Hybrid Learning on Pencak Silat Sport in Higher Education: Students' Perception and Issues

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This study aimed to evaluate the implementation of hybrid learning in sports education, especially in Pencak Silat sport at Mpu Kuturan State College Singaraja. The data was collected using a questionnaire, interview, and observation. The questionnaire results were analyzed quantitatively to determine students' perceptions of implementing hybrid learning. While the interview and observation results were analyzed qualitatively to identify the challenges during the hybrid learning implementation. This study found that students' perceptions were very positive and challenges in this hybrid learning were balancing between offline and online activities, participating in face-to-face learning activities, getting reliable internet connection and technological devices.

Keywords: hybrid learning, pencak silat, online learning, offline learning

INTRODUCTION

The COVID-19 pandemic has impacted education and work systems worldwide, forcing schools and public places to close or limit the number of people who can enter (Ahmad et al., 2021; Favale et al., 2020; Zweigbergk, 2021). The COVID-19 pandemic has affected many students and students. The government eliminates and dismisses students from school-based learning activities. Many countries, including Indonesia, have closed all educational activities, forcing the government and related schools to provide alternative educational processes. This is done to keep the Covid-19 virus from spreading (Appolloni et al., 2021; Bavel et al., 2020; Zweigbergk, 2021). So that in this situation, the government, through the ministry of education and culture, finally enforced an online learning policy.

The Covid-19 pandemic has affected up to 68 million more students in Indonesia, ranging from Early Childhood Education (PAUD) to high school (SMA), according to the Ministry of Education and Culture

(Marini & Milawati, 2020; Pratama et al., 2021; Rachmawati et al., 2021). Only 34.5% of these people have access to online education services (Irawan et al., 2020; Lase et al., 2022). This situation adds to the lack of study readiness for educators who are used to face-to-face learning. The spread of Covid-19 has necessitated that everyone become technologically literate (Almahasees et al., 2021; Carolan et al., 2020; Yusuf, 2021). This is the only bridge that can connect educators and student learning without the need for lectures, and it uses the expository method to help students understand the theory.

Online learning has evolved into hybrid learning (Bülow, 2022; Eyal & Gil, 2022; Geronimo et al., 2022). Hybrid learning combines several methods, including classroom, computer-based, and online learning (Bai, 2022; Behzad et al., 2022; Simpson & Goodyear, 2022). Hybrid can also describe a learning method (Abebe et al., 2022; Wu & Zhou, 2022). With this in mind, one of the most significant consequences of the Covid - 19 case in Indonesia is the transformation of online learning into hybrid learning.

Almost all levels of education, including college, use a hybrid of direct and indirect learning. However, every university will face challenges when implementing hybrid learning (Fawns et al., 2022; Khoiriyah & Pulungan, 2022). An issue is that some students with low technological ability can have their learning success hampered. Knowledge of the student base, in addition to knowledge of computerization, influences the implementation of hybrid learning. As a result, in hybrid learning, students must participate in inter-college engagement activities while learning according to the curriculum (Makki et al., 2022; McGrath, 2021; Purushottam et al., 2021). As a result, the right method is critical for effective hybrid learning (Q. Li et al., 2021; Roman & Plopeanu, 2021; Singh, Steele, et al., 2021).

Practical learning, such as Sport Education, is extremely difficult. Furthermore, elementary school students can learn sports education (Howley, 2021; Varea et al., 2022). By practising at home, children will find it difficult to accept learning from the teacher. Physical education entails learning about body movements and how to process the body properly and correctly to stay as healthy as possible, maintain body proportions, and be disease resistant (Amatriain-Fernández et al., 2020; Casolo et al., 2020). Various good and correct exercise techniques are required to achieve the best results. Athletics, games, and traditional games with different playing rules are all examples of different types of sports education (Cruickshank et al., 2022; Kim et al., 2021; Messakh et al., 2021). Various techniques and rules in sports education must be demonstrated and visually considered by students.

Learning sports like Pencak silat requires activities that allow for hands-on practice (Hidayat et al., 2020; Yudaparmita & Purandina, 2022). All types of sports are impossible to do just by studying the theory but must be followed by direct practice by following the correct basic techniques and special movements (Barker et al., 2022; Junaydulloevich & Istamovich, 2021). These movements must be carried out with a trial and error imitation process. So it has to be done face-to-face (Socrates et al., 2021; Yudaparmita & Purandina, 2022). The same is done in learning sports courses at the Dharma Department on Pencak silat Martial arts material. Lecturers in this course apply mixed learning, namely a mixture of online and offline learning called Hybrid Learning.

This hybrid learning is possible to do because in the unstable situation of the COVID-19 case, where there are still several cases of transmission and there are still new variants, making this step an alternative in learning in Sport Education (Riyanda et al., 2022; Singh, Steele, et al., 2021). This course requires a balanced practice time and even more so that it is impossible if only done through online learning alone. Indeed, face-to-face learning has been allowed, but it is still limited. So this approach is very suitable to do in this context.

Hybrid Learning, also known as Blended Learning, refers to the combination of methods; however, there is a distinction between blended and hybrid learning, that is, blended learning is a combination of methods, whereas hybrid learning is a combination of methods (Gagnon et al., 2020; Leidl et al., 2020). Blended learning focuses on online and offline learning, whereas hybrid learning combines learning methods such as face-to-face with computer-based or online learning (internet and mobile learning) (Gaba, 2021; Tick & Beke, 2021). Combining two complementary learning methods, traditional and online, optimizes learning outcomes (Jiang et al., 2021). Hybrid learning combines two methods, such as online learning and face-to-face instruction.

Hybrid instruction is an instructional delivery model that combines the benefits of face-to-face and online instruction with an emphasis on pedagogy rather than technology (Detyna et al., 2022; Singh, Evans, et al., 2021; Zhang, 2020). It is a relatively new but natural and evolutionary trend that educators in higher education institutions are experiencing (Machwate et al., 2022). These educators have a long history of teaching courses in a face-to-face format. They are looking for ways to improve their traditional teaching practice by utilizing an online delivery method.

The hybrid-online method is feasible for lecture use (Pollock, 2022; White et al., 2022). The Hybrid Learning Network (HLN) can help to accelerate the learning process (Kabak et al., 2022; M. Li & Yu, 2022). WhatsApp is one of the social media platforms that can help students learn (Purandina, 2021; Swart et al., 2019; Ying et al., 2021). A Voice Note service is one of the media WhatsApp features or services. Throughout the learning process, the researcher uses Voice Note on WhatsApp, occasionally using Zoom meeting media if needed, and employs the expository method to help students understand the theory.

