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Information Technology Readiness and Acceptance Model for Social Media Adoption in Blended Learning: A Case Study in Higher Education Institutions in West Java, Indonesia

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Abstract

Technological developments, including the internet, and learning opportunities are increasing. This also encourages the development of learning strategies and models. The blended learning model is applied in almost all universities in Indonesia and the world. With so many universities in Indonesia, implementing blended learning is a challenging thing because it requires a lot of technological preparation and human resources. This research aims to identify factors, develop a model, and evaluate the model to see the readiness and acceptance of technology for adopting social media in blended learning among private higher education institutes students in Indonesia. The population of this research is students from private higher education institutes in West Java, Indonesia, who are directly involved in using blended learning and social media. This quantitative research used a research instrument with five-Likert's scale. The research population was 663,307, with a sample of 384 students spread across West Java. The contribution of this research is to make a significant contribution to the theoretical framework by expanding and refining existing concepts, providing a more comprehensive understanding of the readiness and acceptance factors for the adoption of social media in blended learning so that it has the potential to provide information to learning planners at private higher education institutes in West Java, Indonesia to help make the right decisions and optimize blended learning planning using social media technology. These findings statistically explain that 19 of 31 the hypotheses are the accepted ones. Moreover, nine of 12 variables influenced the readiness and acceptance of social media technology in blended learning based on the student perception among the private higher education institutions. They were the technological literacy factor, perceived validity, perceived trust, and technology readiness factors, namely optimism and Innovativeness, and technology acceptance factors, namely perceived effectiveness, perceived easy to use, intention to use and usage behaviour.

Keywords: Technology Readiness, TAM, Blended Learning, Information Literacy, social media.

1. Introduction

Social media is one of the conveniences offered by utilizing ICT and the Internet for learning activities. This digital platform can facilitate users' communication and enable them to share writing, photos, documents, and videos, both directly and indirectly. Social media can improve and promote students' learning interactions, develop skills, and increase satisfaction with participants' involvement in learning [1], [2]. With 192 million social media users in Indonesia in 2022, social media has become an everyday activity for people in Indonesia for work, study, entertainment or to search for information that users need. Social media used for learning, such as in the blended learning model, is very flexible and affordable for students to communicate with lecturers or discuss in real-time, making students involved in critical thinking and improving problem-solving skills learned well through experience, can help students demonstrate ideas, allow them to express their views about the instructions given, and allow students to learn independently [3]. Social media has great value for academic purposes, especially as a learning tool. Still, using social media in learning has yet to become the policy of many university leaders [2]. So, the level of acceptance of its use by students and teachers in higher education in general still needs to be discovered.

The use of social media as a learning aid in blended learning is believed to help improve the quality and acceptance of learning, as has been done by [4] in research on students at universities in Malaysia, with the results of the research

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showing that the use of social media is positive. And they are significantly related to collaborative writing through collaborative learning between researchers in higher education. This is also in line with research conducted [5] on students in Malaysian tertiary institutions, with the overall result that active collaborative learning and engagement through social media enriches students' learning activities and facilitates group discussions, and therefore, its use must be encouraged in the teaching and learning process in higher education institutions. The results of this research [4], [5] show the level of success in improving the quality and acceptance of collaborative learning; this encourages this research to evaluate these factors in the context of what factors influence the readiness and acceptance of social media in the use of blended learning. This must be a concern when helping higher institutions plan mixed learning models, especially in Indonesia. Social media is a source of information that uses the internet network to distribute information so that it is free to be accessed or used, and this shows that internet users' skills and experience are determining factors [6]. Other study results determined [6] that most social and heretical cues of online credibility (e.g., source trustworthiness, buy-in, and intermediary trustworthiness) do not significantly impact. In this case, there are different views in the research conducted [7], [8] that the source's credibility must receive attention.

Apart from that, the skill considered essential to support the implementation of blended learning is information literacy [9]; for example, when planning or giving blended learning courses, lecturers need to first understand students in terms of their level of digital literacy for learning [10]. A level of digital literacy that matches the expectations of the learning material is necessary for successful blended learning. Information literacy is the literacy level of information as measured by the ability to search, share, verify, and understand information. Information literacy influences lecturers' habits in sharing information on social media regarding implementing blended learning. Perceived validity and perceived trust are needed to support the level of truth and trust in the information received in blended learning activities. Namely, the level of individual confidence and trust in the information they receive is accurate. In research conducted [11], it is stated that perceived validity and perceived trust can influence the acceptance of the use of technology, in this case, the use of social media in the application of blended learning. Blended learning directly provides opportunities for students and teachers to expand their learning interactions anywhere without being limited by space and time, as long as they are still connected to information technology (ICT), communication, and internet applications. This is a challenge for teachers to innovate and have skills in using ICT and the internet properly and correctly. Students are required to be more independent in learning and looking for teaching resources.

In this case, lecturers and students are challenged to develop innovation and skills in its application, as well as universities themselves. With quite a large number of universities, around 3115 (Indonesia Central Bureau of Statistics; 2022), of course, the very large number of students will be a challenge in itself for using technology in blended learning model learning with the unequal distribution of skills and expertise. So many higher education institutions, especially private higher education institutions, need to be challenged to open up opportunities that can influence increasing the competitiveness and business of these universities so that they are sustainable and always adopt technological developments that support their sustainability [12], [13], [14].

The success rate of blended learning with social media facilitators can increase academic success and motivation compared to face-to-face learning [15]. This success did not make a significant difference compared to face-to-face learning. There is also no significant difference in academic success and motivation between blended learning and social media-supported learning [15]. Research [16] examined students' perceptions in China regarding blended learning and their self-perceptions of their relationship to learning outcomes. The results show no difference between blended learning and face-to-face learning based on social media interactions regarding motivation and no significant difference in academic performance. However, there are substantial differences between affective and cognitive learning studied; blended learning is superior to face-to-face learning. One of the reasons why this research was carried out is to see whether other factors influence the increase in the use of blended learning. Of course, the choice of social media used in blended learning is also a determinant [17]. Like Twitter, which is text-based for relatively simple exchanges, it inhibits student interaction. In addition, students prefer to use social media, such as Facebook, with a higher level of popularity [17].

Apart from the issue of readiness and acceptance of its use, a survey study [18] shows that one indication of the failure of using technology (social media) to implement blended learning is that its implementation is not optimally useful as planned, even though the implementation is technically acceptable. However, researchers found that efforts to

implement it in Indonesia still needed to align with what was expected. Recent research conducted by [19] in his study examined the relationship between technology acceptance and learning satisfaction in a blended learning context, focusing on the mediating effects of online behavior, emotional experience, social belonging, and higher-order thinking. This research shows that technology acceptance has a significant direct relationship with learning satisfaction. The mediation analysis identified two considerable mediation patterns: higher-order thinking and the serial mediation effects of emotional experience, social belonging, and higher-order thinking. There is no significant mediating effect of learning behavior on learning satisfaction.

The factors of social media acceptance in blended learning were also researched by [20], with the results of their research being that sharing knowledge has a significant positive impact on the perceived benefits and perceived ease of use of the e-learning system, social media features have an impact significant positive impact on the perceived usefulness and perceived ease of use of the e-learning system, and motivation and use have a significant positive effect on the perceived usefulness and perceived ease of use of the e-learning system. This shows that social media has a positive impact on blended learning [19], [20], but research by [15], [16], [17] has not shown significant use of social media in relation to learner abilities to use social media as a source of information.

Based on the above, the researcher determined that this research aimed to identify factors, develop a model, and evaluate the model to see the readiness and acceptance of technology for adopting social media in blended learning among private university students in Indonesia. This goal is also based on the need for more research regarding the level of Information Technology Readiness and Technology Acceptance for the adoption of social media in blended learning among private students in Indonesia [15], [16], [17]. This illustrates that the number, types, and types of students in Indonesia are very diverse, as stated in the introduction. More research is needed regarding the level of information technology readiness and technology acceptance for adopting social media in blended learning among private university students in Indonesia.

Then, there needs to be more research regarding measuring the factors that influence the acceptance of social media technology among students for the adoption of blended learning [2], [21], [22], [23]. Even though online learning in Indonesia has been launched since 2012, in practice, face-to-face learning still dominated before COVID-19 forced almost all social activities, including learning, to be carried out online. Therefore, research regarding the acceptance of technology in the field of online learning and blended learning in Indonesia is starting to be intensified. So, more research is needed to measure the factors that influence the acceptance of social media technology among students who adopt blended learning.

Then, the factors that influence the acceptance of social media adoption technology in blended learning among students have yet to be widely known [18], [19], [20], [24]. Social media technology is generally used for communication, providing information to each other, marketing, and other social activities. This research tries to see what factors can influence the use of social media in learning, especially in blended learning. What factors can influence the use of social media in learning, especially in blended learning?

This research sets research questions to gain focus in carrying out research and obtain results based on the research objectives. The research question was:

RQ1: What factors influence the readiness and acceptance of information technology among private university students in Indonesia in adopting social media in blended learning?

RQ2: How do we develop a model to test these factors, and how do we evaluate the factors that have been determined?

RQ3: Does this influence the readiness and acceptance of social media in implementing blended learning?

Furthermore, the following descriptions of this article are elucidated within four sections. The literature review section describes the theoretical background used in the study. The research methods section presents the methodological points of the research implementation. The result and discussion section explains the results of each research step and discusses the results by comparing them with the previous theoretical background used in the study.

