

Home / User / Author / Submissions / #2302 / Summary

Summary Review Editing

Submission

Authors Mesta Limbong, Jitu Halomoan Lumbantoruan

Title The Impact of the Blended Learning Model with Online Skills on the Learning Independence of High School Students

Original file 2302-6137-1-SM.docx 2022-11-24

Supp. files None

Submitter Jitu Lumbantoruan

Date submitted November 24, 2022 - 09:57 AM

Section Articles

Editor Berru Amalianita

Author comments To YTH Journal Editor JPPI.
Here we attach an article of our research results. Please help to follow up. We are following the Fast Track Review. When it's finished in the review, we will pay it together with the publication fee. Thank you

True Halomoan

Abstract Views 0

Author Fees

Fast Track Review: Paid December 8, 2022 - 01:05 PM



JPPI (Jurnal Penelitian Pendidikan Indonesia) is Nationally Accredited in SINTA 2

Accreditation Number

(Ministry of Research and Technology /National Agency for Research and Innovation): 200/M/KPT/2020, No 77 pp.15 date December 23, 2020.



True Halomoan

Abstract Views 0

Author Fees

Fast-Track Review: Paid December 8, 2022 - 01:05 PM

Article Processing Charges (APCs) Paid December 8, 2022 - 01:05 PM

Status

Status Published Vol 8, No 4 (2022): JPPI (Jurnal Penelitian Pendidikan Indonesia)

Initiated 2022-12-26

Last modified 2023-02-21

Submission Metadata

Authors

Name Mesta Limbong

ORCID iD <http://orcid.org/0000-0002-9109-7404>

Affiliation Universitas Kristen Indonesia

Country Indonesia

Bio Statement -

Name Jitu Halomoan Lumbantoruan

Affiliation Universitas Kristen Indonesia



[Register](#)

- [Contact Us](#)
- [Editorial Team](#)
- [Reviewers](#)
- [Focus and Scope](#)
- [Publication Ethics](#)
- [Section Policies](#)

Name Mesta Limbong
ORCID ID http://orcid.org/0000-0002-9109-7404
Affiliation Universitas Kristen Indonesia
Country Indonesia
Bio Statement -

Name Jitu Halomoan Lumbantoruan
Affiliation Universitas Kristen Indonesia
Country Indonesia
Bio Statement -

Principal contact for editorial correspondence.

Title and Abstract

Title The Impact of the Blended Learning Model with Online Skills on the Learning Independence of High School Students

Abstract The purpose of this study was to determine the effectiveness of blended learning management and online skills on student learning independence in the North Tapanuli region. The low direct interaction between teachers and students is caused by restrictions and the distance that must be done, forcing students to study independently. However, not all students have online skills. Therefore, teachers must develop competencies by presenting the right model and in accordance with government policies, can be online and offline. This learning model is blended learning. Teachers have no other choice but to carry out good blended learning management so that learning activities can continue. The

- Contact Us
Editorial Team
Reviewers
Focus and Scope
Publication Ethics
Section Policies
Open Access Policy
Privacy Statemet
Journal History
Author Guidelines

Contact Us



students' online skills is 52.10%. The conclusion is that in order to increase student learning independence, the teacher must carry out the learning process with the blended learning model to the fullest. However, this model must still be supported by the provision of online student skills

Download Manuscript Template

Indexing

Academic discipline and sub-disciplines

Keywords Blended Learning, Online Skills, Independent Learning

Geo-spatial coverage

Chronological or historical coverage

Research sample characteristics

Type, method or approach

Language en

USER

You are logged in as...

0111110

My Journals

My Profile

Log Out

AUTHOR

Submissions

Active (0)

Archive (1)

New Submission

NOTIFICATIONS

Supporting Agencies

Agencies Universitas Kristen Indonesia

References

References Alshawabkeh, A. A., Woolsey, M. L., & Kharbat, F. F. (2021). Using online information technology for deaf students during COVID-19: A closer look from experience. *Heliyon*, 7(5), e06915.1-12. <https://doi.org/10.1016/j.heliyon.2021.100691>

Azizah, I. N., & Widjajanti, D. B. (2019). Keefektifan pembelajaran berbasis proyek ditinjau dari proaktifitas, kepercayaan diri siswa, dan kepercayaan diri siswa. *Jurnal Riset Pendidikan Matematika*, 6(2), 233–243. <https://doi.org/10.1016/j.jrpm.2019.02.001>

Bdair, I. A. (2021). Nursing students' and faculty members' perspectives about online learning during COVID-19 pandemic. *Teaching and Learning in Nursing*, 16(3), 220–226. <https://doi.org/10.1016/j.teln.2021.02.001>

Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, G. J. (2020). The impact of quarantine and how to reduce it: rapid review of the evidence. *The Lancet*, 395(10227), 912–920. [https://doi.org/10.1016/S0140-6736\(20\)30460-8](https://doi.org/10.1016/S0140-6736(20)30460-8)

Chiu, T. K. F. (2021). Digital support for student engagement in blended learning based on self-determination theory. *Human Behavior*, 124(June), 106909.1-10. <https://doi.org/10.1016/j.chb.2021.106909>

Chulsum, U. (2017). Pengaruh Lingkungan Keluarga, Kedisiplinan Siswa, Dan Motivasi Belajar Terhadap Prestasi Belajar Siswa SMA Negeri 7 Surabaya. *Jurnal Ekonomi Pendidikan Dan Kewirausahaan*, 5(1), 1–16. <https://doi.org/10.1016/j.jepk.2017.01.001>

Dwivedi, A., Dwivedi, P., Bobek, S., & Sternad Zabukovšek, S. (2019). Factors affecting students' acceptance of blended learning. *Kybernetes*, 48(7), 1500–1515. <https://doi.org/10.1108/K-10-2018-0559>

Fadhli, K. (2020). TERHADAP SEMANGAT KERJA DAN KINERJA TENAGA PENDIDIK (Studi Kasus: Guru-Guru di Wilayah Pesisir). *Persaingan*, 4(2), 35–50. <https://doi.org/10.32764/margi.v4i2.10001>

Feitosa de Moura, V., Alexandre de Souza, C., & Noronha Viana, A. B. (2021). The use of Massive Open Online Courses and the functional value perceived by students. *Computers and Education*. <https://doi.org/10.1016/j.compedu.2020.104077>

NOTIFICATIONS

View (2 new)
Manage

JOURNAL CONTENT

Search

Search Scope
All

Search

Browse

- By Issue
- By Author
- By Title
- Other Journals

Pandemi COVID-19 Pada Peserta Didik Di Sma Dan Smk Kota Salatiga. Satya Widya, 37(2), 79-91.

<https://doi.org/10.24246/j.sw.2021.v37.i2.p79-91>

Sugiarti. (2020). Inovasi Desain Pembelajaran Bahasa, Sastra Berbasis Konsepsi Merdeka Belajar Pada Era Kehidupan Baru. In <https://medium.com/> (pp. 1-142). <https://medium.com/@arifwicaksanaa/pengertian-use-case-a7e576e1b6bf>

Syahrudin, S., Yaakob, M. F. M., Rasyad, A., Widodo, A. W., Sukendro, S., Suwardi, S., Lani, A., Sari, L. P., Mansur, M., Razali, R., & Syam, A. (2021). Students' acceptance to distance learning during Covid-19: the role of geographical areas among Indonesian sports science students. *Heliyon*, 7(9), e08043.1-9. <https://doi.org/10.1016/j.heliyon.2021.e08043>

V. J. Caiozzo, F. Haddad, S. Lee, M. Baker, W. P. and K. M. B., Burkhardt, H., Ph, R. O., Vogiatzis, G., Hernández, C., Priese, L., Harker, M., O'Leary, P., Geometry, R., Analysis, G., Amato, G., Ciampi, L., Falchi, F., Gennaro, C., Ricci, E., Rota, S., Snoek, C., Lanz, O., Goos, G., ... Einschub, M. (2019). Kebijakan Pendidikan Di Era New Normal. *Society*, 2(1), 1-19. http://www.scopus.com/inward/record.url?eid=2-s2.0-84865607390&partnerID=tZOtx3y1%0Ahttp://books.google.com/books?hl=en&lr=&id=2LIMMD9FVXkC&oi=fnd&pg=PR5&dq=Principles+of+Digital+Image+Processing+fundamental+techniques&ots=HjrHeuS_

Yangari, M., & Inga, E. (2021). Article educational innovation in the evaluation processes within the flipped and blended learning models. *Education Sciences*, 11(9), 1-24. <https://doi.org/10.3390/educsci11090487>