This approach is indeed an alternative at this time, but there is still a need for further studies on how the level of success of this learning. And how are students' perceptions, whether they are comfortable or have obstacles in this kind of learning? The extent to which this approach is successful in learning, especially in learning that requires practical activities such as sports education. In theory, this approach has a good impact on students, where students get various choices in their learning. However, this cannot be an absolute reference. Further studies are needed in research in the real world according to the local context.

Previous studies relevant to this study have found positive things about Hybrid learning. Most of these studies state that hybrid learning is an effective and successful thing to implement in learning. As in the research of Mutmainah et al. (2022), which is explained in research, hybrid learning in English lessons at the secondary education level in Senior High School is an excellent alternative to overcome the limitations of online and offline learning. Research by Ismunadar et al. (2022) also explained that the hybrid learning approach positively impacted learning mathematics statistics in higher education. Students are very enthusiastic about welcoming face-to-face learning that is packaged in a mixture with learning that utilizes digital technology online. Then the research conducted by Hidayati et al. (2022) that their research conducted at MTS found answers to previous limitations of online and offline learning. So it is very fitting to be implemented. So far, no study has been conducted to evaluate hybrid learning in sports education, especially on Pencak silat sport which requires the students to do a lot of physical activities.

Therefore, this study aimed to evaluate the Dharma Acarya Department's hybrid learning in sports education. In this study, the researchers investigated students' perceptions further. Perception is a phenomenon caused by the release of the human brain process. Many elements are involved in this process, such as feelings, needs, motivation, education, experience, and so on (Al-Fadley et al., 2018; Ginting et al., 2021). According to some expert definitions, perception is a human thought process of specific phenomena after the feeling has passed through the sense of organ from the environment towards learning responsibility, active learning and participation, efficient communication and interaction, learning style and needs, and level of understanding students to the material provided. In addition, the obstacles in this hybrid learning were also explored.

METHOD

The descriptive qualitative research method was used in this study. Descriptive qualitative research involves collecting, analysing, and interpreting comprehensive, narrative, and visual data to gain insight into a specific phenomenon of interest (Creswell & Creswell, 2017; Fraenkel & Wallen, 2008; Gerring, 2007). This study aims to discover 64 students' perceptions at Dharma Acarya Department, STAHN Mpu Kuturan Singaraja. They are taking *Pencak silat* material in Sport courses in the academic year 2021/2022. In addition, it also identified the obstacles found in the process of hybrid learning in teaching *Pencak silat* material.

The research data on students' were gathered through a questionnaire. The questionnaire was created using perception theory as a foundation (Asadullina et al., 2020). As previously stated, this study focuses on four major topics: student participation, accessibility, material and assignment delivery, and e-learning platforms used that are combined with face-to-face learning that meets their needs and conditions. As a result, the questions are organized around these major themes. Questionnaires were distributed and collected using a Google Form that included closed and open questions (Heigham & Croker, 2009). The percentage of topics analyzed was calculated using the results of closed-ended questions. The percentage was calculated using SPSS 20. Meanwhile, open-ended questions were used to assess students' attitudes toward online learning implementation. The total number of responses received (NS) were counted, analyzed, and explained by topic.

Closed-ended questions limit students' options to those provided by the researcher in the Google Form application. On the other hand, open-ended questions can be filled with unspecified answers based on perception. For example, when you need a more original answer to a question that goes beyond the general. The obtained data will then be written in a narrative, descriptive style by describing the data that was filled out on the Google Form into a table. The table will be presented straightforwardly, displaying original data about students' perceptions of online Physical Education learning.

Furthermore, the data's reliability and validity must be considered to obtain correct and precise data. Researchers also explore data with observation and interview techniques to enrich the resulting data (Moleong, 2013). As a result, the obtained data must undergo a process of cross-checking (cross-checked data) and repeated data collection. This is known as the technique triangulation procedure. This triangulation method also yields accurate data, diverse data, or multiple data acquisitions that can be combined (Flick, 2018; Noble & Heale, 2019; Roulston, 2018). Similarly, the trustworthiness of data is investigated in this study, which covers four areas: the data itself, data transcription, data collection techniques, and findings.

The interactive data analysis method was used for data analysis. This approach consists of three steps. The first is data reduction, which is done directly during data collection. The second step is presenting the data (data display), and the third is verifying or drawing a conclusion (Miles et al., 2014). This analytical approach is used directly and continuously in this research as part of investigating the phenomena. The data is analyzed interactively and simultaneously until the answer or solution to the research question is found to the saturation of the data. There is no limit to the amount of data found in qualitative research, but the end of a search is when the data obtained is data that has reached data saturation (Renz et al., 2019). Saturated means that the data obtained is always the same, so there is no need for repetition.

FINDING AND DISCUSSION

Students' Perception of Hybrid Learning

When face-to-face learning began to gradually improve after the pandemic period, STAHN Mpu Kuturan Singaraja ventured to begin face-to-face learning, but not all students were included in the school area, thus combining online and face-to-face learning, also known as hybrid learning. A hybrid learning method combines face-to-face instruction with online learning processes.

The positive impact obtained by students during face-to-face learning is nearly 80%, with many student respondents stating that face-to-face learning has a very positive impact on students, with students understanding the material better than online. Students can socialize and interact with their peers and teachers directly. When students do not understand the material taught by the teacher, it is easier and faster for them to get a response during face-to-face learning. In addition to positive feelings, students experience negative feelings as well because each student is unique. Approximately 60% of those polled said face-to-face learning had no obstacles, while the remainder reported various issues.

On the other hand, students can also carry out learning at home using applications and directly explore technology to improve students' technological literacy. Students can also learn about learning apps like WhatsApp, Google Classroom, Google Meet, Zoom, and others. Students are expected to be able to carry out face-to-face learning with this application. The next positive impact is that students can learn in a relaxed environment at home, allowing them to assist parents effectively. Students can also look for various learning styles that match their personality so that they have no difficulty understanding learning and can learn anywhere, at any time, and for an unlimited amount of time. This is consistent with fun online learning factors, such as providing and utilising technology to obtain the right material and provide the right feedback.