2. Literature Review

The model used in this research was based on the findings and suggestions from previous research (Table 1), in which previous researchers tended to develop practical information systems research models using previous models rather than empirical studies. This model was developed by adopting concepts, theories, and models from the research, which were then combined and adapted in the context of acceptance of social media in implementing blended learning in private universities in West Java, Indonesia.

Table 1. List of Concepts, Theories, and Models of the Model [25]

Concepts/theories, and models	References
Information process theory	[26], [27]
Technology readiness model	[28], [29]
Technology acceptance model	[30], [31]
Perceived validity and trust theory	[11], [32]
Information Literacy Theory	[9]

2.1. Blended Learning

Blended learning is a learning method developed from the e-learning model, which uses an instructional approach that combines online learning and face-to-face learning [21], [33], [34]. According to [35], blended learning is an innovative way of combining face-to-face and computer-mediated learning (internet). Blended learning has the potential to be the only way of learning in the future. Blended learning is also a newly developed learning approach to embracing the traditional values of face-to-face teaching and integrating the best practices of computer-mediated learning activities. In blended learning, e-learning tools use the model of lectures, lessons, and training sessions usually conducted in ordinary classrooms connected to the internet. In this context [36], [37] state that blended learning combines traditional face-to-face learning and e-learning activities, including choices related to how the content is learned and different means of communication between teachers and students, between students themselves, and between students. With the instructional content to be learned. [37] views blended learning as integrating electronic learning media and traditional teaching methods. Various modes of delivery of instructional materials, including live lectures, online communication, independent study activities, electronic performance support systems, and learning management systems, are used in blended learning [38]. In summary, it can be stated that the main components of blended learning as a newly developed instructional approach include face-to-face regular classroom interactions between teachers and their students, traditional teaching materials such as printed textbooks, workbooks, worksheets, computer-based learning through e-learning environments, electronic assessment, and feedback.

According to [39] in research by [34], [39], blended learning is an instructional delivery method with more than one delivery method used to optimize learning outcomes. Different learning strategies and media are integrated into learning needs in this concept. Examples of instructional attributes are face-to-face and online learning, direct independent and collaborative learning, structured and unstructured learning, work and study, and separate synchronous and asynchronous online formats [34].

2.2. Social Media

Social media is media in the form of web and applications that involve internet-based technology and can allow users to connect with anyone. It can also be interpreted as media providing online network service facilities that connect people individually or in groups [40]. [41] defines social media in three parts: information infrastructure, tools used to produce and distribute content, digital content in personal messages, news, ideas, and cultural products, and people, organizations, and industries. [42] define social media as internet-based channels that allow users to interact opportunistically and selectively present themselves either in real-time or asynchronously, both broad and narrow audiences who derive value from user-generated content and perceptions of interaction with other people. The basis of this definition is that social media is an online tool that operates through the wider internet, where social media is web-based. Social media is used productively by all levels of society, business, politics, media, advertising, police, and

emergency services, where social media has become the key to "provoking" thoughts, dialogue, and actions around social issues [43].

[44] social media provides a means of communication not affected by distance, allowing users to easily share information, files, images, and videos, send messages, and have conversations in real-time. Where currently, Facebook, Twitter, blogs, YouTube, Instagram, Google Docs, and others are favorite social media; social media application services are also increasing from time to time, including WhatsApp, Telegram, TikTok, and podcasts, which are probably the most widely used. In addition, social media has also played a significant role in and can influence decision-making in the economic, political, social, and educational fields [44], [45]. In research by [45], several types of popular social media are used in education as learning media, namely Facebook, Twitter, YouTube, and Instagram [44].

2.3. Information Processing Theory (Input-Process-Output Model)

Referring to the explanation by [26], an information system is defined as a coherent working relationship between components in collecting (input), processing (process), storing (storage), disseminating (output) information, and providing feedback action [46].

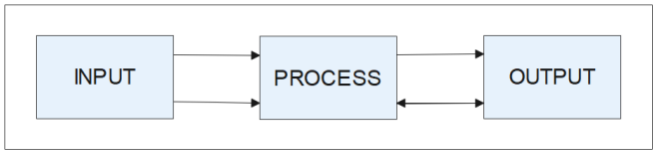

Figure 1. IPO Logic [26], [46]

Research by [47] states that these components include databases, networks, hardware, software, people, and work procedures. In the context of its current development, research conducted by [48] explains that information and communication technology (ICT) can also be referred to as information technology (IT) or Information Systems related to how to support the implementation of information systems in an organization. [49]Argued that information processing theory captures information and how data is stored and retrieved. The process begins by receiving input as a stimulus from the environment using various senses. Then, the input is decoded and stored in memory, which can be retrieved whenever needed. This is in line with the workings of an Input-Process-Output concept from the workings of a computer, also called an information system [46].

2.4. Technology Readiness

Implementing information systems is undeniably the choice of many organizations [50]. This relates to autonomy, diversity, and division of functions and business levels supporting inter-organizational business processes [51]. It's just that many organizations using information systems need to pay more attention to aspects of internal readiness in developing their systems [28]. Technology readiness is a picture of mental motivators and blocks determining a person's tendency to use new technology [52]. Its construction is diverse and consists of four dimensions: optimism, innovativeness, discomfort, and insecurity.The Researcher referred to the explanation by [28] regarding technology readiness. This term describes the tendency of interested parties to adopt and use information systems by considering the mental conditions supporting (contributors) and inhibiting (inhibitors) in this study. Both conditions may be factors that positively support and negatively inhibit the tendency of related parties to adopt and use information systems.

2.5. Technology Acceptance Model (TAM)

Davis introduced TAM in 1989 as an application of the “theory of reasoned action” (TRA). According to TAM [30] , user attitudes toward technology are essential in accepting and using new technology. Perceived usefulness and ease of use are the most fundamental determinants of positive attitudes towards technology and behavioral intention to use technology, ultimately determining actual use. Perceived ease of use refers to “the degree to which a person believes that using a particular system will be effortless” [53]. Ease of use measures a person's subjective assessment of the effort required to use the system [30]. For two reasons, perceived ease of use is an essential construct in TAM [30]. First, perceived ease of use influences intention directly and indirectly through perceived usefulness. Second, to accept and use any technology, users must overcome initial barriers to perceived ease of use.

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In contrast, perceived usefulness is defined as "the extent to which a person believes that using a particular system (e.g., a computer) will increase his or her productivity" [54]. TAM states that perceived ease of use significantly influences perceived usefulness because, other conditions being equal, the easier a technology is to use, the more valuable it is [30].

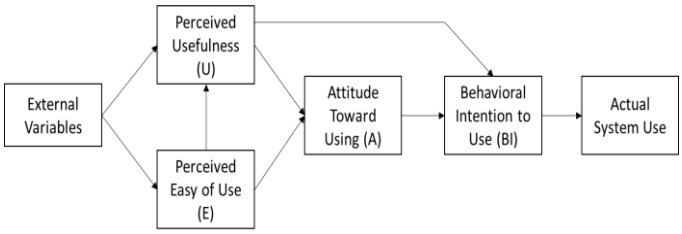

Figure 2. TAM Model F.D. [30]

Figure 2 illustrates the essential constructs of TAM and their relationships. This shows that behavioral intentions are determined jointly by perceived usefulness and perceived ease of use. Then, TAM argues that behavioral intentions are significant for deciding the actual use of the system. The figure also shows that perceived ease of use influences attitudes towards computer use directly and indirectly through perceived usefulness. TAM also theorizes that the influence of external variables is mediated by perceived usefulness and perceived ease of use. TAM has been extensively examined through validation, application, and replication, and, as a result of such extensive research, TAM is considered one of the most influential models in explaining the adoption and use of new technologies across time, environments, populations, and technologies [31]. A critical limitation of TAM is its parsimony and generality [55]. That is, in the original model, TAM attempts to explain technology acceptance with only a limited number of variables. Therefore, previous research suggests that future research should consider human and social factors to explain technology adoption better [55]. One external factor that has not been studied extensively is how the ease of use and usefulness of social media influences the use of technology, in this case, social media in blended learning among students at private higher education institutes, apart from the four factors of technology readiness and three factors of information literacy to test and evaluate.

2.6. Information Literacy

According to [56] research by [57], information literacy is a way of learning that links information literacy with lifelong learning. Information literacy is all activities related to teaching and learning about the various sources and formats of information. For information literacy, an individual must be equipped with reasons for when and how to apply all information literacy tools and develop the ability to think decisively about the information they provide [9]. Research by [43] and [58] statesthat information literacy has several indicators, including information seeking, information sharing, information verification, digital literacy, and media literacy. In his research, [59] states that information-seeking is fundamental to information literacy. Meanwhile, [60] in his study stated that [61] developed standards to measure information literacy, namely identifying information needs, information-seeking behavior, and information sources, techniques, and strategies for information retrieval, organization and evaluation of information, use the information and related issues, and share information and create new knowledge. Information literacy has been widely applied to research development, including the diffusion of innovation by [62], the theory of reasoned action (TRA) by [63], the theory of planned behavior by [64], and TAM, which is considered the most appropriate because it helps predict user behavior [63].

