.

Song, L., Singleton, E. S., Hill, J. R., & Koh, M. H. (2004). Improving online learning: Student perceptions of useful and challenging charateristics. *The Internet and Higher Education*, *7*(1), 59–70. https://doi.org/doi:10.1016/j.iheduc.2003.11.003

Sugiyono. (2008). *Metode Penelitian Pendidikan: Pendekatan Kuantitatif, Kualitatif, dan R & D.* Alfabeta.

Sunjayanto Masykuri, E., & Basuki, B. (2022). Students' perception of digital media for English teaching learning. *Teaching English as a Foreign Language Journal*, *1*(1), 64–73. https://doi.org/10.12928/tefl.v1i1.171

Sunjayanto Masykuri, E., Sukarni, S., Tusino, T., & Dewi, P. (2022). The cohesive devices in hiver.com and its implication in teaching online writing. *Jurnal Ilmu Bahasa, Sastra Dan Pengajarannya*, *1*(2), 124–135.

Sunjayanto Masykuri, E., Vladimirovna, V. O., & Evgenevichc, M. I. (2024). First-year-students' perceptions of asynchronous media platform (AMP) for learning English. *English Language Teaching Educational Journal*, *6*(3), 188–198. https://doi.org/10.12928/eltej.v6i3.6661

Ulum, H. (2022). The effects of online education on academic success: A meta-analysis study. *Education and Information Technologies*, *27*(1), 429–450. https://doi.org/doi:10.1007/s10639-021-10740-8 PMID:34512101

Van Wart, M. (2022). Online Learning: What We Know and What We Don't Know. *International Journal of Adult Education and Technology*, *13*, 1–18. https://doi.org/10.4018/IJAET.312581