The observation results show that the teacher used some application and used it very well. The primary function of the application that the teacher uses is to assist the students in learning. Zoom meetings, quizzes, WhatsApp, and other similar services are examples. The teacher enters the group class to give the students the material and assignments. Offline, some teachers combine quizzes and explanations of the material, but the teacher still spends more time explaining than giving the task. They explain the material directly and answer questions directly in class.

After comparing the convenience provided by face-to-face learning and online learning above, then proceed with analyzing the data regarding hybrid learning in terms of Learning Responsibility, Active Learning and Participation, Efficient Communication and Interaction, Learning Style and Needs, Technical Understanding and Practices. Figure 1 shows how students perceive this in Hybrid Learning.

FIGURE 1
LEARNING RESPONSIBILITY

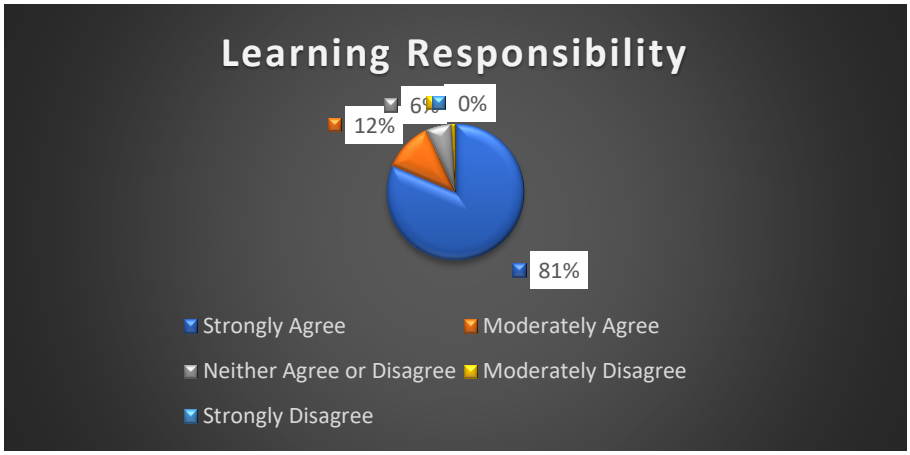


Figure 1 depicts the students appeared to strongly agree that the hybrid delivery encouraged them to take responsibility for their learning (81% being "Strongly Agree," 12% being "Moderately Agree," 6% being "Neither Agree nor Disagree," 1% being "Moderately Disagree," and 0% being "Strongly Disagree"). To encourage students to be responsible for their learning, 93% agreed that the hybrid format was superior to face-to-face or online delivery. They cited "time management," "self-imposed deadlines," and "lecturer absence" as reasons for increased learning responsibility.

Hybrid learning helps the students manage their time since they may choose whether they want to join face-to-face instruction or online learning. The ones who choose to join the instruction through online learning could join the instruction from their homes. While the ones who want to see the teacher in person may come to school to join the face-to-face instruction. In other words, hybrid learning provides flexibility for students (Detyna et al., 2022; Palmer et al., 2022). In addition, conducting synchronous hybrid learning could decrease the teachers' absence. It is because hybrid learning forces the teacher to come to school to conduct face-to-face and online learning simultaneously (Raes, 2022).

FIGURE 2
ACTIVE LEARNING AND PARTICIPATION

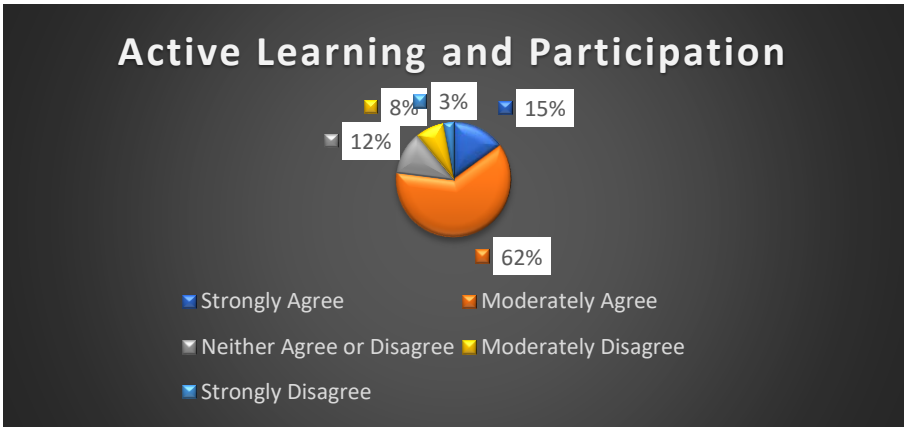
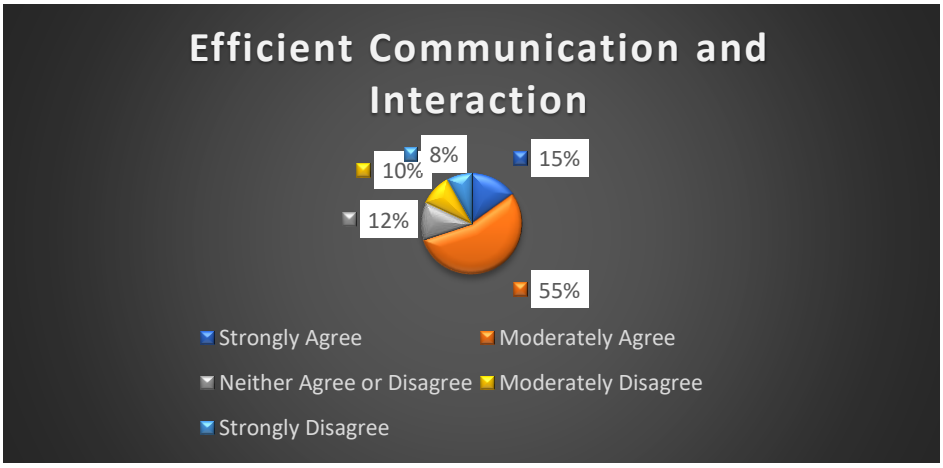


Figure 2 shows Students expressed moderate agreement on active learning and participation in hybrid delivery. However, compared to face-to-face or online instruction, they rated hybrid instruction nearly as well as face-to-face in terms of promoting active learning and participation (77% agree with Hybrid Learning and 23% disagree). Face-to-face was an obvious choice for encouraging active learning and participation due to "immediate help from the lecturer," "instant Q&As," and "discussion with classmates." On the other hand, almost half of the students felt that their "self-reliance" and "ability to change learning speed" made them more active learners. Teachers' presence in hybrid learning could give instant support to their students who join face-to-face or online learning (Lee et al., 2022). That support positively impacts students' satisfaction and participation during the instruction process (Guo et al., 2020; Yousry & Azab, 2022). Hybrid learning

FIGURE 3
EFFICIENT COMMUNICATION AND INTERACTION



Based on Figure 3, the students agreed that the hybrid allowed efficient communication and interactions with the lecturer. This category's response was consistent with their preference for face-to-face or online over hybrid (70% agree and 30% disagree). They appeared to prefer easy access to and immediate communication with the lecturer. Some students, however, noticed that their communication was improved because the online component of the hybrid instruction allowed them to think about topics in greater depth and pose quality questions, resulting in quality interactions with the lecturer. Since the teacher is available synchronously during the teaching and learning process for students in the face-to-face class and online learning, teacher-students communication can be done effectively (Green, 2022; Kawasaki et al., 2021).

