

The Implementation of Hybrid Learning at Islamic University of Nahdlatul Ulama (UNISNU) Jepara

Mahalli¹, Khalimatus Sadiyah¹ & Aliva Rosdiana²

¹ PAI Study Program, Universitas Islam Nahdlatul Ulama, Jepara, Central Java, Indonesia

² PBI Study Program, Universitas Islam Nahdlatul Ulama, Jepara, Central Java, Indonesia

Correspondence: Mahalli, PAI Study Program, Universitas Islam Nahdlatul Ulama, Jepara, Central Java, Indonesia.

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Abstract

Islamic University of Nahdlatul Ulama (UNISNU) Jepara has been implementing hybrid learning which combines face-to-face and online learning for several years. This research investigated how hybrid learning is implemented in teaching and learning and how the facility is provided by institution to support the success of the hybrid learning implementation at UNISNU Jepara. Descriptive qualitative method is used in this research involving respondents of 18 head study programs and 180 students to collect data needed in this research. Survey, interview and FGD were used as instruments to collect the data. The result of the research revealed that the implementation of hybrid learning at all study programs at UNISNU Jepara has not run successfully and the factors causing this was the lack of preparedness of the lecturers and the support system provided by institution has not fully met the requirements as the success factors of hybrid learning implementation.

Keywords: hybrid learning, implementation, study program, UNISNU Jepara

1. Introduction

1.1 Background of the Study

Educational institutions, especially higher education institutions, both public and private institution, have been implementing learning strategy which combines face-to-face and online learning which is often referred to as hybrid learning. Hybrid learning is sometimes referred to as mixed learning which is dominated by distance learning (Dhawan, 2020). This means that students and lecturers conduct face-to-face learning in a limited manner and dominantly conduct learning at a distance that can be done from home or other places that support the implementation of hybrid learning. UNISNU is one of the higher education institutions that has been implementing hybrid learning, beginning at the era of Covid-19. Some problems arise during the implementation of hybrid learning, one of them is the mindset of some lecturers and students who feel more comfortable with face-to-face learning than online learning, because face-to-face learning is felt to be simpler, more efficient and it does not require mastery of technology. Another obstacle is the support system for implementing online learning, has not been fully provided by the institution for example the internet network is unstable in several locations where students live, affecting some of the students get difficulties to take part in online learning. Although learning can be carried out in a hybrid way, there are still pros and cons within the institution and students regarding the essence of learning and education. This is because learning and education are not just a transfer of knowledge, but also the transformation of values that require a direct approach and interaction between teacher and students (Okay & Fernandes, 2020). Furthermore, the implementation of learning that has been carried out so far in universities is mostly in the classroom, laboratory, or workshop which is carried out with many students.

Meanwhile, the implementation of hybrid learning certainly requires additional supporting facilities, that is technological devices from various platforms that support the implementation of distance learning, as part of hybrid learning (Khuluqo et al., 2021). Furthermore, the shift in the dominance of face-to-face learning to online learning in the part of hybrid learning was not widely expected by higher education practitioners to take place this quickly. The majority of practitioners from universities such as the lecturers, education staff, and students are not fully ready for the change in learning towards fully online learning, so the majority of universities carry

out hybrid learning that combines face-to-face and online learning (Adedoyin & Soykan, 2020). This is because there are still many supporting facilities and infrastructure that are not yet available and are not owned by universities and students. As a result, several obstacles emerged in the implementation of hybrid learning from this aspect of distance learning. Several obstacles are often complained of by students, such as unstable internet network, limited internet access, minimal learning support devices, learning media that are difficult to access, low student motivation, and hybrid learning management that is not well structured (Aguilera-Hermida, 2020). The combination of face-to-face learning with online learning has encouraged lecturers and students to immediately adapt to the transition.

Referring to the findings of previous research that management policy and support systems in higher education affect the success of hybrid learning. Putri et al. (2019) said that critical success factors of hybrid learning are institutional support, learning management system, and tools for the online learning. Hybrid learning will be successful if it is supported by a good support system. This is in line with the results of research conducted by Porter and Graham (2016).

Previous researchers were conducted to investigate the effectiveness of hybrid learning strategy in teaching and learning at a certain study program or department in universities. Meanwhile this research is carried out at all study programs at a private university. This study will analyze and describe the implementation of hybrid learning at eighteen study programs at Islamic University of Nahdlatul Ulama (UNISNU) Jepara, from the perspective of the head of study program and the students and how the institution provide facilities and support system for hybrid learning implementation.