Yustina, Syafii, W., & Vebrianto, R. (2020). The effects of blended learning and project-based learning on pre-service biology teachers' creative thinking skills through online learning in the COVID-19 pandemic. *Jurnal Pendidikan IPA Indonesia*, 9(3), 408-420. <https://doi.org/10.15294/jpii.v9i3.24706>



CONTACT

LINKS

PUBLISHED BY:

Principal

About

Indonesian Institute for Counseling, Education and

Home / User / Author / Submissions / #2302 / Review

Summary Review Editing

Submission

Authors Mesta Limbong, Jitu Halomoan Lumbantoruan

Title The Impact of the Blended Learning Model with Online Skills on the Learning Independence of High School Students

Section Articles

Editor Berru Amalianita

Peer Review

Round 1

Review Version 2302-6138-3-RV.docx 2022-12-12

Initiated 2022-12-08

Last modified 2022-12-21

Uploaded file Reviewer B 2302-6735-1-RV.docx 2022-12-21

Editor Decision

Decision Accept Submission 2022-12-26

Notify Editor Editor/Author Email Record 2022-12-18



JPPI (Jurnal Penelitian Pendidikan Indonesia) is Nationally Accredited in **SINTA 2**

Accreditation Number

(Ministry of Research and Technology /National Agency for Research and Innovation): 200/M/KPT/2020, No 77 pp.15 date December 23, 2020.



Round 1

Review Version [2302-6138-3-RV.docx](#) 2022-12-12
 Initiated 2022-12-08
 Last modified 2022-12-21
 Uploaded file Reviewer B [2302-6735-1-RV.docx](#) 2022-12-21

Editor Decision

Decision Accept Submission 2022-12-26
 Notify Editor [Editor/Author Email Record](#) 2022-12-18
 Editor Version [2302-6455-2-ED.docx](#) 2022-12-12
 Author Version [2302-6812-1-ED.docx](#) 2022-12-25 [Delete](#)

Upload Author Version No file chosen

(Ministry of Research and Technology /National Agency for Research and Innovation): 200/M/KPT/2020, No 77 pp.15 date December 23, 2020.



[+ Register](#)

Home / User / Author / Submissions / #2302 / Editing

Summary Review Editing

Submission

Authors Mesta Limbong, Jitu Halomoan Lumbantoruan
Title The Impact of the Blended Learning Model with Online Skills on the Learning Independence of High School Students
Section Articles
Editor Berru Amalianita

Copyediting

Copyedit Instructions

Table with 4 columns: Review Metadata, Request, Underway, Complete. Row 1: Initial Copyedit, File: None. Row 2: Author Copyedit.



JPPI (Jurnal Penelitian Pendidikan Indonesia) is Nationally Accredited in SINTA 2

Accreditation Number

(Ministry of Research and Technology /National Agency for Research and Innovation): 200/M/KPT/2020, No 77 pp.15 date December 23, 2020.



File: None

Copyedit Comments No Comments

Layout

Galley Format File
None

Supplementary Files File
None

Layout Comments No Comments

Proofreading

Review Metadata

	Request	Underway	Complete
1. Author	—	—	—
2. Proofreader	—	—	—
3. Layout Editor	—	—	—

Proofreading Corrections No Comments Proofing Instructions



Register

- Contact Us
- Editorial Team
- Reviewers
- Focus and Scope
- Publication Ethics
- Section Policies
- Open Access Policy



Home / User / Author / Archive

Active Archive

ID	MM-DD	Sec	Authors	Title	Status
2302	11-24	ART	Limbong, Lumbantoruan	The Impact of the Blended Learning Model with Online...	Vol 8, No 4 (2022): JPPI (Jurnal Penelitian Pendidikan Indonesia)

1 - 1 of 1 Items

Start a New Submission



JPPI (Jurnal Penelitian Pendidikan Indonesia) is Nationally Accredited in **SINTA 2**

Accreditation Number

(Ministry of Research and Technology /National Agency for Research and Innovation): 200/M/KPT/2020, No 77 pp.15 date December 23, 2020.

Submit

2302	11-24	ART	Limbong, Lumbantoruan	The Impact of the Blended Learning Model with Online...	Vol 8, No 4 (2022): JPPI (Jurnal Penelitian Pendidikan Indonesia)
------	-------	-----	-----------------------	---	---

1 - 1 of 1 Items

Start a New Submission

Click here to go to step one of the five-step submission process.

Refbacks

- All
- New
- Published
- Ignored

Date Added	Hits	URL	Article	Title	Status	Action
<input type="checkbox"/> 2023-01-03	2	https://scholar.google.co.id/	The Impact of the Blended Learning Model with Online Skills on the Learning Independence of High School Students		New	Edit Delete
<input type="checkbox"/> 2023-01-12	12	https://scholar.google.com/	The Impact of the Blended Learning Model with Online Skills on the Learning Independence of High School Students		New	Edit Delete

Indonesia) is Nationally Accredited in SINTA 2

Accreditation Number

(Ministry of Research and Technology /National Agency for Research and Innovation): 200/M/KPT/2020, No 77 pp.15 date December 23, 2020.



Date Added	HITS	URL	ARTICLE	Title	Status	ACTION
<input type="checkbox"/> 2023-01-03	2	https://scholar.google.co.id/	The Impact of the Blended Learning Model with Online Skills on the Learning Independence of High School Students	—	New	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input type="checkbox"/> 2023-01-05	12	https://scholar.google.com/	The Impact of the Blended Learning Model with Online Skills on the Learning Independence of High School Students	—	New	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input type="checkbox"/> 2023-01-24	2	http://sister.uki.ac.id/	The Impact of the Blended Learning Model with Online Skills on the Learning Independence of High School Students	—	New	<input type="button" value="Edit"/> <input type="button" value="Delete"/>
<input type="checkbox"/> 2023-02-01	1	https://www.google.com/	The Impact of the Blended Learning Model with Online Skills on the Learning Independence of High School Students	—	New	<input type="button" value="Edit"/> <input type="button" value="Delete"/>

1 - 4 of 4 Items



-
-
-
-
-
-
-
-
-



Contents lists available at [Journal IICET](#)

JPPI (Jurnal Penelitian Pendidikan Indonesia)

ISSN: 2502-8103 (Print) ISSN: 2477-8524 (Electronic)

Journal homepage: <https://jurnal.iicet.org/index.php/jppi>



1
2
3
4
5
6

The Impact of the Blended Learning Model with Online Skills on the Learning Independence of High School Students

ABSTRACT

Article Info

Article history:

Received Jun 12th, 201x

Revised Aug 20th, 201x Accepted Aug 26th, 201x

Keyword:

Blended Learning, Online Skills, Independent Learning

Corresponding Author:

Jitu Halomoan Lumbantoruan The purpose of this study was to determine the effectiveness of blended learning management and online skills on student learning independence in the North Tapanuli region. The low direct interaction between teachers and students is caused by restrictions and the distance that must be done, forcing students to study independently. However, not all students have online skills. Therefore, teachers must develop competencies by presenting the right model and in accordance with government policies, can be online and offline. This learning model is blended learning. Teachers have no other choice but to carry out good blended learning management so that learning activities can continue. The method in this research is quantitative with the type of ex post facto research, namely comparative causal research. The data collection technique is by distributing instruments in the form of questionnaires to each teacher respondent by first making a Google form link. The population in the study were all teachers in North Tapanuli with a sample of 90 people from 4 schools that were spread out. Data analysis techniques are correlation and regression. The results of the study show that blended learning management and online skills have an impact on student learning independence. The impact of the blended learning model and students' online skills is 52.10%. The conclusion is that in order to increase student learning independence, the teacher must carry out the learning process with the blended learning model to the fullest. However, this model must still be supported by the provision of online student skills.



© 2020 The Authors. Published by IICET.