FIGURE 4
LEARNING STYLE AND NEEDS

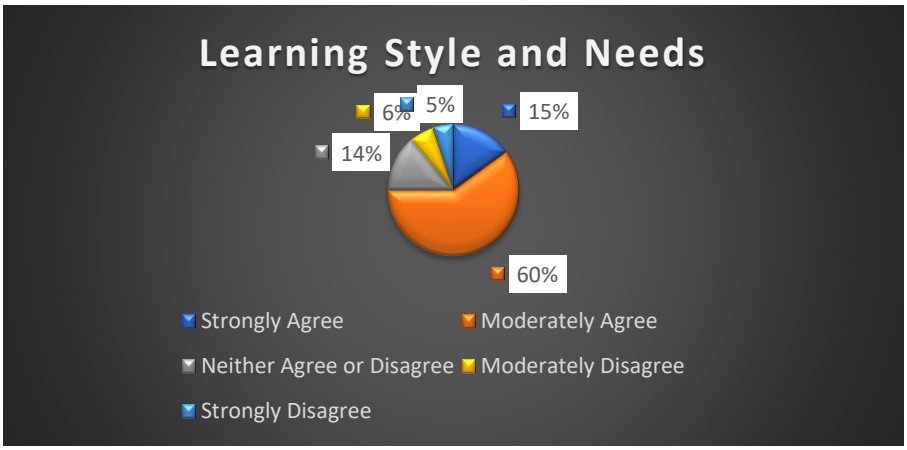
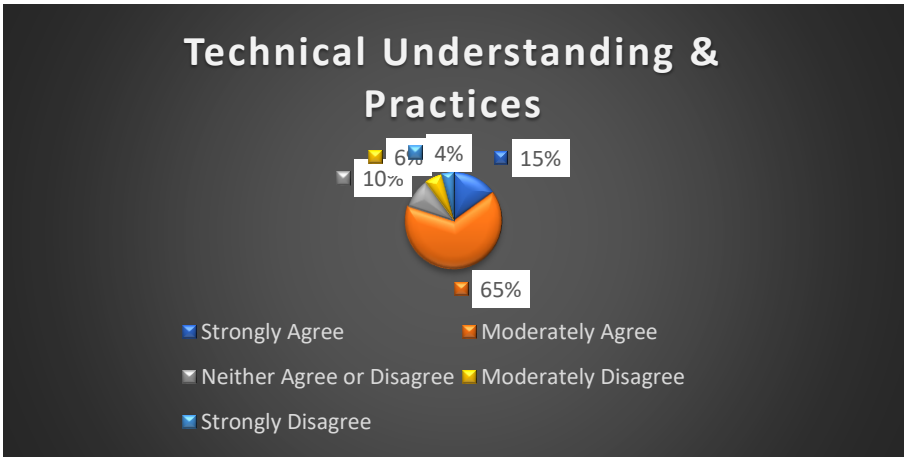


Figure 4 depicts 70% of students who said the hybrid format was more sensitive to their learning style and needs than the face-to-face or online format. They stated that the hybrid delivery's online component allowed them to study at their own pace. Another reason the hybrid was preferred was the flexibility of learning around their busy schedules while maintaining contact with the lecturer. They can also set the time and freedom to choose whether to take classes face-to-face or online (Palmer et al., 2022). This is also an effort to get around the limitations that we experience in this post-COVID-19 period. Thus, it can be said that the flexibility of hybrid learning gives more chances for students to join the face to face or online learning based on their learning style and needs.

Figure 5 shows the students gave the hybrid a high rating for its ability to help students understand technical topics. According to reports, the main reason was that they were given opportunities to learn and digest the topics at their own pace before reinforcing their understanding through hands-on exercises and Q&A sessions in the subsequent face-to-face class meeting. So that the combination of face-to-face and online delivery will make learning easier, and various media and learning materials will be easily linked online and balanced with face-to-face learning, making learning clearer and easier. Of course not boring because it is rich in activities that can be done. Therefore, hybrid learning is better than only online learning regarding students' achievement (Q. Li et al., 2021).

FIGURE 5
TECHNICAL UNDERSTANDING & PRACTICES



Based on these findings from the survey, it can be concluded that hybrid learning could have various benefits for students. Those benefits give the students a positive perception of implementing hybrid learning. Taking into account the various limitations experienced by students, hybrid learning can be a better alternative than distance learning (Mutmainnah et al., 2022). Thus, hybrid learning shows a positive response from students. It even looks superior to face-to-face and online learning itself. The students prefer the hybrid learning model because they can obtain the material directly, allowing them to understand the learning material better.

Challenges in Hybrid Learning

Challenges in this hybrid learning include: (1) balancing activities between offline and online; (2) Online students still have difficulties participating in face-to-face learning activities. (3) Poor internet connection. (4) Limited technological devices such as PC and gadgets. This data was obtained through direct observation and interviews with students so that it can then be grouped into 4 (four) challenges in hybrid learning in *Pencak silat*, Sport Education courses in the Dharma Acarya Department, STAHN Mpu Kuturan Singaraja.

First, it is difficult to balance participating in offline and online activities. Sometimes some students become confused with assignments or how to access online media and learning materials previously explained in offline meetings. Sometimes explanations during face-to-face classes do not match the material or learning activities presented online. The level of material difficulty also sometimes differs in face-to-face and online classes. Students are sometimes confused by some of the instructions that are carried out in face-to-face classes are different from when they are online.