2.7. Perceived validity and trust theory

Validation is a theoretical concept that has evolved from a straightforward definition of a test for anything correlated to a more complex one where validation is used for tests that predict future performance; construct validation is used to make inferences about psychological traits [65]. Validation is a set of methods to assess the accuracy of information. Someone can use validation to determine decision-making based on the information received. Validation is used to determine how good the information is. In addition to the accuracy of the information, validation is also used to determine the level of consistency of the information. This information must also be easy to explain, along with its theoretical aspects, and can be traced to sources [32].

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In testing the research model[27], the validation factor is related to how the output of a process can describe the input of the process; in other words, it can tell its original condition or state, where the focus of observation is not oriented to the process but rather to the output. So, the perception of validation can be defined as an assumption of the suitability between the description or result of a process compared to the actual situation [11]. Trust is a concept with various definitions: offline and online trust. Offline trust is directed only to a person or group. In contrast, online trust occurs in an environment where direct, physical contact does not happen, where moral and social pressures can be perceived differently, and where digital devices mediate interactions [64]. According to [66], digital trust "means general trust in online service providers that generates behavioral intentions."

Trust refers to the transparency of an object, which in this case is information on social media. Transparency is related to how one can find the data and the source of the scattered information. Transparency refers to the extent to which a person gets the structure, clarity, integrity, and openness of the information received. Transparency aims to provide sufficient information to convince readers to understand the accuracy of information and data and the limitations of information spread on social media [66]. Perceived trust can be defined as an assumption related to the degree of confidence in something or someone who clearly shows aspects of their honesty and reliability [11]. According to [68], research by [69] states that previous empirical studies have produced several relevant factors that determine trust in the context of ICT, such as the tendency to trust, experience, and proficiency in using technology, perceived ease of use, information quality, graphic characteristics, customization and personalization, privacy and security, third party guarantees, reputation, and offline presence.

3. Method

From the concepts, models, and theories presented above, a model is proposed to be tested with a larger scale of respondents compared to the same model in the research of [70]. The hope is that the results of the tests carried out can support the results of testing the same model as that of [70]. The model developed can be seen in Figure 3 and Figure 4:

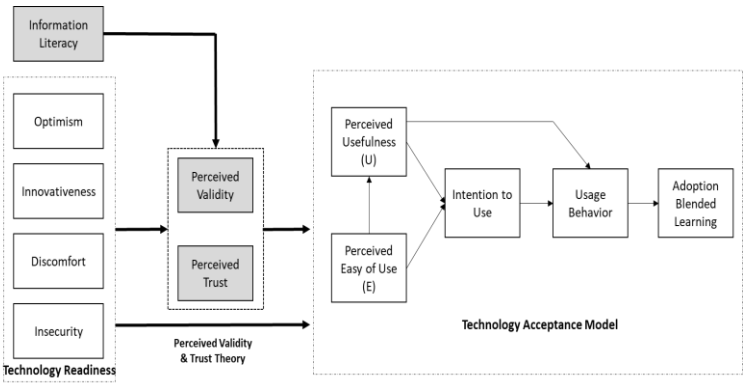

Figure 3. Proposed Model

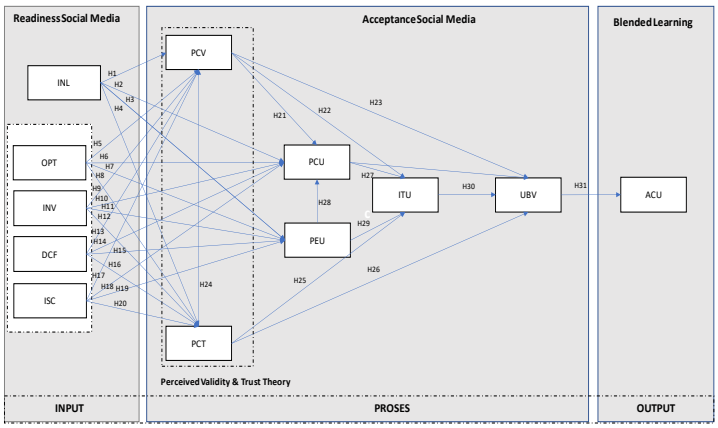

Figure 4. The hypotheses in the proposed model

3.1. Population and Sampling

This study's population is students at private universities in West Java, Indonesia, directly involved in implementing blended learning using social media. Based on the 2021 Indonesia central bureau of statistics, the student population in West Java is 663,307 students. To determine the sample in this study, the researcher referred to the sample table based on the [71] tables, where with a student population of 663,307, a sample of 384 samples was obtained [71], [72]. The population of this research is students from private universities in West Java, Indonesia, who are directly involved in implementing blended learning using social media. Based on records from the Indonesia Central Bureau of Statistics in 2021, the student population in West Java is 663,307 students. To determine the sample in this study, the researcher referred to the sample table based on the [71], where with a student population of 663,307, a sample of 384 samples was obtained [71], [72].

The sample was chosen in West Java because the number of private higher education institutes is number one among the provinces in Indonesia. Private higher education institutions dominate the number of universities. Of the 3,115 existing universities, 2,990 have private higher education institutions status, and 125 are state universities. With a provincial distribution of private higher education institutions in West Java, there are 380 private universities with a total of 663,307 students; East Java has 321 private universities with a total of 33,5841 students; Jakarta has 275 private higher education institutions with a total of 104,251 students.

3.2. Instrumentation

The data collection technique the researcher used a research instrument in the form of a questionnaire using a 5 (five) Likert scale, with a scale of 1 "Strongly Disagree" to a scale of 5 "Strongly Agree," which consists of two parts, namely a cover letter and research questions. The research questions consisted of demographic questions in the form of respondents' profiles and testing questions related to the acceptance of social media for implementing blended learning among students at private universities in West Java, Indonesia.

3.3. Reliability And Validity Test

Tables 2, 3, 4, and 5 below present all research variables' reliability and construct validity results. The tests were Cronbach's Alpha, rho_A, Composite Reliability, Average Variance Extracted (AVE), cross-loading, Fornell-Lacker cross-loading, and Heterotrait-Monotrait Ratio (HTMT). These results were obtained through SmartPLS analysis output.

Table 2. Construct Reliability and Validity

Variables	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Action to Use	1.000	1.000	1.000	1.000
Discomfort	0.883	0.898	0.914	0.680
Information Literacy	0.852	0.859	0.894	0.629
Innovativeness	0.842	0.844	0.888	0.614
Insecurity	0.866	0.929	0.898	0.639
Intention to use	0.853	0.853	0.911	0.773
Optimism	0.852	0.862	0.901	0.695
Perceived Ease of Use	0.887	0.888	0.914	0.638
Perceived Trust	0.898	0.900	0.922	0.664
Perceived Usefulness	0.900	0.900	0.923	0.667
Perceived Validity	0.851	0.853	0.894	0.628
Usage Behaviour	0.894	0.897	0.927	0.759

Based on Table 2, the test results show that the average variance extracted (AVE) value of the twelve variables in the model used has met the required threshold value, namely ≥ 0.5, Cronbach Alpha > 7 [73]. This shows that the convergent validity of each variable indicator has met statistical requirements.