This is an open access article under the CC BY-NC-SA license (<https://creativecommons.org/licenses/by-nc-sa/4.0>)

Fakultas Keguruan dan Ilmu Pendidikan, Universitas Kristen Indonesia

Email: jituhalomoan.lumbantoruan@gmail.com

7

8 Introduction

9 The emergence of distance learning activities in Indonesia is a policy carried out by 10 the government in striving for the learning and learning process to continue according to

11 expectations from the curriculum that has been planned, even though it is still in a

12 pandemic condition that has not been completed.(Puspitasari, 2018). The government has
13 socialized and given authority to schools and tertiary institutions in using the appropriate
14 APA learning model for the learning process in their schools and tertiary institutions. Taking

15 this policy into account, schools must still pay attention to and understand that the places
16 that have the most potential to cause crowds large so and have a fairly high risk of 17 spreading Covid-19 (Julaeha,
2019). The application of online distance learning policies 18 requires students to study independently at their
respective homes (V. J. Caiozzo, F. Haddad,
19 S. Lee, M. Baker et al., 2019). This is due to direct interactions that have been carried out so
20 far and must be avoided and can only communicate through digital media (Brooks et al.,
21 2020). However, with the rapid development of technology and the lack of time in adjusting
22 the ability to master technology. In overcoming this the learning process can be done partly 23 online and partly
face-to-face but limited (Rasheed et al., 2020). With a learning model like 24 this, students are expected to have
their own initiative to explore different learning 25 resources to gain knowledge according to WHAT the students
themselves want and need. 26 This learning process method requires a lot of great responsibility, high self-discipline,
and 27 skills in utilizing learning resources (Niemi, 2002). With the implementation of this hope, the 28 learning
process is ensured to be effective and run as previously planned.

29 In measuring the learning independence of students, it can be measured from the
30 process they learn until they get the specified results (Handayani & Ariyanti, 2021). This
31 independence can be seen from the following characteristics: a) having the ability to plan 32 and choose
learning materials independently; b) Having initiative and self-motivation 33 without having to be directed;
c) is responsible for carrying out his own work; d) critical, 34 logical and open to all; e) have a high sense of
self-confidence. With the appearance of a

35 high sense of confidence, it will also generate high enthusiasm in completing the work
36 (Fadhli, 2020). Student learning independence is influenced by several factors including 37 motivation, place of
study, learning aids, time availability, economic conditions, and skills in 38 using online media (Jayawardena et al.,
2020). Skills in using online media include operating 39 and writing skills in zoom media and Google meet during the
learning process. This skill can 40 be acquired by students by independent study, with independent study will have
an impact 41 on great curiosity, more critical thinking in decision making, innovation and high self42 confidence (Fey
et al., 2020). These indicators are important things that must be possessed

43 by students in learning. With social restrictions having a negative impact on students in 44 carrying out independent
learning at home. Adult interference in learning for students can 45 have a negative impact on the development of their
independent learning. While very 46 limited interaction between teachers and students, it will reduce enthusiasm for 47
independent learning (Grewenig et al., 2021). The motivation that is usually obtained from 48 face-to-face learning is very
useful. This is what requires teachers to have the obligation to 49 balance between direct interaction and monitoring
developments in online media mastery 50 (Rovai, 2000).

51 Recognizing the importance of student learning independence, teachers should look 52 for appropriate learning
methods to meet current government policies in online and offline

53 learning (Selvaraj et al., 2021). Learning with a new life order requires teachers to make
54 changes by developing basic skills. This is based on the fact that there is an ongoing 55 transition process from the
face-to-face learning process method to the online learning 56 process method (Sugiarti, 2020). One choice of
suitable method is to combine online and

57 face-to-face learning, which is known as a learning style by combining the two methods
58 which is called the blended learning model. The blended learning model has many
59 advantages, including flexibility, cost-effectiveness, and interactivity (Mali & Lim, 2021). The 60 blended learning
application model can be adapted to the current state of students (Yangari 61 & Inga, 2021). Online learning or
online learning allows students to access various learning 62 resources online from anywhere they want, anytime
and anywhere (Bdair, 2021). This can 63 also be done during direct discussion activities in the classroom face-to-
face or online from

64 home. The concept of blended learning management is one of the steps that must be
65 implemented so that quality learning activities are carried out (Dwivedi et al., 2019). Steps 66 that must be done by
the teacher is Lapitan et al., (2021): 1) Implement learning plans, 2) 67 material for learning activities based on

blended learning, must be able to be discussed in face-to-face and online meetings; 3) It must be in the form of an assessment by the teacher,

namely the teacher provides an assessment or assessment, both attitude, knowledge and skills assessment according to the characteristics of blended learning; 4) teachers can implement blended learning management methods, for example carrying out learning activities using hybrid learning methods.

However, in carrying out this learning model, teachers face different obstacles in carrying out blended learning management (Feitosa de Moura et al., 2021). Learning

methods are applied suddenly, resulting in them not understanding in depth how the blended learning form of learning management can work well (Gjestvang et al., 2021).

Teachers do not have extensive experience with applying this model and little information about the blended learning methods they receive (Chiu, 2021). Teachers in carrying out dominant online learning only give assignments to students without a clear division between material that will be done independently and that which is done during face-to-face learning

(Garrison & Kanuka, 2004). Independent learning according to the development of the current technological era requires special skills in obtaining information or sources that can be used in developing the material they will teach (Lavi et al., 2021). Special skills when online provide opportunities for students to be able to define a problem with their own thinking concepts, gather information, analyze it, and freely find solutions to the problem.

This skill is particularly useful in today's times as it saves time and money and can obtain information quickly (Sjølie et al., 2021). But the fact is, there is still a gap in the skills of students (Alshawabkeh et al., 2021).

In general, when viewed from its geographical location, students who live in dominant urban areas have the ability to use technology and operate online media properly (Syahrudin et al., 2021). This is supported by the facilities and infrastructure available in the student environment. But on the other hand, skills in using this technology will be seen in rural areas, where students still experience limited facilities and infrastructure, for example the limited availability of internet access in their environment. In addition, students also need assistance from adults, especially regarding ethical and safety factors in the use of technology (Laksana, 2021). Previous research stated that 21st century skills require online skills in technical aspects, information and communication, collaboration, critical thinking, creativity, and specific skills in solving problems through the use of the latest technology (Yustina et al., 2020). Other research shows that digital skills have a positive

effect on the work readiness of the millennial generation in urban areas such as Jakarta (Hendayani, 2019). Interest in learning is also strongly influenced by the ability to operate technology, students who are equipped with good technological knowledge can access various learning resources properly (Sailer et al., 2021). With a good interest in learning, students will automatically be independent in carrying out learning activities (Lee et al.,

2021). In this case, this study focuses on research to find out how effectively students use online skills with the blended learning model used by teachers to support independent learning processes. Based on the background above, the sub focus that will be examined in this study is whether there is an effect of the management of the blended learning model with online skills on the learning independence of North Tapanuli district students? The

purpose of this study was to determine the effectiveness of blended learning management and online skills on student learning independence in the North Tapanuli region. Introduction.

Method

In this study using a quantitative method with the type of export facto where the research is causal comparative (Harapan et al., 2020). Researchers try to find causal linkages in certain problems. The problem in this research is the link between blended learning management and online skills on students' learning independence. The location of this research was

conducted at public and private high schools (SMA) in North Tapanuli Regency, North Sumatra. At the time of testing the instrument was conducted on 20 teacher respondents who were not part of the research sample. The population in this study were all public and

private high school (SMA) teachers in North Tapanuli district, with the research sample being teachers who taught at public high school (SMA) 1 and PGRI 20 Si borong-borong, high school Negeri 1 and Negeri 2 Tarutung with a total of 90 teachers who were directly involved as respondents. The data collection technique was by distributing instruments in the form of

125 a questionnaire directly to the respondent's WhatsApp number by making a Google form link 126 that had been prepared by the researcher and could be accessed by respondents via 127 cellphone or laptop. The instrument is a statement that has alternative answers as follows: 128 SL = Always (5), S = Often (4), K = Sometimes (3), J = Rarely (2), TP = Never (1). Data

129 analysis techniques with correlation and regression analysis methods. The variables in this 130 study are blended learning management (X1), Online Skills (X2), and independent learning

131 (Y). In this study, researchers conducted a t test (partial test) which aims to find out how 132 significant the independent variable is to the dependent variable with a temporary 133 assumption that the other independent variables are considered constant. Whereas the F 134 test in this study was to determine the effect of all the independent variables contained in 135 the model simultaneously on the dependent variable. The following are indicators and 136 research grids:

137 Table 1. Learning Independence Instrument Grid

138	Number	Indicator
139		
140	1	Have Initiative
141	2	Have high responsibility
142	3	Self-Discipline
143	4	Self-control

144 Table 2. Grid
145 of Blended Learning Management Instruments

146	Number	Indicator
147	1	Blended Learning planning management
148	2	Management of the implementation of Blended Learning
149	3	Blended Learning learning evaluation management
150	4	Blended Learning development management

151 Tabel 3.
152 Kisi-kisi Instrumen Ketrampilan Online

153	Number	Indicator
154		
155	1	Information Skills online
156	2	Intelligence Communicate online (Communication Digital Skills)
157	3	Media collaboration (Collaboration Digital Skills)
158	4	Creative (Creative Digital Skills)
	5	Problem solving (Problem solving skills)

159 Results and Discussions

160 Results

161 Based on research conducted in North Tapanuli district, from a sample of 4 schools in two
162 different sub-districts, namely state 1 high school and PGRI 20 high school in Si Borong
163 Borong district and Tarutung state 1 and state 2 high school, the data is as follows following. 164 The results of research on aspects of learning independence, blended learning 165 management, and online skills can be seen descriptively in the following table.