Second, some students of the Dharma Acarya Department, STAHN Mpu Kuturan Singaraja, are still outside the region, even outside the island. So although some of these students have never attended face-to-face classes, they are indeed given the right to still choose online learning. This unequal activity makes students' understanding not at the same level as the students in an online class and face-to-face class. Of course, those who do not receive face-to-face learning will find it difficult to understand and practice *pencak silat* movements and other activities that require practice.

Third, most students complain about running out of quotas during online learning, such as when studying with the Zoom application, because the application consumes a lot of quotas. These impediments may cause students to miss the information presented by the teacher. Another barrier is that students have difficulty getting reliable internet connections during learning, disrupting teaching and learning activities. Some studies also found that reliable internet connection is a major problem in online learning (Cahyadi et

al., 2021; Noori, 2021; Saha et al., 2022). Besides, some teachers may not teach online classes because they forget them. Thus, these obstacles bring a negative impact on the instruction quality.

Fourth, implementing hybrid learning, of course, requires supporting technological equipment. For example, when lecturers conduct face-to-face classes simultaneously with online, they must use cameras, projectors, computers, microphones, speakers, etc. So that students who take online learning can receive the same information or instructions as students who take lectures in person or face to face. These tools are not fully supported by the campus but are prepared by the lecturers. The availability of hardware is also a common problem in online learning (Almaiah et al., 2020; Q. Li et al., 2021; Sofi-Karim et al., 2022).

CONCLUSION

Face-to-face learning began to gradually improve after the pandemic period, STAHN Mpu Kuturan Singaraja ventured to begin face-to-face learning. However, not all students were included in the school area, thus combining online and face-to-face learning, also known as hybrid learning. A hybrid learning method combines face-to-face instruction with online learning processes. *Pencak silat* learning requires a combination of knowledge in the form of theory as well as hands-on practice. So face-to-face learning is inevitable. However, not all students can participate in face-to-face learning, so they are given the choice of face-to-face or online. This is where hybrid learning becomes an alternative. The survey of students regarding their perceptions of hybrid learning that has been carried out shows a very positive response. Judging from Hybrid Learning out itself in terms of Learning Responsibility, Active Learning and Participation, Efficient Communication and Interaction, Learning Style and Needs, Technical Understanding and Practices. However, there are also several challenges in the form of obstacles in this hybrid learning which can then be classified into four categories of obstacles, namely (1) Balanced activities between offline and online; (2) Online students still have difficulties participating in face-to-face learning activities; (3) Poor internet connection; (4) Limited technological devices such as laptops and smartphones. Since this study was limited to evaluating the students' perception and the challenges in conducting hybrid learning, a further study that evaluates the effectiveness of hybrid learning is important to give a more comprehensive understanding of the implementation of hybrid learning for teaching *pencak silat*.

REFERENCES

Abebe, W.T., Endalie, D., & Haile, G. (2022). Development of hybrid baseflow prediction model by integrating analytical method with deep learning. *Sustainable Water Resources Management*, *8*(4), 97. https://doi.org/10.1007/s40899-022-00694-1

Ahmad, M., Rashid, R.A., Mansor, N.R., Ahmad, M., Sung, C.M., Hussain, E.M., & Chua Abdullah, N.A. (2021). The impact of integrating ICT in Malay foreign language teaching and learning. *Journal of Physics: Conference Series*, *1793*(1). https://doi.org/10.1088/1742-6596/1793/1/012070

Al-Fadley, A., Al-Holy, A., & Al-Adwani, A. (2018). Teacher perception of parents' involvement in their children's literacy and their reading instructions in Kuwait EFL primary school classrooms. *International Journal of Education and Practice*, *6*(3), 120–133. https://doi.org/10.18488/journal.61.2018.63.120.133

Almahasees, Z., Mohsen, K., & Amin, M.O. (2021). Faculty's and students' perceptions of online learning during COVID-19. *Frontiers in Education*, *6*, 1–10. https://doi.org/10.3389/feduc.2021.638470

Almaiah, M.A., Al-Khasawneh, A., & Althunibat, A. (2020). Exploring the critical challenges and factors influencing the e-learning system usage during COVID-19 pandemic. *Education and Information Technologies*, *25*(6), 5261–5280. https://doi.org/10.1007/s10639-020-10219-y

Amatriain-Fernández, S., Murillo-Rodríguez, E.S., Gronwald, T., Machado, S., & Budde, H. (2020). Benefits of physical activity and physical exercise in the time of pandemic. In *Psychological*

Trauma: Theory, Research, Practice, and Policy (Vol. 12, Issue S1, pp. S264–S266). Educational Publishing Foundation. https://doi.org/10.1037/tra0000643

Appolloni, A., Colasanti, N., Fantauzzi, C., Fiorani, G., & Frondizi, R. (2021). Distance Learning as a Resilience Strategy during Covid-19: An Analysis of the Italian Context. In *Sustainability* (Vol. 13, Issue 3). https://doi.org/10.3390/su13031388

Asadullina, G.R., Korovkina, N.V., Sadretdinova, E.V., Badretdinovich, R.S., & Hajrullina, N.G. (2020). Social character: Issues of methodology and research methods. *Revista Amazonia Investiga*, *9*(26), 545–553. https://doi.org/10.34069/ai/2020.26.02.61

Bai, H. (2022). Students' use of learning management system in hybrid learning: Mobile or not. *International Journal on E-Learning*, *21*(1), 5–23.

Barker, D., Nyberg, G., & Larsson, H. (2022). Coaching for skill development in sport: A kinesio-cultural approach. *Sports Coaching Review*, *11*(1), 23–40. https://doi.org/10.1080/21640629.2021.1952811

Bavel, J.J.Van, Baicker, K., Boggio, P.S., Capraro, V., Cichocka, A., Cikara, M., . . . Willer, R. (2020). Using social and behavioural science to support COVID-19 pandemic response. *Nature Human Behaviour*, *4*(5), 460–471. https://doi.org/10.1038/s41562-020-0884-z

Behzad, M., Rasheed, N., Malik, A.N., & Merchant, S.A. (2022). Technology-Embedded Hybrid Learning. *Preprints*, pp. 1–12. https://doi.org/10.20944/preprints201803.0229.v2

Bülow, M.W. (2022). In E. Gil, Y. Mor, Y. Dimitriadis, & C. Köppe (eds.), Designing synchronous hybrid learning spaces: Challenges and opportunities. *BT - Hybrid Learning Spaces*, pp. 135–163. Springer International Publishing. https://doi.org/10.1007/978-3-030-88520-5_9

Cahyadi, A., Hendryadi, Widyastuti, S., Mufidah, V.N., & Achmadi. (2021). Emergency remote teaching evaluation of the higher education in Indonesia. *Heliyon*, *7*(8), e07788. https://doi.org/https://doi.org/10.1016/j.heliyon.2021.e07788

Carolan, C., Davies, C.L., Crookes, P., McGhee, S., & Roxburgh, M. (2020). COVID 19: Disruptive impacts and transformative opportunities in undergraduate nurse education. In *Nurse education in practice* (Vol. 46, p. 102807). https://doi.org/10.1016/j.nepr.2020.102807

Casolo, F., Coco, D., Sopranzi, S., & Supital, R.A. (2020). *Physical and sports education in the era of COVID-19: Between DID and outdoor education*.