Based on the background of this research, the research questions can be formulated as follows; 1) how do the head of study program and students perceive about hybrid learning implementation at the eighteen study programs at the Islamic University of Nahdlatul Ulama (UNISNU) Jepara? and 2) how is the support system provided by the institution for the hybrid learning implementation at the eighteen study programs at the Islamic University of Nahdlatul Ulama (UNISNU) Jepara?

1.2 Hybrid Learning

Hybrid learning is learning that combines the implementation of online learning with face-to-face learning (Chaeruman et al., 2018). Through the integration of technological adaptation into learning, it will simplify and strengthen the learning process that is fun, meaningful, interactive, communicative, and optimizes students as learning subjects (Wang et al., 2021). Furthermore, hybrid learning can run well if each component of the learning support binds and supports each other. The supporting components of hybrid learning include the availability of competent lecturers, students who think logically, a supportive learning environment, and learning outcomes. Face-to-face learning is learning that is carried out directly in the classroom with direct interaction between students and lecturers (Shu & Gu, 2018). Meanwhile, online learning is learning that is carried out indirectly by requiring intermediary devices such as laptops or smartphones that are connected to the internet network (Horzum, 2017). However, now the term hybrid learning has emerged which combines face-to-face learning and online learning. Hybrid learning can also be interpreted as the integration of face-to-face learning with online learning with the dominance of online learning (Abdelrahman & Irby, 2016). Hybrid teaching as regularly scheduled face-to-face meetings explicitly integrated with significant online learning activities that replace onsite sessions (Ahlgren et al., 2020). Hybrid learning is also carried out through strategies that are carried out synchronously and asynchronously using a variety of support facilities for face-to-face learning and online learning such as smartphones and laptops that have online learning applications and are connected to the internet (Bailey et al., 2021). Through hybrid learning, lecturers and students can learn without having to go to campus every time. This means that hybrid learning combines the advantages of face-to-face learning with online learning that is more flexible.

Students do not continuously learn from campus, but they can study from home or anywhere and anytime that has a stable internet network (Bahasoan et al., 2020). Furthermore, in hybrid learning, students can interact with friends, lecturers, and learning materials easily and quickly. Students can also use a variety of learning resources and learning material formats that are available on the internet (Li & Tsai, 2017). Hybrid learning is usually carried out with a rotation system that involves 50% of students studying face-to-face and 50% of other students studying online (Singh et al., 2021). Hybrid learning emphasizes learning theory that puts forward aspects of live events, self-paced learning, collaboration, assessment, and performance support materials (Jamison et al., 2014). That is, in hybrid learning, face-to-face learning is carried out synchronously at the same time and place or at the same time in different places. Hybrid learning also focuses on a combination of independent learning, a collaboration between teachers and students, and collaboration between fellow students in teaching and learning

activities. (Xiao et al., 2020).

1.3 The Success Factors of Hybrid Learning

Success factors of hybrid learning implementation are teachers' pedagogical skills, include the planning of the course and the actions taken during the hybrid session, teacher's identity, refers to the can-do-attitude towards hybrid teaching and to the courage of trying new tools and pedagogical solutions. Organizational practices, e.g. arranging the timetables, deciding group sizes and the possibility to teach in pairs, and educational technologies and facilities (Ahlgren et al., 2020). Meanwhile according to Putri et al. (2019) critical success factors of hybrid learning were classified into four parts. *The first* part is the preparation before implementation (planning) including course design, *the second* part is implementation, including; teaching-learning method, instructional model, teaching-learning materials, *the third* is evaluation, including learning outcomes or learning objective, and *the fourth* is institutional support, learning management system, and tools for the online learning. Porter and Graham (2016) investigated drivers and barriers of blended learning adoption and pointed out that sufficient infrastructure, technological and instructional support, evaluation data as well as an institution's purpose are key drivers of blended learning adoption. Mozelius and Hettiarachchi (2017) mentioned other critical factors for the implementation of blended learning included technology, instructional design, and teacher's role, learning outcomes and learner satisfaction, social interactions between learning participants, course design, and synchronous and asynchronous features of course activities.