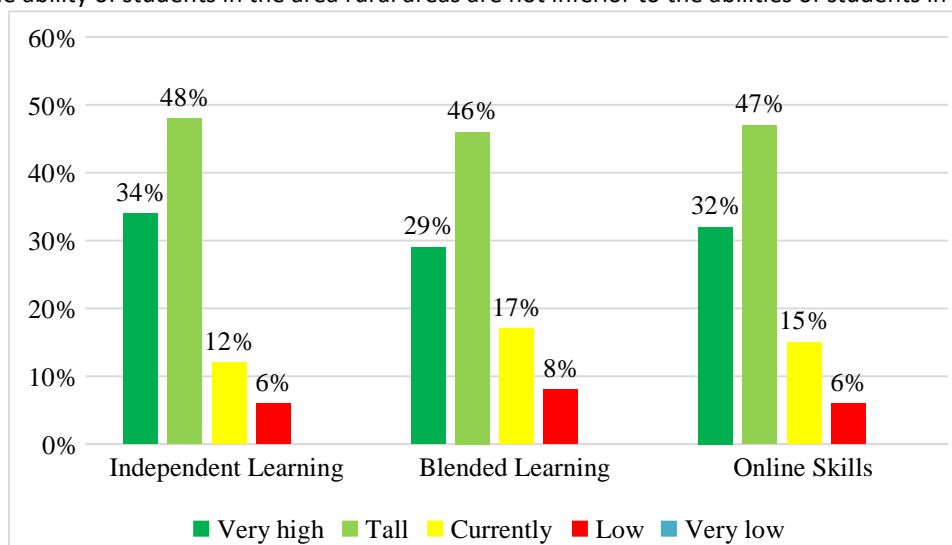
166 Table 4. Descriptive Results of Independent Learning, Management of Blended Learning and 167 Digital Skills

Information	Independent Learning	Blended Learning Online Skills
-------------	----------------------	--------------------------------

N	90	90	90
Mean	4,00	3.92	3,81
Range	2,50	2,81	2,76

Std. Deviation	0,47	0,45	0,48
Maximum	4,73	5,03	4,96
Minimum	2,42	2,09	2,05

0 Based on the descriptive table above it can be seen that the data with the average score obtained by the learning
 1 independence indicator shows that, in North Tapanuli district the level of independence of students in learning is
 2 quite high, this data obtained a fairly good distribution of data by looking at the standard deviation of 0.47 where
 3 the data can be are responsible for the source of the information. By looking at table 4, the blended learning indicator
 4 with an average score obtained is 3.92, meaning that the learning model used in North Tapanuli district has been
 5 running well and is effectively used for the learning process in the future. The same thing can also be seen in the
 6 skills indicator when online, with an average of 3.81, meaning that the skills of students are considered by the
 7 teacher to be very good by comparing the assessment of the maximum score given by the teacher on online skills of
 8 4.96 then, the ability of students in the area rural areas are not inferior to the abilities of students in urban areas.



9
10 Figure 1. Learning Independence Histogram, Blended Learning and Online Skills

11 Based on Figure 1 above, it is known that students who are in the North Tapanuli district have a fairly high
 12 learning independence. This can be seen from diagram 1, of the 90 teachers who were respondents there were 34%
 13 and 48% who said that the students taught by them were very high and had high independence in learning. This is
 14 in line with the average in table 4, which is 4.00 from a maximum scale of 4.73. The blended learning management
 15 indicator presents frequency data from teachers who have blended learning management skills in the "very high"
 16 category of 29% and high 46%. Or 66%. Even so, there are also teachers who think that not all students can fulfill the
 17 blended learning model, there are 17% in the medium category and 8% in the low category. This can be used as
 18 input for education circles to improve and investigate the obstacles of low students in following the blended learning
 19 model. In terms of skills when online, students who are in North Tapanuli are rated by the teacher very high and
 20 there are 32% and 42% high. This has a positive impact on the progress of education in the North Tapanuli area in
 21 dealing with emergency situations such as the Covid pandemic.

22 In knowing the effect of blended learning management (X_1) and online skills (X_2) on student learning
 23 independence (Y), the researcher conducted a multiple regression analysis test. The results of this multiple
 24 regression analysis are shown in the table below:

25 Table 5. Results of Multiple Linear Regression Analysis X_1 and X_2 against Y

Model	Unstandardized		Standardized	t	Sig.
	B	Std. Error	Beta		

Constant	0,476	0,243		1.276	0,051
Blended Learning Management	0,510	0,058	0,476	7.085	0,000
Online Skills	0,488	0,053	0,478	5.067	0,000
<u>Student Learning Independence</u>	<u>0.521</u>	<u>0.051</u>	<u>0.467</u>	<u>6.890</u>	<u>0.000</u>

201
 202 Based on the results of multiple linear regression tests as shown in the table above,
 203 that the significance of the Blended Learning Management variable (X_1) is $0.000 < 0.05$, and
 204 $t_{count} 7.0853 > t_{table} 1.984$, this can be interpreted that H_0 is rejected and H_1 is accepted
 205 which means that there is a significant influence of the blended learning management 206 variable in the
 implementation of learning conducted by teachers in the North Tapanuli 207 district on high school level
 students with an effect of 51.0%. On the online skills indicator, a 208 significance of $0.000 < 0.05$, and t_{count}
 $5.0657 > t_{table} 1.984$ is obtained, this can be 209 interpreted as H_0 being rejected and H_1 being accepted.
 This means that there is a 210 significant influence of students' online skills on learning independence. The
 effect is 48.8%.

211 The results of the F test analysis with blended learning management variables (X_1) and
 212 online skills (X_2) on student learning independence (Y) obtained a significance of 0.000
 213 < 0.05 and the calculated F_{value} of $68.90 > F_{table} 2.32$, this is it can be interpreted that H_0 is 214 rejected and H_1 is
 accepted, which means that the teacher's blended learning management 215 model (X_1) and online skills (X_2) have
 a relationship to student learning independence (Y) 216 with a variation in Y of 52.10%.

217 Discussions

218 From the results of the descriptive analysis, it can be seen that the learning 219 independence of high school
 students in the North Tapanuli region shows that 34% is very 220 high and 48% is high. This was assessed by the
 teachers who taught and from 90 teacher 221 respondents, only 6% had a low opinion of independence study high
 school in North 222 Tapanuli and the remaining 12% are moderate. This certainly has a positive impact on the 223
 development of education in the area, especially in the North Tapanuli region, North
 224 Sumatra which is classified as far from urban areas. This finding refutes previous findings 225 which say that
 independent learning is dominantly carried out by participants students who
 226 are in urban areas (Soesilo et al., 2022). These findings show the independence of students
 227 through initiative, responsibility, discipline and self-control as well as skills that are 228 continuously honed through
 the digital media they have. This independence can be
 229 achieved because of the direct impact of government policies that enforce learning from 230 home during the Covid
 pandemic, when at that time they were not allowed to leave the 231 house to carry out the learning process at school or
 were prohibited from working in groups 232 with friends. The online learning method causes teacher-student interaction
 to be very low

233 so that the opportunity for teachers to participate in directing students is very limited. In the 234 online learning
 process, the tasks carried out by the teacher are more dominant so that 235 students have their own initiative to explore
 the subject matter being studied. Learners 236 consciously do the tasks given by the teacher. Through owned facilities such
 as textbooks or 237 smartphones are used to access various learning resources with discipline. Discipline of 238 students
 through their learning activities can be seen from the completion of assignments 239 given on time (Chulsum, 2017).