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Table 3. Cross Loading

	ACU	DCF	INL	INV	ISC	ITU	OPT	PCT	PCU	PCV	PEU	UBV
ACU2	1.000	0.138	0.390	0.475	0.128	0.491	0.362	0.477	0.412	0.433	0.551	0.502
DCF1	0.136	0.800	0.112	0.088	0.606	0.093	0.091	0.130	0.132	0.151	0.095	0.045
DCF2	0.158	0.850	0.039	0.123	0.649	0.065	0.105	0.109	0.093	0.152	0.057	0.067
DCF3	0.087	0.822	0.025	0.126	0.601	0.066	0.083	0.137	0.068	0.141	0.060	0.080
DCF4	0.123	0.861	0.101	0.100	0.659	0.121	0.116	0.148	0.156	0.167	0.111	0.074
DCF5	0.052	0.788	0.058	0.058	0.645	0.021	0.102	0.089	0.075	0.146	0.052	0.018
INL1	0.246	0.043	0.820	0.480	0.103	0.476	0.350	0.441	0.466	0.465	0.489	0.549
INL2	0.309	0.102	0.840	0.530	0.173	0.428	0.365	0.471	0.465	0.441	0.535	0.537
INL3	0.301	0.137	0.702	0.414	0.136	0.418	0.355	0.397	0.381	0.411	0.412	0.407
INL4	0.359	-0.001	0.787	0.494	0.069	0.414	0.422	0.398	0.418	0.459	0.503	0.498
INL5	0.334	0.066	0.810	0.597	0.142	0.549	0.503	0.543	0.520	0.521	0.584	0.572
INV1	0.351	0.066	0.599	0.814	0.087	0.615	0.629	0.588	0.558	0.553	0.630	0.608
INV2	0.388	0.111	0.445	0.786	0.091	0.531	0.627	0.540	0.539	0.546	0.562	0.477
INV3	0.418	0.068	0.538	0.755	0.062	0.501	0.493	0.512	0.576	0.508	0.564	0.532
INV4	0.331	0.073	0.492	0.811	0.066	0.558	0.556	0.553	0.574	0.594	0.564	0.565
INV5	0.376	0.159	0.427	0.749	0.084	0.495	0.562	0.531	0.539	0.473	0.562	0.489
ISC1	0.050	0.713	0.128	0.115	0.822	0.119	0.165	0.136	0.114	0.192	0.062	0.081
ISC2	0.126	0.609	0.130	0.125	0.863	0.071	0.108	0.188	0.092	0.169	0.122	0.114
ISC3	0.085	0.484	0.164	0.025	0.721	0.023	-0.013	0.086	0.012	0.098	0.056	0.098
ISC4	0.162	0.573	0.139	0.027	0.790	0.095	0.016	0.093	0.022	0.122	0.060	0.148
ISC5	0.109	0.684	0.061	0.028	0.795	-0.033	0.107	0.059	-0.017	0.100	0.015	-0.063
ITU1	0.397	0.037	0.524	0.600	0.060	0.881	0.498	0.615	0.635	0.565	0.657	0.704
ITU2	0.489	0.110	0.519	0.622	0.062	0.867	0.552	0.637	0.642	0.585	0.646	0.687
ITU3	0.409	0.102	0.488	0.600	0.106	0.889	0.498	0.613	0.625	0.567	0.643	0.714
OPT1	0.278	0.191	0.296	0.517	0.122	0.438	0.725	0.414	0.417	0.480	0.386	0.329
OPT3	0.347	0.070	0.461	0.630	0.105	0.482	0.857	0.517	0.511	0.503	0.567	0.470
OPT4	0.320	0.057	0.473	0.650	0.076	0.542	0.877	0.530	0.531	0.535	0.532	0.464
OPT5	0.264	0.106	0.443	0.637	0.076	0.491	0.867	0.516	0.522	0.548	0.531	0.457
PCT1	0.319	0.095	0.520	0.546	0.128	0.613	0.445	0.803	0.596	0.645	0.594	0.599
PCT2	0.341	0.080	0.459	0.520	0.136	0.609	0.435	0.840	0.542	0.652	0.540	0.564
PCT3	0.377	0.144	0.480	0.575	0.115	0.579	0.504	0.840	0.609	0.646	0.647	0.580
PCT4	0.379	0.171	0.413	0.568	0.156	0.485	0.482	0.791	0.547	0.621	0.589	0.487
PCT5	0.460	0.141	0.486	0.638	0.127	0.613	0.561	0.847	0.627	0.661	0.634	0.607
PCT6	0.461	0.113	0.432	0.554	0.118	0.547	0.482	0.763	0.561	0.572	0.562	0.505
PCU1	0.312	0.137	0.475	0.537	0.104	0.586	0.430	0.555	0.798	0.518	0.606	0.642
PCU2	0.342	0.108	0.486	0.607	0.028	0.608	0.525	0.581	0.850	0.578	0.605	0.578
PCU3	0.324	0.103	0.428	0.608	0.025	0.572	0.538	0.574	0.804	0.565	0.589	0.552
PCU4	0.378	0.104	0.432	0.619	0.090	0.608	0.530	0.619	0.817	0.558	0.654	0.605
PCU5	0.366	0.091	0.488	0.569	0.065	0.555	0.460	0.594	0.806	0.487	0.685	0.556
PCU6	0.292	0.110	0.490	0.542	0.069	0.601	0.436	0.572	0.823	0.536	0.660	0.589
PCV1	0.304	0.183	0.425	0.504	0.225	0.470	0.457	0.556	0.458	0.753	0.502	0.482
PCV2	0.351	0.162	0.451	0.574	0.136	0.507	0.572	0.621	0.532	0.838	0.522	0.462

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PCV3	0.331	0.107	0.407	0.546	0.079	0.541	0.513	0.588	0.558	0.821	0.558	0.506
PCV4	0.372	0.169	0.516	0.574	0.126	0.546	0.512	0.668	0.582	0.801	0.546	0.504
PCV5	0.352	0.111	0.503	0.507	0.174	0.508	0.395	0.639	0.484	0.744	0.539	0.532
PEU1	0.358	0.011	0.517	0.579	0.020	0.572	0.455	0.559	0.615	0.476	0.781	0.681
PEU2	0.395	0.073	0.502	0.539	0.079	0.554	0.476	0.605	0.594	0.490	0.796	0.593
PEU3	0.478	0.109	0.415	0.598	0.053	0.562	0.509	0.542	0.572	0.545	0.779	0.571
PEU4	0.452	0.075	0.525	0.578	0.072	0.568	0.461	0.574	0.628	0.500	0.826	0.648
PEU5	0.458	0.141	0.491	0.647	0.103	0.621	0.578	0.620	0.639	0.607	0.792	0.638
PEU6	0.494	0.046	0.615	0.584	0.106	0.651	0.440	0.596	0.663	0.604	0.819	0.686
UBV1	0.432	0.076	0.586	0.581	0.135	0.674	0.437	0.621	0.603	0.554	0.668	0.854
UBV2	0.384	0.061	0.593	0.576	0.093	0.654	0.407	0.563	0.619	0.515	0.684	0.864
UBV3	0.434	0.048	0.555	0.648	0.066	0.707	0.488	0.580	0.667	0.566	0.714	0.876
UBV4	0.492	0.061	0.541	0.579	0.092	0.741	0.475	0.624	0.617	0.553	0.714	0.892

Cross-loading is the first approach to assessing an indicator's discriminant validity. Specifically, an indicator's out-loading on a related construct must be greater than its cross-loading (i.e., its correlation) on other constructs [73]. Table 3 above shows that the cross-loading value has been met. That is, the loading of the external indicator on the related construct is more significant than all cross-loadings (i.e., correlations) on the other constructs. Furthermore, Table 4 shows the results of the Fornell-Larcker cross-loading test, which indicates that the AVE root value is higher than the correlation between the construct and other constructs, so the discriminant validity is good. The final validity test looks at the Heterotrait-Monotrait Ratio (HTMT) value. The required Heterotrait-Monotrait ratio must be smaller than 0.9 so that it can be said to meet the assessment of discriminant validity [73]. The results of processing using smartPLS on the Heterotrait-Monotrait Ratio (HTMT) tab can be seen in table 5. Based on the results of the four stages above, namely cross-loading, Fornell Larcker, and Heterotrait-Monotrait Ratio (HTMT), it is known that there are no problems in testing discriminant validity [73], [74].

Table 4. Discriminant Validity Fornell-Larcker Criterion

	ACU	**DCF**	**INL**	**INV**	**ISC**	**ITU**	**OPT**	**PCT**	**PCU**	**PCV**	**PEU**	**UBV**
ACU	1.000											
DCF	0.138	0.825										
INL	0.390	0.086	0.793									
INV	0.475	0.120	0.640	0.783								
ISC	0.128	0.766	0.158	0.099	0.799							
ITU	0.491	0.095	0.580	0.691	0.086	0.879						
OPT	0.362	0.121	0.507	0.733	0.111	0.587	0.834					
PCT	0.477	0.152	0.572	0.696	0.159	0.707	0.596	0.815				
PCU	0.412	0.133	0.572	0.711	0.078	0.721	0.596	0.714	0.817			
PCV	0.433	0.184	0.582	0.684	0.184	0.651	0.619	0.778	0.662	0.792		
PEU	0.551	0.095	0.641	0.736	0.091	0.738	0.609	0.730	0.775	0.674	0.799	
UBV	0.502	0.070	0.651	0.684	0.110	0.798	0.520	0.686	0.719	0.628	0.798	0.871

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Table 5. HTMT values

	ACU	DCF	INL	INV	ISC	ITU	OPT	PCT	PCU	PCV	PEU	UBV
ACU												
DCF	0.143											
INL	0.424	0.106										
INV	0.519	0.141	0.748									
ISC	0.142	0.868	0.185	0.104								
ITU	0.556	0.100	0.705	0.835	0.084							
OPT	0.393	0.146	0.585	0.863	0.123	0.714						
PCT	0.505	0.168	0.648	0.800	0.160	0.828	0.679					
PCU	0.434	0.144	0.649	0.817	0.090	0.845	0.679	0.793				
PCV	0.468	0.212	0.680	0.806	0.199	0.782	0.728	0.887	0.754			
PEU	0.584	0.109	0.730	0.851	0.103	0.867	0.697	0.817	0.866	0.774		
UBV	0.479	0.082	0.745	0.739	0.156	0.852	0.531	0.731	0.756	0.680	0.840	

3.4. Evaluation of Structural Model

The next stage is to measure the Determinant Coefficient (R^2), effect size f^2, Predictive Relevance (Q^2), Effect Size (q^2), and Direct Relationship Analysis. These results were obtained through SmartPLS analysis output and the results of these measurements can be seen in the table below.

Table 6. Coefficient of determinant test results

	R^2 Value*	Model's Explanatory Power
ACU	0.194	Weak
ITU	0.608	Moderate
PCT	0.529	Moderate
PCU	0.665	Moderate
PCV	0.667	Moderate
PEU	0.599	Moderate
UBV	0.527	Moderate

Note: *R^2 values of 0.75, 0.50, or 0.25 as substantial, moderate, or weak, respectively [73].