1.4 Advantages of Hybrid Learning

Some of the advantages that arise from the implementation of hybrid learning are that learning can be carried out in a variety of ways, not necessarily in the classroom, whenever it means that learning can be done at an unlimited time, access and flexibility of place and learning time, speed, learning style, materials, strategies, and more varied learning evaluations (Nartiningrum & Nugroho, 2020).

A number of potential advantages to HL are explained by Marsh (2012) as follows; (1) provides a more individualized learning experience, (2) provides more personalized learning support, (3) supports and encourages independent and collaborative learning, (4) increases student engagement in learning, (5) accommodates a variety of learning styles, (6) provides a place to practice the target language beyond the classroom, (7) provides a less stressful practice environment for the target language, (8) provides flexible study, anytime or anywhere, to meet learners' needs, (9) helps students develop valuable and necessary twenty-first century learning skills

Meanwhile Al-Huneidi and Schreurs (2010) explains that there are many benefits which make teachers choose HL over other learning strategies, such as extending the reach, increasing flexibility, pedagogical richness, reusable patterns (reusable contents and functionality), optimizing development cost, social interaction, and easy to revision and customization. Hybrid learning also allows flexibility of place, time, accessibility of learning materials, and more student-centered learning as the main subject of learning (Soffer et al., 2019). Furthermore, hybrid learning has had a positive impact on the time and operational costs of the learning process and increased opportunities to collaborate with experts from around the world (Demir et al., 2020), makes it easier for students to do the learning process, and can facilitate students active in independent learning without having to wait face to face with the lecturer (Mahalli et al., 2019).

2. Method

2.1 Research Design

This research was conducted using mixed methods that focused on the concurrent triangulation model. This mixed methods research was conducted by combining quantitative and qualitative research methods simultaneously (Johnson & Cristensen, 2014). The combination of quantitative and qualitative methods simultaneously in this research is to obtain a broad and in-depth understanding of the research objectives. Furthermore, mixed research methods provide several advantages which include adequate data completeness, validity, reliability, and objectivity. This is due to the research data obtained through triangulation techniques and the data collection process is more efficient (Creswell, 2009). Meanwhile, this study aims to analyze the head of study program and students' perception of the implementation of hybrid learning in eighteen study programs at Unisnu Jepara, and how the support system provided by the management or institution.

2.2 Research Participants

This research is a mixed methods research that is carried out by combining quantitative and qualitative methods simultaneously. Participants in this study for quantitative data were 18 heads of study program and undergraduate students from eighteen study programs at UNISNU Jepara. Student participants in this study were selected using a purposive random sampling technique (Etikan & Bala, 2017). Students participants involved in

this study were semester 6 students or students who had attended face-to-face learning and online learning. Students participants were taken by ten students from each existing study program. That is, from the eighteen existing study programs each involved ten students, and a total of 180 students were involved in this study. Furthermore, the profiles of the participants involved in this study can be presented in Table 1.

Table 1. Profile of research participants

	Study Program	Head of Study program	Students	Total
1.	Product Design	1	10	11
2.	Industrial Engineering	1	10	11
3.	Information Engineering	1	10	11
4.	Information Systems	1	10	11
5.	Electrical Engineering	1	10	11
6.	Civil Engineering	1	10	11
7.	Visual Communication Design	1	10	11
8.	Aquaculture	1	10	11
9.	Management	1	10	11
10.	Accountancy	1	10	11
11.	Islamic Economics	1	10	11
12.	Islamic Communication and Broadcasting	1	10	11
13.	Islamic Education	1	10	11
14.	English Language education	1	10	11
15.	Early Childhood Teacher Education	1	10	11
16.	Elementary Teacher Education	1	10	11
17.	Islamic Family Law	1	10	11
18.	Syariah Banking	1	10	11
	Total	18	180	198

Data from the research using qualitative methods were collected from research participants which included students from the eighteen study programs at Unisnu Jepara. The number of participants involved in the qualitative research was eighteen head of study program participants, each participant representing each of the existing study programs. Students participants in this qualitative study were selected using a purposive random sampling technique (Etikan & Bala, 2017). The selection of students participants in this qualitative research is based on certain characteristics of the participants needed to answer the research questions (Lohr, 2010). Participants who were involved in this qualitative research were carried out until they got complete or saturated data. This occurs when the number of participants cannot enrich the required information or the information provided by each participant has a majority in common with one another (Saunders et al., 2018; Tuckett, 2004).