240 The teachers when giving material and assignments to students by limiting time, this 241 is considered necessary to
 know the seriousness of students and to keep students 242 disciplined. The students enthusiastically completed the
 assignments given according to the 243 time limit agreed by both parties. These assignments are collected in person and
 through 244 social media that the teacher has made links to collect student work. The students realize 245 that learning
 process activities like this are done for their own good, their future and to 246 overcome the spread of epidemic diseases.
 With this self-awareness, students are very 247 concerned and try to achieve maximum learning results. Nonetheless, this
 study noted that 248 the learning outcomes obtained by students were still low in some materials, such as some 249
 materials in mathematics, physics and chemistry. Students in terms of exact lessons, are

250 still not able to study independently and are simply let go by the teacher. They are still very
 251 dependent on the topic and the way the teacher designs the learning given by the teacher 252 to them. In addition,
 the level of confidence to solve problems in learning activities is in a 253 fairly good category. If students do not take
 part in the lesson at the scheduled meeting, 254 they usually try to find other sources, but to ensure their
 understanding of the material is 255 still in doubt. It was also found in this study that some of these students did not

submit 256 assignments given by the teacher. To overcome this, the teacher creates a special strategy 257 to adapt to the problems faced by students. They can apply problem-based learning 258 methods so that students can be more independent in planning and carrying out their 259 learning activities. Their self-confidence can be boosted by giving students more 260 opportunities to communicate what they have learned. This is in line with previous research, 261 that communication can expedite the learning process (Azizah & Widjanti, 2019).

262 The results of the descriptive analysis of blended learning management variable data 263 show that teachers in the North Tapanuli region have implemented this model well so that 264 the expected learning objectives can be achieved. Blended learning management is

265 integrated learning between face-to-face and online learning carried out by teachers which 266 includes learning planning, implementation, assessment and development activities. At the 267 learning planning stage, the teacher, through routine activities carried out at school, 268 compiles an annual program and a semester program which will be carried out at the 269 beginning of the school year. Make a semester program as a plan for the next semester's 270 activities to be carried out by the teacher for time management and implementation 271 management. The teacher determines the day and week effectively, based on calculations 272 in the educational calendar by compiling a blended learning curriculum and lesson plan 273 (RPP) so that learning material can be implemented according to the time agreed by the 274 teacher and school principal. The teacher prepares a blended learning-based learning 275 implementation plan as a reference in carrying out learning activities, prepares online and 276 offline learning materials so that each student can easily access them through the links that 277 have been prepared, makes a list of material sites to be studied, and divides topics to be 278 even better in a structured and continuous manner. As well as planning supporting facilities 279 by preparing learning media that are of interest to students such as Google meet and media

280 zoom. Implementation of the learning process includes opening, core, and closing activities. 281 Teachers interact with students and integrate online learning and face-to-face learning. 282 Planned learning is carried out by the teacher in learning activities. Opening activities such 283 as saying greetings, praying, checking student attendance. Furthermore, in the main 284 learning activities, the teacher conveys topics with methods, learning aids with learning 285 media prepared beforehand. In this activity, the teacher builds communication through

286 interaction, gives problem-based assignments to students to work on independently via the

287 WhatsApp group, directs students to conduct studies on certain topics, and holds virtual or 288 face-to-face meetings in class for discussions. Then in the closing activity, the teacher and 289 students draw conclusions about the topic. The teacher provides continuous reinforcement 290 and assistance to students by providing guidance and solutions to those who find it difficult 291 to understand the subject matter. The teacher always facilitates interactions between 292 students such as greeting kindly at every meeting and inviting them to be active in 293 discussions and always providing feedback in every discussion session. At the learning 294 assessment stage, high school teachers in the North Tapanuli region provide an assessment 295 of the results of student learning activities at the end of each subject both online and offline. 296 Evaluation is carried out by providing an assessment of attitudes, knowledge and skills 297 during face-to-face learning in the curriculum. Evaluation is carried out continuously and 298 planned to find out progress and deficiencies in the learning process by providing 299 continuous remedial to students who have not achieved the minimum completeness criteria 300 (KKM) in each subject topic. This is proven, many teachers get appreciation with one proof, 301 students are active in carrying out online and offline learning activities. At the learning 302 development stage, teachers use Google Classroom, zoom, google meet and through 303 WhatsApp the development of learning process management. The teacher organizes 304 blended learning-based learning activities where students can participate face-to-face or 305 virtually through proximity, Google meet at the same time. In the skill variable with

306 descriptive analysis it is known that the teacher gives an assessment of the instrument by 307 32% and 47% in the very high category and the students' ability to operate media online is

308 high. This data provides information that the abilities of students in the North Tapanuli

309 region are very proficient in using online media. These digital skills can be seen from

310 students' skills in using digital devices to learn, communicate digitally, collaborate digitally, 311 and develop creativity by creating digital content and solving problems related to digital

312 technology that they have used so far in finding answers to questions that arise in their

313 minds. Students' skills in using digital information are very good. They can search for the 314 topics they need from online sites. The data they get can be stored in their own computer

315 folder which they can access when they need it again. In online learning activities, they use 316 these skills to share information in solving a problem encountered from the assignment 317 given by the teacher.

318
Technology that connects teachers and students is constrained by regulations made 319 by the government because the
covid factor is no longer an obstacle for them to learn more. 320 They prove this by being able to communicate through
voice calls, video calls, and 321 messages sent via Google Meet and Zoom. Group assignments given by the teacher can be
322 carried out collaboratively through an active virtual world. With the skills they have, they
323 create digital content such as making learning videos and things that become projects or
324 assignments that the teacher gives to students. This can hone student creativity with one 325 proof, students are
more confident and have a lot of time and sources of information 326 obtained online. However, the results of this
study also show that at points in problem
327 solving. Some of the students got scores below the average. Some students experience 328 obstacles in operating the
media used during the learning process. About 8% of teachers 329 think that the students they teach experience difficulties.
This happens because the 330 condition of students who are not evenly distributed in owning electronic devices such as
331 hempon and laptops. In this case, the teacher must be able to provide solutions to the 332 difficulties faced by students
when online learning is carried out. Teachers must be able to 333 direct students who have difficulty using technology at
home or around the house, or invite 334 other students to help each other by lending their communication tools. Based on
the results 335 of the t-test analysis, it is known that the learning model with blended learning has a
336 significant effect on the learning independence of students. Generating self-directed 337 learning requires that each
learner has a well-planned and modifiable strategy. Teachers 338 can organize blended learning very well. Even though this
online learning method is 339 implemented, the teacher is sufficient in its implementation. Teachers can design quality 340
learning, organize learning, and make assessments that are appropriate to the 341 circumstances and conditions of
students. Good learning planning starts with preparing a 342 learning implementation plan using a blended learning model,
and choosing learning media 343 that is appropriate to the subjects to be taught and adapts to the circumstances of
students. 344 With this plan, the teacher is more focused on carrying out each stage of the 345 implementation of learning,
has more control over the subject matter, and is more
346 responsive to any problems that arise in learning activities. Teachers can carry out the
347 process of implementing learning using an online blended learning model. The teacher 348 distributes study material
through the WhatsApp group application or google classroom well 349 before the learning process begins.

350 In the initial stage the teacher provides a learning implementation plan (RPP) and is
351 followed by briefly providing topics and material by giving students the opportunity to
352 discuss problems and difficulties. The teacher also prepares the rubric provided by the 353 teacher which
includes an assessment covering cognitive competence in the form of student 354 worksheets which are
collected via the prepared link. Skills assessment is carried out 355 through products produced by students
such as creating digital content or other products
356 made by students at home. Situation assessment is carried out by involving students in 357 learning activities or
completing assignments appropriately according to the allotted time.
358 The results of the data analysis show that students' digital skills have a significant effect on 359 learning independence.
With this method they can learn according to their circumstances. 360 They can access various learning resources from
their devices independently with a little 361 guidance from the teacher. Various applications that are available for free
support their 362 creativity in creating digital content related to their studies, for example making tutorials on
363 making a product. The ease of content sharing allows them to collaborate on an issue or 364 create content either as
assignments given by the teacher or on their own initiative. They 365 can also find colleagues with the same talent without
being limited to one school but on a 366 larger scale so that they can share ideas and creativity. The management of blended
367 learning and digital skills has a significant impact on student independence. Teachers who
368 are able to apply blended learning planning well will be able to organize fun and challenging 369 learning for students.
Sharing material studied offline and material studied online will be 370 more sustainable. Online learning provides
opportunities for students to explore material 371 without limits, whereas in offline learning, teachers can directly check
the achievements and 372 progress of each student. The teacher can also provide reinforcement of the material that 373
has been delivered. If the Blended Learning Department is supported by good numerical 374 abilities, students will support
each other to increase student learning independence. 375 Students focus more on studying the topic of the lesson, and
it's easy to get good references
376 for the lesson. Obstacles and difficulties faced by students can be found a solution right
377 away by discussing together. The implications of this research can be used as input, 378 reference and discourse on
student learning independence in managing blended learning 379 and students' digital skills. By having good digital
skills and supported by good education 380 management, student learning independence will also increase so that
the impact on 381 improving the quality of education is getting better. In the administrative aspect of blended 382

learning, teachers should provide more intensive guidance to students who experience 383 difficulties in online learning activities by providing lists and recommendations of trusted 384 learning resources to focus more on exploring topics.