Table 7. Effect Size (f^2)

Relationship	f2	Effect Size
DCF → PCT	0.001	No Effect
DCF → PCU	0.015	No Effect
DCF →PCV	0.003	No Effect
DCF → PEU	0.001	No Effect
INL → PCT	0.047	Small Effect
INL → PCU	0.002	No Effect
INL → PCV	0.023	Small Effect
INL → PEU	0.115	Small Effect
INV → PCT	0.151	Medium Effect
INV → PCU	0.032	Small Effect
INV → PCV	0.016	No Effect
INV →PEU	0.192	Medium Effect
ISC → PCT	0.002	No Effect

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ISC →PCU	0.014	No Effect
ISC → PCV	0.000	No Effect
ISC → PEU	0.001	No Effect
OPT → PCT	0.026	Small Effect
OPT → PCU	0.003	No Effect
OPT → PCV	0.028	Small Effect
OPT → PEU	0.019	No effect
ITU → UBV	0.219	Medium Effect
PCT → ITU	0.036	Small Effect
PCT → PCV	0.386	Large Effect
PCT → UBV	0.044	Small Effect
PCU → ITU	0.058	Small Effect
PCV → ITU	0.009	No Effect
PCV → PCU	0.033	Small Effect
PCV → UBV	0.006	No Effect
PEU → ITU	0.075	Small Effect
PEU → PCU	0.248	Medium Effect
UBV → ACU	0.240	Medium Effect

Note: *f^2 values higher than 0.02, 0.15, and 0.35 indicate small, medium, and large effect sizes accordingly [75].

Table 8. Predictive Relevance Testing Results

	SSO	SSE	Q^2 (=1-SSE/SSO)
ACU	384.000	315.030	0.180
ITU	768.000	398.529	0.481
PCT	2.304.000	1.508.466	0.345
PCU	2.304.000	1.297.545	0.437
PCV	1.920.000	1.134.613	0.409
PEU	2.304.000	1.439.858	0.375
UBV	768.000	426.850	0.444

Note: *Q^2 value above 0 indicates that the structural model has adequate predictive power or relevance [73].

Table 9. Effect Size q^2.

Variables		Q2-in	Q2-ex	$\frac{Q^2 \text{ include} - Q^2 \text{ exclude}}{1 - Q^2 \text{ include}}$	Description
INL	PCV	0.409	0.404	0.008	No Effect
OPT			0.404	0.008	No Effect
INV			0.406	0.005	No Effect
DCF			0.410	-0.002	No Effect
ISC			0.411	-0.003	No Effect
PCT			0.330	0.134	Small Effect
INL	PCT	0.345	0.332	0.130	Small Effect
OPT			0.338	0.120	Small Effect
INV			0.298	0.188	Small Effect
DCF			0.345	0.108	Small Effect
ISC			0.345	0.108	Small Effect
INL	PCU	0.437	0.436	-0.046	Small Effect and Negative

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OPT			0.437	-0.047	Small Effect and Negative
INV			0.430	-0.036	Small Effect and Negative
DCF			0.434	-0.042	Small Effect and Negative
ISC			0.434	-0.042	Small Effect and Negative
PCV			0.430	-0.036	Small Effect and Negative
PEU			0.382	0.046	Small Effect
INL			0.346	0.107	Small Effect
OPT			0.371	0.064	Small Effect
INV	PEU	0.375	0.326	0.140	Small Effect
DCF			0.375	0.058	Small Effect
ISC			0.375	0.058	Small Effect
PCV			0.481	-0.122	Small Effect and Negative
PCT	ITU	0.481	0.476	-0.113	Small Effect and Negative
PCU			0.465	-0.095	Small Effect and Negative
PEU			0.458	-0.083	Small Effect and Negative
PCV			0.443	-0.058	Small Effect and Negative
PCT	UBV	0.444	0.427	-0.030	Small Effect and Negative
ITU			0.444	-0.059	Small Effect and Negative

Note: *q^2 of 0.02, 0.15, and 0.35 indicate small, medium, and large q^2 effect sizes, respectively [73]

Table 10. Path Coefficients, Confidence Interval 95%, and f^2

Hypothesis	Variables	Symbol	Path Coefficients (β)	Confidence Interval 95%		
				2.5%	97.5%	f^2
H1	Information Literacy → Perceived Validity	INL → PCV	0.12	0.004	0.227	0.023
H2	Information Literacy → Perceived Usefulness	INL → PCU	0.035	-0.066	0.137	0.002
H3	Information Literacy → Perceived Ease to Use	INL → PEU	0.285	0.168	0.397	0.115
H4	Information Literacy → Perceived Trust	INL → PCT	0.197	0.085	0.313	0.047
H5	Optimism → Perceived Validity	OPT → PCV	0.144	0.048	0.244	0.028
H6	Optimism → Perceived Usefulness	OPT → PCU	0.049	-0.060	0.163	0.003
H7	Optimism → Perceived Ease to Use	OPT → PEU	0.128	0.022	0.240	0.019
H8	Optimism → Perceived Trust	OPT → PCT	0.163	0.054	0.271	0.026
H9	Innovativeness → Perceived Validity	INV → PCV	0.13	0.021	0.246	0.016
H10	Innovativeness → Perceived Usefulness	INV → PCU	0.192	0.058	0.327	0.032
H11	Innovativeness → Perceived Ease of Use	INV → PEU	0.461	0.342	0.582	0.192

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H12	Innovativeness → Perceived Trust	INV → PCT	0.443	0.304	0.569	0.151
H13	Discomfort → Perceived Validity	DCF → PCV	0.05	-0.082	0.181	0.003
H14	Discomfort → Perceived Usefulness	DCF → PCU	0.11	-0.011	0.218	0.015
H15	Discomfort → Perceived Ease to Use	DCF → PEU	0.025	-0.090	0.135	0.001
H16	Discomfort → Perceived Trust	DCF → PCT	0.027	-0.097	0.156	0.001
H17	Insecurity → Perceived Validity	ISC → PCV	0.015	-0.122	0.160	0.000
H18	Insecurity → Perceived Usefulness	ISC → PCU	-0.110	-0.216	0.032	0.014
H19	Insecurity → Perceived Ease to Use	ISC → PEU	-0.033	-0.146	0.086	0.001
H20	Insecurity → Perceived Trust	ISC → PCT	0.045	-0.096	0.173	0.002
H21	Perceived Validity → Perceived Usefulness	PCV → PCU	0.161	0.052	0.268	0.033
H22	Perceived Validity → Intention to use	PCV → ITU	0.097	-0.071	0.261	0.009
H23	Perceived Validity → Usage Behaviour	PCV → UBV	0.088	-0.097	0.251	0.006
H24	Perceived Trust → Perceived Validity	PCT → PCV	0.523	0.415	0.629	0.386
H25	Perceived Trust → Intention to use	PCT → ITU	0.216	0.050	0.366	0.036
H26	Perceived Trust → Usage Behaviour	PCT → UBV	0.253	0.075	0.448	0.044
H27	Perceived Usefulness → Intention to use	PCU → ITU	0.255	0.102	0.399	0.058
H28	Perceived Ease to Use → Perceived Usefulness	PEU → PCU	0.473	0.342	0.606	0.248
H29	Perceived Ease to Use → Intention to use	PEU → ITU	0.300	0.154	0.466	0.075
H30	Intention to use → Usage Behaviour	ITU → UBV	0.457	0.329	0.572	0.219
H31	Usage Behaviour → Action to Use	UBV → ACU	0.440	0.303	0.567	0.240

4. Result and Discussion

This research evaluates readiness factors that are important in determining readiness to adopt technology, in this case, social media as a tool used by students in blended learning-based learning at private universities in West Java, Indonesia. Of the factors evaluated in the 31 hypotheses proposed, 19 were accepted, and 12 were rejected. It is known that specific factors that contribute to the readiness and adoption of social media technology in blended learning are Information Literacy (INL), Optimism (OPT), Innovativeness (INV), Perceived Validity (PCV), Perceived Trust (PCT), Perceived Effectiveness Factor (PCU), Perceived Ease of Use (PEU), Intention to Use (ITU) influence the acceptance and adoption of social media technology in blended learning with a direct relationship effect. Usage

Behavior (UBV), Intention to Use (ITU), Perceived Ease of Use (PEU), and Innovativeness (INV) show that the effect size f2 has a moderate influence. In contrast, other impacts were minor. Knowing these factors provides a basis for private universities to design support to increase student readiness in adopting social media technology in blended learning. This research provides valuable insight into the factors that influence social media adoption.

Information literacy factors and perceived trust influence the acceptance of social media technology following research by [76] which created a model for increasing information literacy for students based on an intelligent learning environment where the model results can be accepted and applied. Research by [77] shows that students' information literacy positively relates to academic performance in blended learning with factors mediated by self-regulation learning (SRL). Therefore, teachers can help facilitate students' SRL by increasing their information literacy. Still, in research by [77], it is recommended that lecturers give online learning assignments to students to complete using learning technology and topics that will be discussed online via social media.

Then, the technology readiness factor represented by innovation, discomfort, insecurity, and optimism was also tested in this social media technology acceptance model, with the results of the test showing that the innovation and optimism factors were the factors that influenced the acceptance and adoption of social media in blended learning. At the same time, the insecurity and discomfort factors have no effect, following research by [78], who stated in their research results those students who are more independent and have an active attitude toward technology-based products are more motivated to implement online learning strategies and achieve their learning goals in blended learning. This research also states that learning motivation is influenced by technology readiness, not learning independence. [78] also noted that instructional designers must consider technology readiness when adopting blended learning approaches to ensure a more effective teaching presence.