2.3 Data Collection Instruments and Procedures

Data collection techniques in this mixed qualitative and quantitative research were carried out using three main techniques, in-depth interviews, questionnaires, and forum group discussions (FGD). Questionairs techniques were used to collect data about the perception of heads study programs and students about the implementation of hybrid learning in eighteen study programs at UNISNU Jepara including, planning, learning process and evaluation. The questionnaire used in this data collection is a closed questionnaire containing multiple-choice questions. The closed questionnaire technique was used so that each participant only chose the answer choices that had been provided for each question. Furthermore, each participant filled out a questionnaire that was given to them through the use of the Google Form platform. The data collected in this study was also not only through a questionnaire, but also through in-depth interviews with several participants (Rutakumwa et al., 2020). Meanwhile, In depth interviews and FGD techniques were carried out to collect data on students' perspective about the platform used in online learning, the strenght and weakness of hybrid learning and support system provided by the institution to support the implementation of hybrid learning. Furthermore, data obtained from quantitative research were collected and assessed with Likert Scale assessment with five choices including very poor, poor, fair, good, and very good (Chyung et al., 2017).

All items in the quantitative research questionnaire had scoring guidelines including 1 for very poor, 2 for poor, 3 for fair, 4 for good and 5 for very good. This questionnaire was developed in several stages, starting with the stage of analyzing the research variables, elaborating the research variables into aspects. The next stage was to develop detailed characteristics of the questionnaire, compile questionnaire items, analyzing, and discuss the

questionnaire with members of the research group.

Furthermore, qualitative data collection was carried out through in-depth interviews with several participants by the interview guidelines that had been prepared. During the in-depth interview process, the researcher recorded important points conveyed by each participant.

2.4 Data Analysis Technique

The qualitative data in this study were analyzed interpretively-descriptively. The stages of analysis adopt the data analysis initiated by Miles et al. (2014). Qualitative data analysis was carried out interactively and intensively at each stage of the study until the research data was saturated. The qualitative data analysis process includes data compaction, data presentation, and inference or verification. The researchers selected, focused, abstracted, and modified the data after collecting it from the participants. The data collected was obtained from the survey, in-depth interview process, recording the in-depth interview process, and interview notes.

The next step is to display the data or represent the data in the form of a description, draw preliminary conclusions, and conclude the findings which are dialectical with the results of relevant previous studies. Thus, the conclusions can be trusted and used as the final findings of this study. Data credibility stage is carried out by comparing the data that has been obtained from the questionnaire with the results of the interview. The next stage is the researcher examines the process of collecting data, analyzing notes, and recording during interviews, coding the data, and drawing conclusions.

3. Results

3.1 Hybrid Learning Implementation at UNISNU Jepara

The study of implementation of hybrid learning at UNISNU Jepara covered two objects of the study. The first, perception of the head of study program and students about hybrid learning implementation, including: a) the planning/course design, b) learning process, covering the selection of learning material, the use of method, and media, and c) learning evaluation, and the second, is the support system of the hybrid learning implementation, including of management policy, software, hardware and human resources. Furthermore, the results of the analysis of the implementation of hybrid learning at the study program at UNISNU Jepara are presented in Tables 2 and 3.

Table 2. Head of Study Programs'(SP) and Students'(S) Perception on the Implementation of Hybrid Learning at UNISNU Jepara

Criteria	Hybrid Learning Implementation							
	Planning		Learning process		Evaluation		%	
	SP	S	SP	S	SP	S	SP	S
Very Poor	0	1	0	1	0	3	0	0.3
Poor	6	2	14	12	6	12	10.4	1.4
Fair	18	165	15	126	12	135	18.1	23.2
Good	12	316	92	344	24	352	51.4	55.2
Very Good	10	130	35	135	5	100	20.1	19.9
Average score	3.28	3.73	3.71	3.81	3.35	3.79	3.45	3.77
Category	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair

Table 3. Head of Study Programs (SP) and Students' (S) Perception on the Support System of the Implementation of Hybrid Learning at UNISNU Jepara