385

386

387 Conclusions

388 Learning management using the blended learning model conducted by teachers in the North

389 Tapanuli district has a positive impact on the learning independence of students at the 390 senior high school level. A well-designed and implemented blended learning model will 391 generate interest and provide motivation for students in the independent learning process. 392 The independent learning process will have a positive impact and value for the expected 393 improvement in quality and education. The skills of students when online have an impact on 394 increasing students' interest in learning independently. With these online skills, students 395 have more time to find sources of information to answer questions from the teacher, this 396 makes students more developed and faster in solving problems they face.

397

398 Acknowledgments

399 We express our deep gratitude to the Indonesian Christian University for funding this

400 research. We hope that this research will have a positive impact on developing quality and 401 improving the well-being of teachers in Indonesia, especially Toraja. We hereby declare that 402 we do not have any conflict of interest.

403

404 References

- 405 Alshwabkeh, A. A., Woolsey, M. L., & Kharbat, F. F. (2021). Using online information
406 technology for deaf students during COVID-19: A closer look from experience. *Heliyon*,
407 7(5), e06915.1-12. <https://doi.org/10.1016/j.heliyon.2021.e06915>
- 408 Azizah, I. N., & Widjajanti, D. B. (2019). Keefektifan pembelajaran berbasis proyek ditinjau
409 dari prestasi belajar, kemampuan berpikir kritis, dan kepercayaan diri siswa. *Jurnal*
410 *Riset Pendidikan Matematika*, 6(2), 233–243. <https://doi.org/10.21831/jrpm.v6i2.15927>
- 411 Bdair, I. A. (2021). Nursing students' and faculty members' perspectives about online
412 learning during COVID-19 pandemic: A qualitative study. *Teaching and Learning in*
413 *Nursing*, 16(3), 220–226. <https://doi.org/10.1016/j.teln.2021.02.008>
- 414 Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, 415 G. J. (2020).
The psychological impact of quarantine and how to reduce it: rapid review
416 of the evidence. *The Lancet*, 395(10227), 912–920. <https://doi.org/10.1016/S0140417> 6736(20)30460-8
- 418 Chiu, T. K. F. (2021). Digital support for student engagement in blended learning based on
419 self-determination theory. *Computers in Human Behavior*, 124(June), 106909.1-10.
420 <https://doi.org/10.1016/j.chb.2021.106909>
- 421 Chulsum, U. (2017). Pengaruh Lingkungan Keluarga, Kedisiplinan Siswa, Dan Motivasi 422 Belajar
Terhadap Hasil Belajar Ekonomi Siswa Di Sma Negeri 7 Surabaya. *Jurnal*
423 *Ekonomi Pendidikan Dan Kewirausahaan*, 5(1), 1–16.
424 <https://doi.org/10.26740/jepk.v5n1.p5-20>
- 425 Dwivedi, A., Dwivedi, P., Bobek, S., & Sternad Zabukovšek, S. (2019). Factors affecting
426 students' engagement with online content in blended learning. *Kybernetes*, 48(7), 427 1500–1515.
<https://doi.org/10.1108/K-10-2018-0559>
- 428 Fadli, K. (2020). TERHADAP SEMANGAT KERJA DAN KINERJA TENAGA PENDIDIK (Studi 429 Kasus pada Yayasan
Yalatif Indonesia) A . PENDAHULUAN Persaingan yang dihadapi
430 yayaan ataupun lembaga yang bergerak pada wilayah pendidikan dirasakan semakin
431 kompetitif . Persaingan tersebut da. 4(2),
35–50.
432 <https://doi.org/https://doi.org/10.32764/margin.v3i2.907>

- 433 Feitosa de Moura, V., Alexandre de Souza, C., & Noronha Viana, A. B. (2021). The use of
434 Massive Open Online Courses (MOOCs) in blended learning courses and the functional
435 value perceived by students. *Computers and Education*, 161, 104077.
436 <https://doi.org/10.1016/j.compedu.2020.104077>
- 437 Fey, S. B., Theus, M. E., & Ramirez, A. R. (2020). Course-based undergraduate research
438 experiences in a remote setting: Two case studies documenting implementation and
439 student perceptions. *Ecology and Evolution*, 10(22), 12528–12541.
440 <https://doi.org/10.1002/ece3.6916>
- 441 Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative
442 potential in higher education. *Internet and Higher Education*, 7(2), 95–105.
443 <https://doi.org/10.1016/j.iheduc.2004.02.001>
- 444 Gjostvang, B., Høye, S., & Bronken, B. A. (2021). Aspiring for competence in a multifaceted
445 everyday life: A qualitative study of adult students' experiences of a blended learning
446 master programme in Norway. *International Journal of Nursing Sciences*, 8(1), 71–78.
447 <https://doi.org/10.1016/j.ijnss.2020.11.001>
- 448 Grewenig, E., Lergetporer, P., Werner, K., Woessmann, L., & Zierow, L. (2021). COVID-19 and
449 educational inequality: How school closures affect low- and high-achieving students.
450 *European Economic Review*, 140(September), 103920.1-21.
451 <https://doi.org/10.1016/j.euroecorev.2021.103920>
- 452 Handayani, A. S., & Ariyanti, I. (2021). Kemandirian Belajar Matematika Siswa SMP disaat
453 Pandemi COVID-19. *UrbanGreen Conference Proceeding Library*, 6–10.
- 454 Harapan, P., Publishing, E., Collection, B. A., An, U., Leung, D., Accounting, I., Sociology, T.,
455 Reporting, F., & Account, A. (2020). *A Gower Book*.
456 <https://doi.org/https://doi.org/10.4324/9781315573038>
- 457 Hendayani, M. (2019). Problematika Pengembangan Karakter Peserta Didik di Era 4.0. *Jurnal
458 Penelitian Pendidikan Islam*, 7(2), 183–188. <https://doi.org/10.36667/jppi.v7i2.368>
- 459 Jayawardena, P. R., van Kraayenoord, C. E., & Carroll, A. (2020). Factors that influence senior
460 secondary school students' science learning. *International Journal of Educational
461 Research*, 100(June 2019), 101523.1-14.
462 <https://doi.org/10.1016/j.ijer.2019.101523>
- 463 462 Julaeha, S. (2019). *Problematika Kurikulum dan Pembelajaran Pendidikan
464 Karakter*. 7(2), 157–182.
- 465 Laksana, D. N. L. (2021). Implementation of Online Learning in The Pandemic Covid-19: 465 Student Perception
466 in Areas with Minimum Internet Access. *Journal of Education
467 Technology*, 4(4), 502–509.
468 <https://doi.org/10.23887/jet.v4i4.29314>
- 469 Lapitan, L. D., Tiangco, C. E., Sumalinog, D. A. G., Sabarillo, N. S., & Diaz, J. M. (2021). An
470 effective blended online teaching and learning strategy during the COVID-19 pandemic.
471 *Education for Chemical Engineers*, 35(May 2020),
472 116–131.
473 <https://doi.org/10.1016/j.ece.2021.01.012>
- 474 Lavi, R., Tal, M., & Dori, Y. J. (2021). Perceptions of STEM alumni and students on developing
475 21st century skills through methods of teaching and learning. *Studies in Educational
476 Evaluation*, 70, 101002.1-11. <https://doi.org/10.1016/j.stueduc.2021.101002>
- 477 Lee, S. J., Ward, K. P., Chang, O. D., & Downing, K. M. (2021). Parenting activities and the
478 transition to home-based education during the COVID-19 pandemic. *Children and Youth
479 Services Review*, 122(July 2020), 105585.1-10.
480 <https://doi.org/10.1016/j.chilyouth.2020.105585>
- 481 Mali, D., & Lim, H. (2021). How do students perceive face-to-face/blended learning as a
482 result of the Covid-19 pandemic? *International Journal of Management Education*, 19(3), 480 100552.
483 <https://doi.org/10.1016/j.ijme.2021.100552>
- 484 Niemi, H. (2002). Active learning - A cultural change needed in teacher education and
485 schools. *Teaching and Teacher Education*, 18(7),
486 763–780.
487 [https://doi.org/10.1016/S0742-051X\(02\)00042-2](https://doi.org/10.1016/S0742-051X(02)00042-2)