In the technology acceptance model (TAM), the factors Perceived Effectiveness (PCU), Perceived Ease of Use (PEU), Intention to Use (ITU), Usage Behavior (UBV), and Intention to Use (ITU) influence technology acceptance and adoption. Social media in blended learning. This model has been widely used in studying technology adoption. In his research, [79] tested a model to explore the relationship between constructs that contribute to students continued use of blended learning modes with 12 hypotheses; 11 were accepted, and one was rejected. The relationship between perceived ease of use and perceived usefulness was refuted in this study. Then, [80] examined measuring students' behavioral intentions using a blended learning system.

As seen in the test results tables above, the direct relationships between variables provide an in-depth understanding of the dynamics between different variables in the structural model in the context of the research being conducted. These supported hypotheses (H1, H3, H4, H5, H7, H8, H9, H10, H11, H12, H21, H24, H25, H26, H27, H28, H29, H30, and H31) explain factors such as information literacy (INL), optimism (OPT), innovativeness (INV), discomfort (DCF), insecurity (ISC), perceived validity (PCV), perceived trust (PCT), perceived usefulness (PCU), perceived ease of use (PEU), intention for usage (ITU), usage behavior (UBV), and actual usage (ACU) showed statistical significance in the research model.

However, twelve hypotheses (H2, H6, H13, H14, H15, H16, H17, H18, H19, H20, H22, and H23) were rejected, indicating that some factors in the direct relationship did not show statistical significance in the context of the study. This explains that some factors in looking at the readiness and acceptance of social media technology among students in private higher education institutions do not affect the adoption of social media technology in blended learning. This means several factors represented by several indicators in the readiness and acceptance of social media technology in blended learning among students at private higher education institutions in West Java have only partially accepted social media. This can be seen from the variables where all hypotheses are rejected, namely DCF and ISC, and other variables, INL, OPT, and PCV hypotheses are partially rejected.

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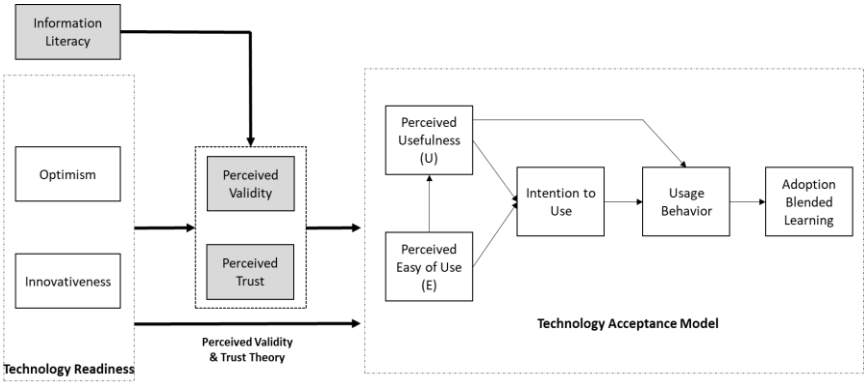

Figure 5. Revision to the Proposed Model

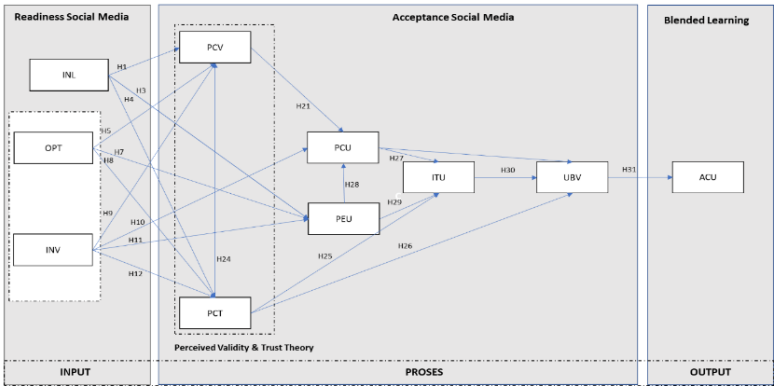

Figure 6. Revision of Hypotheses in the Proposed Model

Based on the analysis and calculations of the model developed and the results of hypothesis testing, this research has achieved the three initial research objectives. The final model can be seen in figures 5 and 6. This model perfects the proposed research model by eliminating the relationship between variables represented by the rejected hypothesis so that in the final model, the relationship between variables, according to this research, is a model in which all variable relationships have a positive influence. It is hoped that the final model can be a model that can be understood as an illustration that the factors in the model have a small or medium influence on the acceptance of social media in blended learning so that blended learning planning by adopting social media in private higher education institutions can be planned more It's better to more attention to these factors. For example, suppose the information literacy factor is influential. In that case, activities or programs to increase literacy among students are improved first so that blended learning activities can be successful and other factors can be made into programs or activities.

5. Conclusion

This research was conducted on students at private universities in West Java, where the number of students is spread across various regions, so differences in technology use, learning culture, and economic level can give rise to different responses from respondents. As with differences in economic levels, individuals with higher economic levels usually have better access to the newest and most sophisticated technology. Economic level also influences a person's ability to access the internet. The cost of Internet service can be prohibitive for low-income individuals, limiting their ability to use it entirely. It is important to note that this research focuses on students at higher education institutions in a specific region, which may pose limitations in the broader context. The snapshot nature of data collection captures a single moment, which may not capture the dynamic nature of understanding social media technology in blended learning and may, therefore, introduce bias. The bias that arises in sampling this research is possible because it occurs when the sample selection method causes the sample to not represent the population as a whole, in the sense that the sample used is not evenly distributed throughout the population in West Java, which consists of several regions. Another bias is that if potential respondents do not want to participate, the results may not reflect the overall characteristics of the population.

Due to existing limitations, it is essential to emphasize that this research contributes to understanding the acceptance and adoption of social media in the specific context studied. Although contextualized, these findings have great potential to shape blended learning planning practices and policies and stimulate further research efforts. The complexity inherent in information technology research, particularly in emerging technology adoption, requires ongoing dialogue and a commitment to improving methodology. As technological advances continue to shape the learning landscape using technology, reflection on these limitations paves the way for future investigations and efforts to achieve a more comprehensive understanding of the evolving dynamics of social media adoption across various ever-changing learning environments.

Given the identified limitations and the dynamic nature of research in this area, several suggestions for future research can be gleaned from this study. First, future researchers can expand the scope of research to students outside West Java and use more diverse respondents covering various regions, cultural backgrounds, and levels of education. This broader perspective will increase the generalizability of the findings and provide a more comprehensive understanding of the factors influencing social media acceptance and adoption in different learning contexts. Additionally, as technology advances, future research may explore new technologies and their impact on teaching and learning in higher education, such as using Artificial Intelligence or Augmented reality. The new model in this research can be developed and refined again with other supporting variables so that it can strengthen learning outcomes or further research that measures student learning outcomes so that there is an evaluation of learning achievement so that learning is successful. Social media in blended learning can be counted.

6. Declarations

6.1. Author Contributions

Conceptualization: F.Y., T.K., and A.S.; Methodology: T.K.; Software: F.Y.; Validation: F.Y., T.K.; Formal Analysis: F.Y., T.K.; Investigation: F.Y.; Resources: T.K.; Data Curation: T.K.; Writing Original Draft Preparation: F.Y. and T.K.; Writing Review and Editing: T.K. and F.Y.; Visualization: F.Y.; All authors have read and agreed to the published version of the manuscript.

6.2. Data Availability Statement

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The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

References

[1] O. C. Romero, “Social Media aS learning Tool in HigHer educaTion: THe caSe of Mexico and SouTH Korea,” 2014. [Online]. Available: www.sinectica.iteso.mx

[2] A. E. E. Sobaih, M. A. Moustafa, P. Ghandforoush, and M. Khan, “To use or not to use? Social media in higher education in developing countries,” *Comput Human Behav*, vol. 58, pp. 296–305, May 2016, doi: 10.1016/j.chb.2016.01.002.

[3] K. Suebsom, “ACM International Conference Proceeding Series,” in *The use of blended learning: Social media and flipped classroom to encourage thinking skills and collaborate work in higher*, ACM, Jan. 2020, pp. 201–206, 2020, doi: 10.1145/3383845.3383883.

[4] W. M. Alenazy, W. Mugahed Al-Rahmi, and M. S. Khan, "Validation of TAM Model on Social Media Use for Collaborative Learning to Enhance Collaborative Authoring," *IEEE Access*, vol. 7, no. 1, pp. 71550–71562, 2019, doi: 10.1109/ACCESS.2019.2920242.

[5] W. M. Al-Rahmi and A. M. Zeki, "A model of using social media for collaborative learning to enhance learners' performance on learning," *Journal of King Saud University - Computer and Information Sciences*, vol. 29, no. 4, pp. 526–535, Oct. 2017, doi: 10.1016/j.jksuci.2016.09.002.

[6] C. Shen, M. Kasra, W. Pan, G. A. Bassett, Y. Malloch, and J. F. O'Brien, "Fake images: The effects of source, intermediary, and digital media literacy on contextual assessment of image credibility online," *New Media Soc*, vol. 21, no. 2, pp. 438–463, Feb. 2019, doi: 10.1177/1461444818799526.