Criteria	Hybrid Learning Support System									
	Management		Software		Hardware		Human Resources		%	
	SP	S	SP	S	SP	S	SP	S	SP	S
Very Poor	0	1	0	0	0	5	0	0		0.3
Poor	4	14	2	12	8	44	0	18	9.5	3.7
Fair	12	162	9	111	15	144	15	141	24.5	23.4
Good	24	324	14	340	12	308	20	332	35.4	54.7
Very Good	10	95	25	170	10	50	20	115	30.6	18.0
Average score	3.6	3.09	3.7	2.85	3.2	3.09	3.9	3.03	3.6	3.01
Category	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair	Fair

Table 2 shows that the average score of three aspects of hybrid learning implementation in eighteen study programs at the undergraduate level at UNISNU Jepara is categorized Fair. This can be seen from the average score from the stages of planning, learning process, and evaluation at the undergraduate level at UNISNU Jepara which has a score between 3.0–3.9 which is in the level of Fair. It means that the head of study program and students perceive that the implementation of hybrid learning at UNISNU Jepara is categorized Fair. Meanwhile based on Table 3 it can be found that hybrid learning support system average score is between 3.0–3.9. It means that both the head of study programs and students perceive that the support system including; management policy, software, hardware and human resoucers are categorized Fair, too. The lowest score of the implementation aspect is at planning. Meanwhile the lowest score of the support system aspect is the sufficient of software. The highest score of the implementation aspect is learning process aspect, covering the learning material, the use of method of learning and the media used by the lecuters, meanwhile the highest score of the support system aspect is readiness of human resources in implementing hybrid learning.

Following is the result of interview with the students. Student of the product design study program (MDP) revealed; “In my opinion, the implementation of hybrid learning is quite good because it is carried out with good planning and strategy by my lecturers.” Student of the industrial engineering study program (MTI) said “Hybrid learning in my study program is so good and fun because the lecturers teach learning materials through various digital platforms, and it is supported with sufficient facilities by universitis. Student of the informatics engineering study program (MTA) said “Through hybrid learning, I have become more adaptive to technology products that support learning such as Zoom, Google Meet, and Google Classroom. However, the hybrid learning that I follow sometimes does not run so good, because of the unstable internet network”. Student of the Information Systems Study Program (MSI) said “hybrid learning is more fun than face-to-face. One of the reason is the lecture implement hybrid learning using some platform that make students feel fun. The problem is sometimes the support facilities do not meet the need of the class. Sometimes I got difficulties in assessing the internet.”

Student of the electrical engineering study program (MTO) said “the implementation of hybrid learning is quite good. This is because most lecturers are ready to use technolgy supported media during the class, and the hardware is also sufficient to support the hybrid learning”. Student of the civil engineering study program (MTS) stated “On line learning is good to complement face-to-face learning. As long as it is well facilitated I think on line learning will as fun as face to face learning. The problem is sometimes some lectures do not prepare the class well, and the software is sometimes not compatible with the topic of the lesson. Student of the visual communication design study program (MDKV) said “I think hybrid learning implementation is very good to be used as the media of learning. However, sometimes hybrid learning is not effective when the lecturers only give assignments without explaining the material to me”. Student of the Aquaculture Study Program (MBP) said “Facilities, especially software in Hybrid learning implementation do not fully support, so it often become the hindrance of using hybrid learning, As far I feel that the support system generally facilitates the implementation of hybrid learning at my campus. Student of the management study program (MM) said “implmentation of hybrid learning in my class is very good because of the readiness of lectures and the facilities that provided by the campus. The most important is that hybrid learning should be supported with good human resorces and facilities”

Student of the accounting study program (MA) said “according to me, hybrid learning is very good because students can learn at home and at campus. It is very flexible model of learning for students, especially for those who are working while they are studying.” Student of the Islamic economics study program (MEI) said “Hybrid learning is more fun than just only face-to-face learning. This is because hybrid learning is much more flexible than face-to-face learning which can be done anytime and anywhere”. Student of the Islamic communication and broadcasting study program (MKPI) said “Online learning is quite good because it can complement face-to-face. Through the combination of two learning model, hybrid learning, can overcome the lack of learning resources and model how to communicate in public that needed by students”. Student of the Islamic religious education study program (MPAI) said “The hybrid learning initially is difficult with various obstacles. However, gradually I am able to overcome these problems to adapt to the components that support hybrid learning. It because the lecturer and the management policy are supporting each other to implement hybrid learning”. Students of the English Education Study Program (MPBI) said hybrid learning become the fun alternative method to run learning. By implementing hybril learning students can overcome the problem in supplying learning resources and media to practice language. As we know that in English class, we need more learning resoucers and ,media to improve language skill and competence. So according to me hybrid learning is very good to choose as the model of learning”.