- 484 Puspitasari, H. (2018). *STANDAR PROSES PEMBELAJARAN SEBAGAI SISTEM A . Pendahuluan 485 Pendidikan*
486 *Indonesia dihadapkan pada berbagai tantangan , baik tantangan internal*
487 *maupun tantangan eksternal . Tantangan internal adalah banyak sekolah yang belum*
488 *memenuhi delapan Standar Nasional. 1, 339–368.*
489 <https://doi.org/https://doi.org/10.21154/muslimheritage.v2i2.1115>
- 489 Rasheed, R. A., Kamsin, A., & Abdullah, N. A. (2020). Challenges in the online component of
490 blended learning: A systematic review. *Computers and Education, 144*(September
491 2019), 103701.1.17. <https://doi.org/10.1016/j.compedu.2019.103701>
- 492 Rovai, A. P. (2000). Building and sustaining community in asynchronous learning networks.
493 *Internet and Higher Education, 3*(4), 285–297. [https://doi.org/10.1016/S10964947516\(01\)00037-9](https://doi.org/10.1016/S10964947516(01)00037-9)
- 495 Sailer, M., Schultz-pernice, F., & Fischer, F. (2021). Computers in Human Behavior
496 Contextual facilitators for learning activities involving technology in higher education :
497 The C b -model. *Computers in Human Behavior, 121*(March), 106794. 1-13.
498 <https://doi.org/10.1016/j.chb.2021.106794>
- 499 Selvaraj, A., Radhin, V., KA, N., Benson, N., & Mathew, A. J. (2021). Effect of pandemic based
500 online education on teaching and learning system. *International Journal of Educational*
501 *Development, 85*(January), 102444. 1-11.
502 <https://doi.org/10.1016/j.ijedudev.2021.102444>
- 503 Sjølie, E., Strømme, A., & Boks-Vlemmix, J. (2021). Team-skills training and real-time
504 facilitation as a means for developing student teachers' learning of collaboration.
505 *Teaching and Teacher Education, 107, 103477.1-10.*
506 <https://doi.org/10.1016/j.tate.2021.103477>
- 507 Soesilo, T. D., Kristin, F., & Setyorini, S. (2022). Pengaruh Penerapan Model Pembelajaran
508 Terhadap Kemandirian Belajar Di Masa Pandemi Covid-19 Pada Peserta Didik Di Sma
509 Dan Smk Kota Salatiga. *Satya Widya, 37*(2), 79–91.
510 <https://doi.org/10.24246/j.sw.2021.v37.i2.p79-91>
- 511 Sugiarti. (2020). Inovasi Desain Pembelajaran Bahasa, Sastra Berbasis Konsepsi Merdeka
512 Belajar Pada Era Kehidupan Baru. In <https://Medium.Com/> (pp. 1–142).
513 <https://medium.com/@arifwicaksanaa/pengertian-use-case-a7e576e1b6bf>
- 514 Syahrudin, S., Yaakob, M. F. M., Rasyad, A., Widodo, A. W., Sukendro, S., Suwardi, S., Lani,
515 A., Sari, L. P., Mansur, M., Razali, R., & Syam, A. (2021). Students' acceptance to
516 distance learning during Covid-19: the role of geographical areas among Indonesian
517 sports science students. *Heliyon, 7*(9), e08043.1-9.
518 <https://doi.org/10.1016/j.heliyon.2021.e08043>
- 519 V. J. Caiozzo, F. Haddad, S. Lee, M. Baker, W. P. and K. M. B., Burkhardt, H., Ph, R. O., 520 Vogiatzis, G.,
Hernández, C., Priese, L., Harker, M., O'Leary, P., Geometry, R., Analysis, 521 G., Amato, G., Ciampi, L., Falchi,
F., Gennaro, C., Ricci, E., Rota, S., Snoek, C., Lanz, O.,
- 522 Goos, G., ... Einschub, M. (2019). Kebijakan Pendidikan Di Era New Normal. *Society, 523 2*(1), 1–19.
[https://doi.org/10.3390/educsci11090487](http://www.scopus.com/inward/record.url?eid=2-s2.0.52484865607390&partnerID=tZOtx3y1%0Ahttp://books.google.com/books?hl=en&lr=&id=2LIMMD9FVXkC&oi=fnd&pg=PR5&dq=Principles+of+Digital+Image+Processing+fundamental+techniques&ots=HjrHeuS_Yangari, M., & Inga, E. (2021). Article educational innovation in the evaluation processes within the flipped and blended learning models. <i>Education Sciences, 11</i>(9), 1–24.
529 <a href=)
- 530 Yustina, Syafii, W., & Vebrianto, R. (2020). The effects of blended learning and project-based
531 learning on pre-service biology teachers' creative thinking skills through online learning
532 in the COVID-19 pandemic. *Jurnal Pendidikan IPA Indonesia, 9*(3), 408–420.
533 <https://doi.org/10.15294/jpii.v9i3.24706>
- 534



Contents lists available at [Journal IICET](#)

JPPI (Jurnal Penelitian Pendidikan Indonesia)

ISSN: 2502-8103 (Print) ISSN: 2477-8524 (Electronic)

Journal homepage: <https://jurnal.iicet.org/index.php/jppi>



1
2
3
4
5
6

The Impact of the Blended Learning Model with Online Skills on the Learning Independence of High School Students

ABSTRACT

Article Info

Article history:

Received Jun 12th, 201x

Revised Aug 20th, 201x Accepted Aug 26th, 201x

Keyword:

Blended Learning, Online Skills, Independent Learning

Corresponding Author:

Jitu Halomoan Lumbantoruan The purpose of this study was to determine the effectiveness of blended learning management and online skills on student learning independence in the North Tapanuli region. The low direct interaction between teachers and students is caused by restrictions and the distance that must be done, forcing students to study independently. However, not all students have online skills. Therefore, teachers must develop competencies by presenting the right model and in accordance with government policies, can be online and offline. This learning model is blended learning. Teachers have no other choice but to carry out good blended learning management so that learning activities can continue. The method in this research is quantitative with the type of ex post facto research, namely comparative causal research. The data collection technique is by distributing instruments in the form of questionnaires to each teacher respondent by first making a Google form link. The population in the study were all teachers in North Tapanuli with a sample of 90 people from 4 schools that were spread out. Data analysis techniques are correlation and regression. The results of the study show that blended learning management and online skills have an impact on student learning independence. The impact of the blended learning model and students' online skills is 52.10%. The conclusion is that in order to increase student learning independence, the teacher must carry out the learning process with the blended learning model to the fullest. However, this model must still be supported by the provision of online student skills.



© 2020 The Authors. Published by IICET.

This is an open access article under the CC BY-NC-SA license (<https://creativecommons.org/licenses/by-nc-sa/4.0>)

Fakultas Keguruan dan Ilmu Pendidikan, Universitas Kristen Indonesia

Email: jituhalomoan.lumbantoruan@gmail.com

7

8 Introduction

9 The emergence of distance learning activities in Indonesia is a policy carried out by 10 the government in striving for the learning and learning process to continue according to

11 expectations from the curriculum that has been planned, even though it is still in a

12 pandemic condition that has not been completed.(Puspitasari, 2018). The government has
13 socialized and given authority to schools and tertiary institutions in using the appropriate
14 APA learning model for the learning process in their schools and tertiary institutions. Taking

1

15 this policy into account, schools must still pay attention to and understand that the places
16 that have the most potential to cause crowds large so and have a fairly high risk of 17 spreading Covid-19 (Julaeha,
2019). The application of online distance learning policies 18 requires students to study independently at their
respective homes (V. J. Caiozzo, F. Haddad,
19 S. Lee, M. Baker et al., 2019). This is due to direct interactions that have been carried out so
20 far and must be avoided and can only communicate through digital media (Brooks et al.,
21 2020). However, with the rapid development of technology and the lack of time in adjusting
22 the ability to master technology. In overcoming this the learning process can be done partly 23 online and partly
face-to-face but limited (Rasheed et al., 2020). With a learning model like 24 this, students are expected to have
their own initiative to explore different learning 25 resources to gain knowledge according to WHAT the students
themselves want and need. 26 This learning process method requires a lot of great responsibility, high self-discipline,
and 27 skills in utilizing learning resources (Niemi, 2002). With the implementation of this hope, the 28 learning
process is ensured to be effective and run as previously planned.