[7] E. Djafarova and O. Trofimenko, "'Instafamous'–credibility and self-presentation of micro-celebrities on social media," *Inf Commun Soc*, vol. 22, no. 10, pp. 1432–1446, Aug. 2019, doi: 10.1080/1369118X.2018.1438491.

[8] R. Li and A. Suh, "Factors Influencing Information credibility on Social Media Platforms: Evidence from Facebook Pages," in *Procedia Computer Science*, Elsevier B.V., vol. 1, no.1, pp. 314–328, 2015. doi: 10.1016/j.procs.2015.12.146.

[9] M. L. Khan and I. K. Idris, "Recognise misinformation and verify before sharing: a reasoned action and information literacy perspective," *Behaviour and Information Technology*, vol. 38, no. 12, pp. 1194–1212, Dec. 2019, doi: 10.1080/0144929X.2019.1578828.

[10] C. M. Tang and L. Y. Chaw, "Digital Literacy: A Prerequisite for Effective Learning in a Blended Learning Environment?," *The Electronic Journal of e-Learning*, vol. 14, no. 1, pp. 54–65, 2016.

[11] Irhashon Luthfie, Subiyakto A'ang, and Muslimin, "Persepsi Kebenaran dan Kepercayaan Terhadap Penerimaan Pustaka Elektronik Keislaman oleh Para Akademisi Perguruan Tinggi Keagamaan Islam Indonesia" *Al Maktabah*, vol. 17, no. 1, pp. 35–41, 2018.

[12] A. Belov, G. Chernova, V. Khalin, and N. Kuznetsova, "Universities' Competitiveness Models In Academic Management: A National Level Approach," *Management Theory and Studies for Rural Business and Infrastructure Development*, vol. 40, no. 2, pp. 155–166, Jun. 2018, doi: 10.15544/mts.2018.15.

[13] V. Satsyk, "Global competitiveness of Universities," *Cultural Psychology of Education*, vol. 1, no. 1, pp. 115–122, 2018. doi:10.1007/978-3-319-96035-7_12.

[14] P. R. A. Simina, "The Importance of Sustainability for University Competitiveness," *Studies in Business and Economics*, vol. 17, no. 1, pp. 187–201, Apr. 2022, doi: 10.2478/sbe-2022-0013.

[15] D. Akgündüz and O. Akinoglu, "The impact of blended learning and social media-supported learning on the academic success and motivation of the students in science education," *Egitim ve Bilim*, vol. 42, no. 191, pp. 69–90, 2017, doi: 10.15390/EB.2017.6444.

[16] W. Zheng, F. Yu, and Y. J. Wu, "Social media on blended learning: the effect of rapport and motivation," *Behaviour and Information Technology*, vol. 41, no. 9, pp. 1941–1951, 2022, doi: 10.1080/0144929X.2021.1909140.

[17] W. T. Y. Chan and C. H. Leung, "The Use of Social Media for Blended Learning in Tertiary Education," *Universal Journal of Educational Research*, vol. 4, no. 4, pp. 771–778, Apr. 2016, doi: 10.13189/ujer.2016.040414.

[18] A. I. Almajed and P. Mayhew, "An empirical investigation of IT project success in developing countries," *2014 Science and Information Conference*, vol. 1, no. 1, pp. 984–990, Aug. 2014. doi:10.1109/sai.2014.6918305

[19] T. Chen, H. Luo, Q. Feng, and G. Li, "Effect of technology acceptance on blended learning satisfaction: The serial mediation of emotional experience, social belonging, and higher-order thinking," International Journal of Environmental Research and Public Health, vol. 20, no. 5, pp. 4442–4449, Mar. 2023. doi:10.3390/ijerph20054442

[20] S. A. Salloum et al., "What impacts the acceptance of e-learning through social media? an empirical study," Studies in Systems, Decision and Control, vol. 335, no. 1, pp. 419–431, 2021. doi:10.1007/978-3-030-64987-6_24

[21] B. Anthony *et al.*, "Blended Learning Adoption and Implementation in Higher Education: A Theoretical and Systematic Review," *Technology, Knowledge and Learning*, vol. 27, no. 2, pp. 531–578, Jun. 2020, doi: 10.1007/s10758-020-09477-z.

[22] L. Wong, A. Tatnall, and S. Burgess, "A framework for investigating blended learning effectiveness," *Education and Training*, vol. 56, no. 2, pp. 233–251, 2014, doi: 10.1108/ET-04-2013-0049.

[23] Y. Zhu, W. Au, and G. Yates, "University students' self-control and self-regulated learning in a blended course," *Internet and Higher Education*, vol. 30, no. 1, pp. 54–62, 2016, doi: 10.1016/j.iheduc.2016.04.001.

[24] E. W. Lubua, A. Semlambo, and P. D. Pretorius, "Factors affecting the use of social media in the learning process," *SA Journal of Information Management*, vol. 19, no. 1, pp. 1-12, Oct. 2017, doi: 10.4102/sajim.v19i1.764.

[25] F. Yusuf, A. Subiyakto, and T. Khawa, "Acceptance of the Use of Social Media on the Application of Blended Learning in Higher Education in Indonesia," in *Scitepress.org, Proceedings of the 3rd International Conference on Advanced Information Scientific Development* ,vol. 1, no. 1, pp. 76–83, 2024. doi: 10.5220/0012444200003848.

[26] Davis WS and Yen David, "System Analysis And Design," 1998. [Online]. Available: www.crcpress.com

[27] A. Subiyakto and Abd. R. Ahlan, "Implementation of Input-Process-Output Model for Measuring Information System Project Success," *TELKOMNIKA Indonesian Journal of Electrical Engineering*, vol. 12, no. 7, pp. 1-12, Jul. 2014, doi: 10.11591/telkomnika.v12i7.5699.

[28] A. Parasuraman and C. L. Colby, "An Updated and Streamlined Technology Readiness Index: TRI 2.0," *J Serv Res*, vol. 18, no. 1, pp. 59–74, Feb. 2015, doi: 10.1177/1094670514539730.

[29] D. Yuniarto, A. Subiyakto, A. B. Abd. Rohman, and R. R. Marliana, "Assessment of Readiness and Usability of Information Systems Use," *Jurnal Online Informatika*, vol. 4, no. 1, p. 1, Sep. 2019, doi: 10.15575/join.v4i1.256.

[30] F. D. Davis, R. P. Bagozzi, and P. R. Warshaw, "User Acceptance of Computer Technology: A Comparison of Two Theoretical Models," *Manage Sci*, vol. 35, no. 8, pp. 982–1003, Aug. 1989, doi: 10.1287/mnsc.35.8.982.

[31] V. Venkatesh and F. D. Davis, "Theoretical extension of the Technology Acceptance Model: Four longitudinal field studies," *Manage Sci*, vol. 46, no. 2, pp. 186–204, 2000, doi: 10.1287/mnsc.46.2.186.11926.

[32] D. M. Eddy, W. Hollingworth, J. J. Caro, J. Tsevat, K. M. McDonald, and J. B. Wong, "Model transparency and validation: A report of the ISPOR-SMDM modeling good research practices task force-7," *Medical Decision Making*, vol. 32, no. 5, pp. 733–743, Sep. 2012, doi: 10.1177/0272989X12454579.

[33] P. Moskal, C. Dziuban, and J. Hartman, "Blended learning: A dangerous idea?," *Internet and Higher Education*, vol. 18, no. 1, pp. 15–23, Jul. 2013, doi: 10.1016/j.iheduc.2012.12.001.

[34] E. Oh and S. Park, "How are universities involved in blended instruction?," 2009.

[35] A. Nouby and T. Alkhazali, "The Effect of Designing a Blended Learning Environment on Achievement and Deep Learning of Graduate Students at the Arabian Gulf University," *Open J Soc Sci*, vol. 05, no. 10, pp. 248–260, 2017, doi: 10.4236/jss.2017.510022.

[36] J. Fransen, "Een nieuwe werkdefinitie van blended learning," *Dutch Open University: Journal 'Onderwijs Innovatie*, vol. 8, no. 2, 26-29, 2006.

[37] S. Trapp, "Blended_Learning_Concepts_-_a_Short_Overview," 2006.

[38] S. E. Kirkley and J. R. Kirkley, "Creating Next Generation Blended Learning Environments Using Mixed Reality, Video Games and Simulations," TechTrends, 2005.

[39] H. Singh and C. Reed, "A White Paper: Achieving Success with Blended Learning," Centra Software, 2001.

[40] E. Triastuti, D. Adrianto, and A, Nurul, "Kajian Dampak Penggunaan Media Sosial Bagi Anak dan Remaja," Pusat Kajian Komunikasi, FISIP Universitas Indonesia, 2017.

[41] P. N. Howard and M. R. Parks, "Social Media and Political Change: Capacity, Constraint, and Consequence," *Journal of Communication*, vol. 62, no. 2. pp. 359–362, Apr. 2012. doi: 10.1111/j.1460-2466.2012.01626.x.

[42] C. T. Carr and R. A. Hayes, "Social Media: Defining, Developing, and Divining," *Atl J Commun*, vol. 23, no. 1, pp. 46–65, Jan. 2015, doi: 10.1080/15456870.2015.972282.

[43] A. Hasanah and M. A. Rachman, "Librarian's Information Literacy Skills to Fulfilling Library Users' Needs A Public Library in Bogor, Indonesia," *Record and Library Journal*, vol. 5, no. 1, p. 22, Oct. 2019, doi: 10.20473/rlj.v5-i1.2019.22-32.