Creswell, J.W., & Creswell, J.D.C. (2017). *Research design: Qualitative, quantitative, mix methods approaches* (1st ed.). SAGE Publications Inc.

Cruickshank, V., Pill, S., & Mainsbridge, C. (2022). "Just do some physical activity": Exploring experiences of teaching physical education online during Covid-19. *Issues in Educational Research*. https://doi.org/10.3316/informit.748840500056591

Detyna, M., Sanchez-Pizani, R., Giampietro, V., Dommett, E.J., & Dyer, K. (2022). Hybrid flexible (HyFlex) teaching and learning: Climbing the mountain of implementation challenges for synchronous online and face-to-face seminars during a pandemic. *Learning Environments Research*. https://doi.org/10.1007/s10984-022-09408-y

Eyal, L., & Gil, E. (2022). Hybrid learning spaces: A three-fold evolving perspective BT - hybrid learning spaces. In E. Gil, Y. Mor, Y. Dimitriadis, & C. Köppe (Eds.), (pp. 11–23). Springer International Publishing. https://doi.org/10.1007/978-3-030-88520-5_2

Favale, T., Soro, F., Trevisan, M., Drago, I., & Mellia, M. (2020). Campus traffic and e-Learning during COVID-19 pandemic. *Computer Networks*, *176*, 107290. https://doi.org/https://doi.org/10.1016/j.comnet.2020.107290

Fawns, T., Markauskaite, L., Carvalho, L., & Goodyear, P. (2022). H2m pedagogy: Designing for hybrid learning in medical education BT - hybrid learning spaces. In E. Gil, Y. Mor, Y. Dimitriadis, & C. Köppe (Eds.), (pp. 61–76). Springer International Publishing. https://doi.org/10.1007/978-3-030-88520-5_5

Flick, U. (2018). Triangulation in Data Collection. *SAGE Research Methods*. https://doi.org/https://dx.doi.org/10.4135/9781526416070.n34

Fraenkel, J.R., & Wallen, N.E. (2008). *How to design and evaluate research in education* (7th ed.). McGraw-Hill.

Gaba, H. (2021). Conceptualizing the terms "blended learning & hybrid mode of teaching learning": A research study. *International Research Journal of Educational …*, *5*(2), 9–16.

Gagnon, K., Young, B., Bachman, T., Longbottom, T., Severin, R., & Walker, M.J. (2020). Doctor of physical therapy education in a hybrid learning environment: Reimagining the possibilities and navigating a "new normal." *Physical Therapy*, *100*(8), 1268–1277. https://doi.org/10.1093/ptj/pzaa096

Geronimo, C.A., Geronimo, A.L., & Faustino, S.M. (2022). Readiness, access, challenges, and efficiency in using flexible mode of learning: Inputs for instructional management plan. *International Journal of Multidisciplinary: Applied Business and Education Research*, *3*(5), 865–875. https://doi.org/10.11594/ijmaber.03.05.13

Gerring, J. (2007). *Case study research: Principles and practices.* Cambridge University Press.

Ginting, D.F., Barella, Y., Linarsih, A., & Hamdani, B. (2021). Foreign language students' voices on blended learning and fully online classes during the COVID-19 pandemic. *World Journal of English Language*, *11*(2), 62. https://doi.org/10.5430/wjel.v11n2p62

Green, J.K. (2022). Designing hybrid spaces for learning in higher education health contexts. In *Postdigital Science and Education* (Vol. 4, Issue 1, pp. 93–115). https://doi.org/10.1007/s42438-021-00268-y

Guo, J., Li, L., Bu, H., Feng, M., Yang, Y., Zhang, Y., . . . Jiao, X. (2020). Effect of hybrid teaching incorporating problem-based learning on student performance in pathophysiology. *The Journal of International Medical Research*, *48*(8), 300060520949402. https://doi.org/10.1177/0300060520949402

Heigham, J., & Croker, R. (2009). *Qualitative research in applied linguistics: A practical introduction*. Palgrave Macmillan. https://doi.org/10.1057/9780230239517

Hidayat, I., Hosnan, M., & Halim, Z.R. (2020). Character education strengthen discipline of students based on extracurricular pencak silat State 2 Sempu Elementary School of Serang city. *Jurnal Primagraha, 1*(1), 84–99.

Hidayati, L., Amalyaningsi, R., Ningrum, W.A., Nurhayati, U., & Wakhidah, N. (2022). Respon peserta didik terhadap penerapan model pembelajaran hybrid learning di MTs Negeri 2 Sidoarjo. *PENSA E-JURNAL: Pedidikan Sains*, *10*(1), 155–160.

Howley, D. (2021). Experiences of teaching and learning in K-12 physical education during COVID-19: An international comparative case study. *Physical Education and Sport Pedagogy*, pp. 1–18. https://doi.org/10.1080/17408989.2021.1922658

Irawan, A.W., Dwisona, D., & Lestari, M. (2020). Psyhological impacts of students on online learingdurung he pandemic covid-19. *Konseli: Jurnal Bimbingan Dan Konseling (E-Journal), 7*(1), 53–60.

Ismunandar, D., & Nandang, N. (2022). Respon mahasiswa pada pembelajaran hybrid pasca pandemi COVID-19. *Proximal: Jurnal Penelitian Matematika Dan Pendidikan Matematika*, *5*(1), 112–119. https://doi.org/10.30605/proximal.v5i1.1609

Jiang, Y., Chen, Y., Lu, J., & Wang, Y. (2021). The effect of the online and offline blended teaching mode on English as a foreign language learners' listening performance in a Chinese context. In *Frontiers in psychology* (Vol. 12, p. 742742). https://doi.org/10.3389/fpsyg.2021.742742

Junaydulloevich, A. M., & Istamovich, A. K. (2021). Analysis of modern technologies for the development of psychophysical qualities of boxers in the process of training. *Web of Scientist: International Scientific Research Journal*, *2*(5), 1–14.