Student of the early childhood education study program (MPAUD) said “Hybrid learning is good choice to implement in learning. According to me it has some advantages in order to follow the instruction of social distance. But there is problem in implementating hybrid learning if the internet is unstable and students live in a remote village, like me, which is very difficult to get the signal of internet. Students of the primary school teacher education (MSD) study program said “I have problem if attending class using on line learning because facilities for Hybrid learning in my class at the 4th floor of my campus is not quite good, and also the readiness of compatible software should be available much more. According to me software and hardware should go together” Student of the Islamic family law study program (MHKI) said “As far as I feel that hybrid learning implmentation in my class is quite good, but sometimes the software which is matched with the lesson is not always available, so the lecutere often get difficulties in implementing on line learning. The management system of learning provided by universities is also good to run hybrid learning”. Student of the Islamic banking study program (MPS) said “In my opinion, management system of learning for hybrid learning implementation is very good, although it is also necessary to be improved especially for lecturer to choose compatible software that matched with the need of my class.”

4. Discussion

The results of the data analysis about head study programs and students perception collected through surveys and interviews, could be described that the implementation of hybrid learning in the study program at UNISNU Jepara was at level of Fair category, this can be seen from the results of the analysis of the data from surveys and interviews with the head of the study program and students at UNISNU Jepara. The major problem was the low readiness of the lectures to prepare learning material for online learning, to choose the effective platform of online learning, and they have problem to conduct evaluation based on hybrid learning. The other problem was the hardware and software that did not fully support the implementation of hybrid learning. The internet connection was often unstable which affected the process of online learning running unsmoothly. The condition is in line with Wijaya et al. (2021) that in addition to the limited access to learning resources was the competence of lecturers and students who are not all adaptive to hybrid learning support technology. It is also in line with the opinion of R. Ahlgren et al. (2020), Mozelius and Hettiarachchi (2017) and Putri et al. (2019) who state that the factors that support the successful implementation of hybrid learning, one of which is the teacher’s skills in developing a learning design or course design/instructional design which includes teaching-learning methods, instructional models and teaching-learning materials

From the results of interview with students, it was found that most of the students were fun with the implementation of hybrid learning. They find flexibility and ease in learning using hybrid learning because they can learn anytime and anywhere. Students feel fun with hybrid learning because lecturers use a lot of various platforms. Feeling fun and happy in learning have an impact on the effectiveness of learning. This is in accordance with the results of the study performed by Fitria (2020) who found that the use of learning applications such as Zoom, Google Meeting, and Google Classroom was very effective in supporting the implementation of hybrid learning. The use of Zoom meetings and Google Classroom is effective as a means of delivering learning materials and collecting assignments for each student (Syaharuddin et al., 2021). This finding is also corroborated by the findings of Cahyadi and Widyastuti (2021) who found that zoom and Google Meetings are easy, inexpensive, and interactive in supporting hybrid learning from the online learning aspect. With hybrid learning they can get the opportunity and ease of obtaining learning materials to improve their skills and competencies. Students said that Hybrid learning can also create independence in their learning. This situation is in line with the opinion of Soffer et al. (2019) who said that hybrid learning also allows flexibility of place, time, accessibility of learning materials, and more student-centered learning as the main subject of learning. Furthermore, hybrid learning has positive impacts on the time and operational costs of the learning process and increases opportunities to collaborate with experts from around the world (Demir et al., 2020), extending the reach, increasing flexibility, pedagogical richness (Al-Huneidi & Schreurs, 2010), It also provides a more individualized and personalized learning experience, supports and encourages independent and collaborative learning, increases student engagement in learning, accommodates a variety of learning styles, provides flexible study, anytime or anywhere, to meet learners’ needs, and helps students develop valuable and necessary twenty-first century learning skills (Marsh, 2012), urge their curiosity and interest for their in class activity (Mahalli et al., 2019). It is also relevant with the Nartiningrum and Nugroho (2020) who said that hybrid learning has advantages because it can be carried out in a variety of ways, not necessarily in the classroom, whenever it means that learning can be done at an unlimited time, access and flexibility of place and learning time, speed, learning style, materials, strategies, and more varied learning evaluations.