[44] K. Syamala Devi, E. Gouthami, V. V. Lakshmi, and A. Professor, "Role of Social Media in Teaching-Learning Process," *International Journal of Emerging Technologies and Innovative Research*, vol. 6, no. 1, pp. 96–103, 2019, [Online]. Available: www.jetir.org

[45] A. Pujiono, "Media Sosial Sebagai Media Pembelajaran Bagi Generasi Z," *Didache: Journal of Christian Education*, vol. 2, no. 1, p. 1, Jun. 2021, doi: 10.46445/djce.v2i1.396.

[46] C. K. Loudon and P. J. Loudon, "Management Information System," 2016. [Online]. Available: http://www.pearsonmylabandmastering.com

[47] Obrien & Marakas, "James_OBrien_George_Marakas_Management_I," 2010.

[48] B. Borena and S. Negash, "IT Infrastructure Role in the Success of a Banking System: The Case of Limited Broadband Access," *Inf Technol Dev*, vol. 22, no. 2, pp. 265–278, Apr. 2016, doi: 10.1080/02681102.2014.979392.

[49] N. Çeliköz, Y. Erişen, and A. Mehmet Şahin, "Cognitive Learning Theories with Emphasis On Latent Learning, Gestalt and Processing Information Theory," *Journal of Educational and Instructional Studies in the World*, vol. 9, no. 3, pp. 18–33, 2019.

[50] L. Da Xu, W. He, and S. Li, "Internet of things in industries: A survey," *IEEE Transactions on Industrial Informatics*, vol. 10, no. 4. IEEE Computer Society, pp. 2233–2243, Nov. 01, 2014. doi: 10.1109/TII.2014.2300753.

[51] W. Hasselbring, "Information system integration," *Commun ACM*, vol. 43, no. 6, pp. 32–38, Jun. 2000, doi: 10.1145/336460.336472.

[52] A. Parasuraman, "Technology Readiness Index (TRI) A Multiple-Item Scale to Measure Readiness to Embrace New Technologies," *Journal of Service Research, Publisher Sage Publications*, vol. 2, no. 4, pp. 307–320, 2000, doi: https://doi.org/10.1177/109467050024001.

[53] M. H. Lee and C. C. Tsai, "Exploring teachers' perceived self efficacy and technological pedagogical content knowledge with respect to educational use of the World wide Web," *Instr Sci*, vol. 38, no. 1, pp. 1–21, Jan. 2010, doi: 10.1007/s11251-008-9075-4.

[54] T. Teo and M. Zhou, "Explaining the intention to use technology among university students: A structural equation modeling approach," *J Comput High Educ*, vol. 26, no. 2, pp. 124–142, 2014, doi: 10.1007/s12528-014-9080-3.

[55] P. Legris, J. Ingham, and P. Collerette, "Why do people use information technology? A critical review of the technology acceptance model," *Information and Management*, vol. 40, no. 3, pp. 191–204, Jan. 2003, doi: 10.1016/S0378-7206(01)00143-4.

[56] C. S. Bruce, "Information Literacy: understanding peoples' information and learning experiences," 2008.

[57] Limberg and Sundin Olof, "Three theoretical perspectives on information literacy," *HUMAN IT*, vol. 11, no. 2, pp. 93-130 2012.

[58] S. Deepmala and A. K. Upadhyay, "Information Literacy: An Overview," *Ilkogretim Online - Elementary Education Online*, vol. 20, no. 1, pp. 4227–4234, 2021, doi: 10.17051/ilkonline.2021.01.465.

[59] T. Koltay, "The media and the literacies: Media literacy, information literacy, digital literacy," *Media Cult Soc*, vol. 33, no. 2, pp. 211–221, Mar. 2011, doi: 10.1177/0163443710393382.

[60] M. Indriyani, Moh. Safii, and Y. Pratiwi, "Information Literacy Level of State University Of Malang Students Participant in National Students Scientific Week 2018-2019.," *Baca*, vol. 42, no. 1, pp. 31–42, Nov. 2021, doi: 10.14203/j.baca.v42i1.713.

[61] I. A. Mokhtar, S. Majid, and S. Foo, "Information literacy education: Applications of mediated learning and multiple intelligences," *Libr Inf Sci Res*, vol. 30, no. 3, pp. 195–206, Sep. 2008, doi: 10.1016/j.lisr.2007.12.004.

[62] E. M. Rogers, A. Singhal, and M. M. Quinlan, "Diffusion of innovations 1," *An Integrated Approach to Communication Theory and Research*, vol. 1, no. 1, pp. 415–434, Mar. 2019. doi:10.4324/9780203710753-35

[63] O. Durodolu, "Technology Acceptance Model as a predictor of using information system' to acquire information literacy skills," *Library Philosophy and Practice*, vol. 2016, no. 1, 2016.

[64] I. Ajzen, "The theory of planned behavior," *Organ Behav Hum Decis Process*, vol. 50, no. 2, pp. 179–211, 1991, doi: 10.1016/0749-5978(91)90020-T.

[65] S. Wolming and C. Wikström, "The concept of validity in theory and practice," *Assess Educ*, vol. 17, no. 2, pp. 117–132, May 2010, doi: 10.1080/09695941003693856.

[66] C. (Renee) Wang and M. Jeong, "What makes you choose Airbnb again? An examination of users' perceptions toward the website and their stay," *Int J Hosp Manag*, vol. 74, no., pp. 162–170, Aug. 2018, doi: 10.1016/j.ijhm.2018.04.006.

[67] D. M. Eddy, W. Hollingworth, J. J. Caro, J. Tsevat, K. M. McDonald, and J. B. Wong, "Model transparency and validation: A report of the ISPOR-SMDM modeling good research practices task force-7," *Medical Decision Making*, vol. 32, no. 5, pp. 733–743, Sep. 2012, doi: 10.1177/0272989X12454579.

[68] C. J. Giovannini, J. B. Ferreira, J. F. da Silva, and D. B. Ferreira, "The effects of trust transference, mobile attributes and enjoyment on mobile trust," *BAR - Brazilian Administration Review*, vol. 12, no. 1, pp. 88–108, 2015, doi: 10.1590/1807-7692bar2015140052.

[69] F. Persson and M. Thorslund, "Factors for perceived trust in mobile applications," Thesis, Universiti of Boras, Boras, Swedia, 2018.

[70] F. Yusuf, A. Subiyakto, and T. Khawa, "Seventh International Conference on Informatics and Computing (ICIC) 2022," in *The Evaluation on Acceptance of the Use of Social Media in the Implementation of Blended Learning in Private Higher Education in Indonesia*, Bali, Indonesia: IEEE; Seventh International Conference on Informatics and Computing (ICIC), Dec. 2022, pp. 1–7. doi: 10.1109/ICIC56845.2022.10006922.

[71] R. V Krejcie, "Determining Sample Size for Research Activities," 1970.

[72] S. Abdul, R. Bukhari, and M. Ali, "Sample Size Determination Using Krejcie and Morgan Table", doi: 10.13140/RG.2.2.11445.19687.

[73] Jr. Joseph F. Hair, G. Tomas M. Hult, Christian M. Ringle, and Marko Sarstedt, "A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM) Second Edition," 2017.

[74] J. Henseler, C. M. Ringle, and M. Sarstedt, "A new criterion for assessing discriminant validity in variance-based structural equation modeling," *J Acad Mark Sci*, vol. 43, no. 1, pp. 115–135, Jan. 2015, doi: 10.1007/s11747-014-0403-8.

[75] J. Cohen, *Statistical Power Analysis for the Behavioral Sciences Second Edition*, vol. 2nd Edition. New York, 1988.

[76] Y. Shi and F. Peng, "A blended learning model based on smart learning environment to improve college students' information literacy," *IEEE Access*, vol. 10, no., pp. 89485–89498, 2022, doi: 10.1109/ACCESS.2022.3201105.

[77] L. Yu, S. Chen, and M. Recker, "Structural relationships between self-regulated learning, teachers' credibility, information and communications technology literacy and academic performance in blended learning," *Australasian Journal of Educational Technology*, vol. 2021, no. 4, pp. 33–50, Apr. 2021, doi: https://doi.org/10.14742/ajet.5783.

[78] S. Geng, K. M. Y. Law, and B. Niu, "Investigating self-directed learning and technology readiness in blending learning environment," *International Journal of Educational Technology in Higher Education*, vol. 16, no. 17, p. 0, Dec. 2019, doi: 10.1186/s41239-019-0147-0.

[79] Y. J. Wu, M. Goh, and Y. Mai, "Social innovation and higher education: evolution and future promise," *Humanities and Social Sciences Communications*, vol. 10, no. 1. Springer Nature, pp. 1–14, Dec. 01, 2023. doi: 10.1057/s41599-023-01759-y.

[80] R. Nadlifatin, B. Ardiansyahmiraja, and S. F. Persada, "The measurement of university students' intention to use blended learning system through technology acceptance model (tam) and theory of planned behavior (TPB) at developed and developing regions: Lessons learned from Taiwan and Indonesia," *International Journal of Emerging Technologies in Learning*, vol. 15, no. 9, pp. 219–230, 2020, doi: 10.3991/ijet.v15i09.11517.