Kabak, E.T., Cagcag Yolcu, O., Aydın Temel, F., & Turan, N.G. (2022). Prediction and optimization of nitrogen losses in co-composting process by using a hybrid cascaded prediction model and genetic algorithm. *Chemical Engineering Journal*, *437*, 135499. https://doi.org/https://doi.org/10.1016/j.cej.2022.135499

Kawasaki, H., Yamasaki, S., & Rahman, M.M. (2021). Developing a hybrid platform for emergency remote education of nursing students in the context of COVID-19. *International Journal of Environmental Research and Public Health*, *18*(24). https://doi.org/10.3390/ijerph182412908

Khoiriyah, N., & Pulungan, A.H. (2022). The effectiveness of Google classroom in learning. *Linguistik Terapan*, *19*(1), 40. https://doi.org/10.24114/lt.v19i1.34327

Kim, M., Yu, H., Park, C.W., Ha, T., & Baek, J.H. (2021). Physical education teachers' online teaching experiences and perceptions during the covid-19 pandemic. *Journal of Physical Education and Sport*, *21*(3), 2049–2056. https://doi.org/10.7752/jpes.2021.s3261

Lase, D., Zega, T.G.C., Daeli, D.O., & Zaluchu, S.E. (2022). Parents' perceptions of distance learning during COVID-19 in rural Indonesia. *Journal of Education and Learning (EduLearn)*, *16*(1), 103–113. https://doi.org/10.11591/edulearn.v16i1.20122

Lee, I.C.J., Wong, P., Goh, S.P.L., & Cook, S. (2022). A synchronous hybrid team-based learning class: Why and how to do it? *Medical Science Educator*, *32*(3), 697–702. https://doi.org/10.1007/s40670-022-01538-5

Leidl, D.M., Ritchie, L., & Moslemi, N. (2020). Blended learning in undergraduate nursing education – A scoping review. *Nurse Education Today*, *86*, 104318. https://doi.org/10.1016/j.nedt.2019.104318

Li, M., & Yu, Z. (2022). Teachers' satisfaction, role, and digital literacy during the COVID-19 pandemic. In *Sustainability* (Vol. 14, Issue 3). https://doi.org/10.3390/su14031121

Li, Q., Li, Z., & Han, J. (2021). A hybrid learning pedagogy for surmounting the challenges of the COVID-19 pandemic in the performing arts education. *Education and Information Technologies*, *26*(6), 7635–7655. https://doi.org/10.1007/s10639-021-10612-1

Machwate, S., Bendaoud, R., Burgos, D., & Berrada, K. (2022). Innovative hybrid SPOC model for initial and continuing education at university BT - Information systems and technologies. In A. Rocha, H. Adeli, G. Dzemyda, & F. Moreira (Eds.), (pp. 523–532). Springer International Publishing.

Makki, A.A., Sindi, H.F., Brdesee, H., Alsaggaf, W., Al-Hayani, A., & Al-Youbi, A.O. (2022). Goal programming and mathematical modelling for developing a capacity planning decision support system-based framework in higher education institutions. In *Applied Sciences* (Vol. 12, Issue 3). https://doi.org/10.3390/app12031702

Marini, S., & Milawati, M. (2020). Distance learning innovation strategy in Indonesia during the COVID-19 pandemic. *Proceedings of the 5th Annual International Seminar on Transformative Education and Educational Leadership*. https://doi.org/10.2991/assehr.k.201124.085

McGrath, C.F. (2021). *Frame-bending quality: Leading through discourses towards equity and student success*. Western University.

Messakh, S.T., Utomo, B., & Rohman, F. (2021). Evaluation on the implementation of study on physical, sport and health in the pandemic time COVID-19 at state junior high schools in Salatiga in academic year 2020/2021. *Physical Education, Health and Recreation*, *5*(2), 5–48.

Miles, M.B., Huberman, A.M., & Saldaña, J. (2014). *Qualitative data analysis* (3rd ed.). SAGE Publication.

Moleong, L.J. (2013). *Metodologi penelitian kualitatif.* PT. Remaja Rosdakarya Offset.

Mutmainnah, M., Samtidar, S., & Korompot, C.A. (2022). Study of perceptions on hybrid learning in the teaching of English at MTSN 4 Bone during the COVID-19 pandemic. *Journal of Technology in Language Pedagogy (JTechLP)*, *1*(1), 27–37.

Noble, H., & Heale, R. (2019). Triangulation in research, with examples. *Evidence-Based Nursing*, *22*(3), 67–68. https://doi.org/10.1136/ebnurs-2019-103145

Noori, A.Q. (2021). The impact of COVID-19 pandemic on students' learning in higher education in Afghanistan. *Heliyon*, *7*(10), e08113. https://doi.org/10.1016/j.heliyon.2021.e08113

Palmer, R.H., Moulton, M.K., Stone, R.H., Lavender, D.L., Fulford, M., & Phillips, B.B. (2022). The impact of synchronous hybrid instruction on students' engagement in a pharmacotherapy course. *Pharmacy Practice*, *20*(1), 2611. https://doi.org/10.18549/PharmPract.2022.1.2611

Pollock, N.B. (2022). Student performance and perceptions of anatomy and physiology across face-to-face, hybrid, and online teaching lab styles. *American Physiological Society*, *74*(1), 37–72.

Pratama, A.S., Maghfirah, E., Ramadhan, F., As, R.Z., & Jamilah, J. (2021). The role of Indonesian education-based startup in enhancing the learning quality of high school students in COVID-19 pandemic era. *2021 Sixth International Conference on Informatics and Computing (ICIC)*, pp. 1–6. https://doi.org/10.1109/ICIC54025.2021.9632949

Purandina, I.P.Y. (2021). Whatsapp sebagai solusi keterbatasan guru dengan anak didik pada saat pandemi COVID-19 Di TK Tunas Mekar desa Tegaljadi. *Widyacarya Jurnal Pendidikan, Agama & Budaya*, *5*(1), 1–11.