Meanwhile, the results of data analysis on how the perceptions of the heads of study programs and students

relate to the support system for the implementation of hybrid learning can be concluded that the support system includes; management policies, software, hardware and human resources are not at ideal level. According to the perception of the head of the study program and the students that hardware and software are in the lowest quality of the support system, the lack of software that meets or matches the needs of the course, and the lack of hardware needed to support hybrid learning, for example the availability of internet is still limited and cannot reach certain class rooms or area around the campus.

Since hybrid learning is based on web-based learning content, it relies on a learning management system (LMS) that supports content development and facilitates learning interactions. Based on this perspectives, IT development unit at UNISNU Jepara, has prepared and developed a learning platform based on a Modular object oriented dynamic learning environment (Moodle). Moodle's learning platform uses the Computer Assisted Learning (CAL) and Computer Assisted Teaching (CAT) Models. It is linear with the idea of Mozelius and Heetiarachchi (2017) that the virtual learning environment and media integration are one of the factors that influence the implementation of hybrid learning because technology is a basic material that is combined with traditional learning, so technology will be a very crucial factor in all learning activities in hybrid learning. Students' expectations about the characteristics of the online learning environment and the management of BL are important to be considered by ICT technology-based learning developers in the institution to obtain an effective learning resources that are in line with the learning needs of students (Mahalli et al., 2020). This is also in line with the results of research conducted by Porter and Graham (2016) which states that the success factor for implementing blended/hybrid learning is that there is sufficient infrastructure, technological and instructional support. Meanwhile, Brown (2016) and Mozelius and Hettiarachchi (2017) identified factors that support the successful implementation of hybrid learning, namely faculty involvement in the provision of learning technology, student attitudes and institutional environment and technology support. According to Mozelius and Heetiarachchi (2017) that teachers and students often have different perspectives on the use of technology in learning, but what they have in common is that mastery of computers, their pre-technical knowledge and personal innovation are important factors that must be owned by students. Meanwhile from the data it can be described that the human resource aspect as one of the support system of the implementation of hybrid learning at UNISNU Jepara was the highest average score among other aspects. It means that human resources at UNISNU Jepara have capacity to manage hybrid learning. It is in line with Mozelius and Heetiarachchi (2017, who state that other system supporting factors are the learning design and the role of the teacher. Relating with human resources support, Mozelius and Heetiarachchi (2017) further said that the teacher characters such as attitudes, teaching styles, self-control and responsiveness are very important factors.

From the results of interviews with students it can be obtained the data about student complaints related to software and hardware problems. They said that the software provided by the IT development unit was sometimes not in accordance with the subject matter discussed. It is relevant to the conclusion of the study performed by (Aguilera-Hermida, 2020) that several obstacles are often complained of by students, such as an unstable internet network, limited internet access, minimal learning support devices, learning media that are difficult to access, low student motivation, and hybrid learning management that is not well structured. Meanwhile, from the hardware aspect, they complained that there were still blank spot areas at campus that students could not access the internet provided by the campus. This is in line with the results of previous research conducted by Rahiem (2021) that the obstacles that arise in hybrid learning do not only affect the lecturers, but also most of the students. Students often complain that internet access is less stable so that the online aspect of hybrid learning becomes less than optimal. It is in line with the results of research conducted by Atmojo and Nugroho (2020) stated that the hybrid learning management system lacks proper preparation, resulting in less-than-optimal hybrid learning.

It can be concluded that qualified human resources; lecturers, students and staff and the available of support system contributes the success of hybrid learning implementation in teaching and learning. It can be suggested that in order to implement hybrid learning more successful at UNISNU, the institution should do skill upgrading for the lecturers to improve their pedagogic competence and readiness in teaching using hybrid learning, especially in designing the learning process and choosing suitable online learning platforms based on the learning material and information technology mastery to operate the computer and other relevant tools. The lecturers should have positive attitude and awareness that hybrid learning has advantages for students. Besides, the institution should improve the support system by facilitating more hardware needed in implementing hybrid learning to overcome the problem of unstable internet connection at around campus and facilitating more various software to match with the learning topic or material.

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Authors' contributions

Khalimatus Sakdiyah, M.Pd was responsible for study design and Aliva Rosdana, M.Pd was responsible for data collection and analysis. All of us-the authors- have good commitment and agreement in this study from the beginning up to the final manuscript.

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The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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No additional data are available.

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