Purushottam, N., Rwelamila, P.D., & Ncube, O. (2021). Fostering sustainable development in Africa through multidisciplinary management education: The case of sustainability marketing knowledge-base BT. In W. Leal Filho, R. Pretorius, & L. O. de Sousa (Eds.), (pp. 299–315). Springer International Publishing. https://doi.org/10.1007/978-3-030-74693-3_17

Rachmawati, R., Choirunnisa, U., Pambagyo, Z.A., Syarafina, Y.A., & Ghiffari, R.A. (2021). Work from home and the use of ICT during the COVID-19 pandemic in Indonesia and its impact on cities in the future. *Sustainability*, *13*(12). https://doi.org/10.3390/su13126760

Raes, A. (2022). Exploring Student and Teacher Experiences in Hybrid Learning Environments: Does Presence Matter? In *Postdigital Science and Education* (Vol. 4, Issue 1, pp. 138–159). https://doi.org/10.1007/s42438-021-00274-0

Renz, S.M., Carrington, J.M., & Badger, T.A. (2019). Two strategies for qualitative content analysis: An intramethod approach to triangulation. *SAGE Journals*, *28*(5), 824–831. https://doi.org/10.1177/1049732317753586

Riyanda, A.R., Agnesa, T., Wira, A., Ambiyar, A., Umar, S., & Hakim, U. (2022). Hybrid learning: Alternatif model pembelajaran di masa pandemi COVID-19. *Jurnal Basicedu*, *6*(3), 4461–4469. https://doi.org/10.31004/basicedu.v6i3.2794

Roman, M., & Plopeanu, A.-P. (2021). The effectiveness of the emergency eLearning during COVID-19 pandemic. The case of higher education in economics in Romania. *International Review of Economics Education*, *37*, 100218. https://doi.org/10.1016/j.iree.2021.100218

Roulston, K. (2018). Triangulation in qualitative research. *QualPage*.

Saha, S.M., Pranty, S.A., Rana, M.J., Islam, M.J., & Hossain, M.E. (2022). Teaching during a pandemic: do university teachers prefer online teaching? *Heliyon*, *8*(1), e08663. https://doi.org/10.1016/j.heliyon.2021.e08663

Simpson, A., & Goodyear, P. (2022). Dialogic teaching and the architecture of hybrid learning spaces: Alexander meets alexander BT - Hybrid learning spaces. In E. Gil, Y. Mor, Y. Dimitriadis, & C. Köppe (Eds.), (pp. 265–286). Springer International Publishing. https://doi.org/10.1007/978-3-030-88520-5_15

Singh, J., Evans, E., Reed, A., Karch, L., Qualey, K., Singh, L., & Wiersma, H. (2021). Online, hybrid, and face-to-face learning through the eyes of faculty, students, administrators, and instructional designers: Lessons learned and directions for the post-vaccine and post-pandemic/COVID-19 world. *Journal of Educational Technology Systems*, *50*(3), 301–326. https://doi.org/10.1177/00472395211063754

Singh, J., Steele, K., & Singh, L. (2021). Combining the best of online and face-to-face learning: Hybrid and blended learning approach for COVID-19, post vaccine, & post-pandemic world. *Journal of Educational Technology Systems*, *50*(2), 140–171. https://doi.org/10.1177/00472395211047865

Socrates, T.P., Ihsan, H., Rahmayani, M., Rahim, F.R., & Padang, U.N. (2021). Physics culture: Animation application of physics. *International Journal of Bio-Informatic, Innovation, Invention and Techno-Science*, *1*, 15–21.

Sofi-Karim, M., Bali, A.O., & Rached, K. (2022). Online education via media platforms and applications as an innovative teaching method. *Education and Information Technologies*, pp. 1–17. https://doi.org/10.1007/s10639-022-11188-0

Swart, J., Peters, C., & Broersma, M. (2019). Sharing and discussing news in private social media groups: The social function of news and current affairs in location-based, work-oriented and leisure-

focused communities. *Digital Journalism*, *7*(2), 187–205. https://doi.org/10.1080/21670811.2018.1465351

Tick, A., & Beke, J. (2021). Online, digital or distance? – Spread of narratives in ICT-supported education. *Journal of Higher Education Theory and Practice*, *21*(6), 15–31. https://doi.org/10.33423/jhetp.v21i6.4371

Varea, V., González-Calvo, G., & García-Monge, A. (2022). Exploring the changes of physical education in the age of COVID-19. *Physical Education and Sport Pedagogy*, *27*(1), 32–42. https://doi.org/10.1080/17408989.2020.1861233

White, T., Minhas, W., Daleure, G., Hanfy, H., Solovieva, N., & Brandon, C. (2022). Transitioning from classroom delivery to simulated online delivery across campuses: General education in the UAE BT - English language and general studies education in the United Arab Emirates: Theoretical, empirical and practical perspectives. In C. Coombe, L. Hiasat, & G. Daleure (Eds.), (pp. 321–345). Springer Singapore. https://doi.org/10.1007/978-981-16-8888-1_21

Wu, Y., & Zhou, Y. (2022). Hybrid machine learning model and Shapley additive explanations for compressive strength of sustainable concrete. *Construction and Building Materials*, *330*, 127298. https://doi.org/10.1016/j.conbuildmat.2022.127298

Ying, Y.H., Siang, W.E.W., & Mohamad, M. (2021). The Challenges of learning english skills and the integration of social media and video conferencing tools to help ESL learners coping with the challenges during COVID-19 pandemic: A literature review. *Creative Education*, *12*(7), 1503–1516. https://doi.org/10.4236/ce.2021.127115

Yousry, Y.M., & Azab, M.M. (2022). Hybrid versus distance learning environment for a paediatric dentistry course and its influence on students' satisfaction: A cross-sectional study. *BMC Medical Education*, *22*(1), 343. https://doi.org/10.1186/s12909-022-03417-4

Yudaparmita, G.A., & Purandina, I.P. (2022). *The role of parents in cultivating characters through pencak silat sport at the pandemic COVID-19 in sub-district Sukasada Buleleng, Bali*. https://doi.org/10.4108/eai.3-8-2021.2315081

Yusuf, N. (2021). The effect of online tutoring applications on student learning outcomes during the COVID-19 pandemic. *Italienisch*, *11*(2), 81–88.

Zhang, C. (2020). From face-to-face to screen-to-screen: CFL teachers' beliefs about digital teaching competence during the pandemic. *International Journal of Chinese Language Teaching*, *1*, 35–52. https://doi.org/10.46451/ijclt.2020.06.03

Zweigbergk, M.von. (2021). *Emergency Distance Teaching during the first year of the COVID-19 pandemic: Narratives from upper secondary school teachers in Sweden*.