29 In measuring the learning independence of students, it can be measured from the
30 process they learn until they get the specified results (Handayani & Ariyanti, 2021). This
31 independence can be seen from the following characteristics: a) having the ability to plan 32 and choose
learning materials independently; b) Having initiative and self-motivation 33 without having to be directed;
c) is responsible for carrying out his own work; d) critical, 34 logical and open to all; e) have a high sense of
self-confidence. With the appearance of a

35 high sense of confidence, it will also generate high enthusiasm in completing the work
36 (Fadhli, 2020). Student learning independence is influenced by several factors including 37 motivation, place of
study, learning aids, time availability, economic conditions, and skills in 38 using online media (Jayawardena et al.,
2020). Skills in using online media include operating 39 and writing skills in zoom media and Google meet during the
learning process. This skill can 40 be acquired by students by independent study, with independent study will have
an impact 41 on great curiosity, more critical thinking in decision making, innovation and high self42 confidence (Fey
et al., 2020). These indicators are important things that must be possessed

43 by students in learning. With social restrictions having a negative impact on students in 44 carrying out independent
learning at home. Adult interference in learning for students can 45 have a negative impact on the development of their
independent learning. While very 46 limited interaction between teachers and students, it will reduce enthusiasm for 47
independent learning (Grewenig et al., 2021). The motivation that is usually obtained from 48 face-to-face learning is very
useful. This is what requires teachers to have the obligation to 49 balance between direct interaction and monitoring
developments in online media mastery 50 (Rovai, 2000).

51 Recognizing the importance of student learning independence, teachers should look 52 for appropriate learning
methods to meet current government policies in online and offline

53 learning (Selvaraj et al., 2021). Learning with a new life order requires teachers to make
54 changes by developing basic skills. This is based on the fact that there is an ongoing 55 transition process from the
face-to-face learning process method to the online learning 56 process method (Sugiarti, 2020). One choice of
suitable method is to combine online and

57 face-to-face learning, which is known as a learning style by combining the two methods
58 which is called the blended learning model. The blended learning model has many
59 advantages, including flexibility, cost-effectiveness, and interactivity (Mali & Lim, 2021). The 60 blended learning
application model can be adapted to the current state of students (Yangari 61 & Inga, 2021). Online learning or
online learning allows students to access various learning 62 resources online from anywhere they want, anytime
and anywhere (Bdair, 2021). This can 63 also be done during direct discussion activities in the classroom face-to-
face or online from

64 home. The concept of blended learning management is one of the steps that must be
65 implemented so that quality learning activities are carried out (Dwivedi et al., 2019). Steps 66 that must be done by
the teacher is Lapitan et al., (2021): 1) Implement learning plans, 2) 67 material for learning activities based on

blended learning, must be able to be discussed in 68 face-to-face and online meetings; 3) It must be in the form of an assessment by the teacher,

69 namely the teacher provides an assessment or assessment, both attitude, knowledge and 70 skills assessment according to the characteristics of blended learning; 4) teachers can 71 implement blended learning management methods, for example carrying out learning 72 activities using hybrid learning methods.

73 However, in carrying out this learning model, teachers face different obstacles in 74 carrying out blended learning management (Feitosa de Moura et al., 2021). Learning

75 methods are applied suddenly, resulting in them not understanding in depth how the 76 blended learning form of learning management can work well (Gjestvang et al., 2021).

77 Teachers do not have extensive experience with applying this model and little information 78 about the blended learning methods they receive (Chiu, 2021). Teachers in carrying out 79 dominant online learning only give assignments to students without a clear division between 80 material that will be done independently and that which is done during face-to-face learning

81 (Garrison & Kanuka, 2004). Independent learning according to the development of the

82 current technological era requires special skills in obtaining information or sources that can

83 be used in developing the material they will teach (Lavi et al., 2021). Special skills when

84 online provide opportunities for students to be able to define a problem with their own 85 thinking concepts, gather information, analyze it, and freely find solutions to the problem.

86 This skill is particularly useful in today's times as it saves time and money and can obtain 87 information quickly (Sjølie et al., 2021). But the fact is, there is still a gap in the skills of 88 students (Alshawabkeh et al., 2021).

89 In general, when viewed from its geographical location, students who live in 90 dominant urban areas have the ability to use technology and operate online media properly 91 (Syahrudin et al., 2021). This is supported by the facilities and infrastructure available in 92 the student environment. But on the other hand, skills in using this technology will be seen 93 in rural areas, where students still experience limited facilities and infrastructure, for 94 example the limited availability of internet access in their environment. In addition, students 95 also need assistance from adults, especially regarding ethical and safety factors in the use 96 of technology (Laksana, 2021). Previous research stated that 21st century skills require 97 online skills in technical aspects, information and communication, collaboration, critical 98 thinking, creativity, and specific skills in solving problems through the use of the latest 99 technology (Yustina et al., 2020). Other research shows that digital skills have a positive

100 effect on the work readiness of the millennial generation in urban areas such as Jakarta

101 (Hendayani, 2019). Interest in learning is also strongly influenced by the ability to operate 102 technology, students who are equipped with good technological knowledge can access 103 various learning resources properly (Sailer et al., 2021). With a good interest in learning, 104 students will automatically be independent in carrying out learning activities (Lee et al.,

105 2021). In this case, this study focuses on research to find out how effectively students use

106 online skills with the blended learning model used by teachers to support independent 107 learning processes. Based on the background above, the sub focus that will be examined in 108 this study is whether there is an effect of the management of the blended learning model 109 with online skills on the learning independence of North Tapanuli district students? The

110 purpose of this study was to determine the effectiveness of blended learning management 111 and online skills on student learning independence in the North Tapanuli region. 112 Introduction.

113 Method

114 In this study using a quantitative method with the type of export facto where the research is

115 causal comparative (Harapan et al., 2020). Researchers try to find causal linkages in certain

116 problems. The problem in this research is the link between blended learning management 117 and online skills on students' learning independence. The location of this research was

118 conducted at public and private high schools (SMA) in North Tapanuli Regency, North

119 Sumatra. At the time of testing the instrument was conducted on 20 teacher respondents 120 who were not part of the research sample. The population in this study were all public and

121 private high school (SMA) teachers in North Tapanuli district, with the research sample being 122 teachers who taught at public high school (SMA) 1 and PGRI 20 Si borong-borong, high 123 school Negeri 1 and Negeri 2 Tarutung with a total of 90 teachers who were directly involved 124 as respondents. The data collection technique was by distributing instruments in the form of

125 a questionnaire directly to the respondent's WhatsApp number by making a Google from link 126 that had been prepared by the researcher and could be accessed by respondents via 127 cellphone or laptop. The instrument is a statement that has alternative answers as follows: 128 SL = Always (5), S = Often (4), K = Sometimes (3), J = Rarely (2), TP = Never (1). Data

129 analysis techniques with correlation and regression analysis methods. The variables in this 130 study are blended learning management (X1), Online Skills (X2), and independent learning

131 (Y). In this study, researchers conducted a t test (partial test) which aims to find out how 132 significant the independent variable is to the dependent variable with a temporary 133 assumption that the other independent variables are considered constant. Whereas the F 134 test in this study was to determine the effect of all the independent variables contained in 135 the model simultaneously on the dependent variable. The following are indicators and 136 research grids:

137 Table 1. Learning Independence Instrument Grid

138	Number	Indicator
139		
140	1	Have Initiative
141	2	Have high responsibility
142	3	Self-Discipline
143	4	Self-control

144 Table2. Grid
145 of Blended Learning Management Instruments

146	Number	Indicator
147	1	Blended Learning planning management
148	2	Management of the implementation of Blended Learning
149	3	Blended Learning learning evaluation management
150	4	Blended Learning development management

151 Tabel3.
152 Kisi-kisi Instrumen Ketrampilan Online

153	Number	Indicator
154		
155	1	Information Skills online
156	2	Intelligence Communicate online (Communication Digital Skills)
157	3	Media collaboration (Collaboration Digital Skills)
158	4	Creative (Creative Digital Skills)
	5	Problem solving (Problem solving skills)

159 Results and Discussions

160 Results

161 Based on research conducted in North Tapanuli district, from a sample of 4 schools in two
162 different sub-districts, namely state 1 high school and PGRI 20 high school in Si Borong
163 Borong district and Tarutung state 1 and state 2 high school, the data is as follows following. 164 The results of
research on aspects of learning independence, blended learning 165 management, and online skills can be seen
descriptively in the following table.

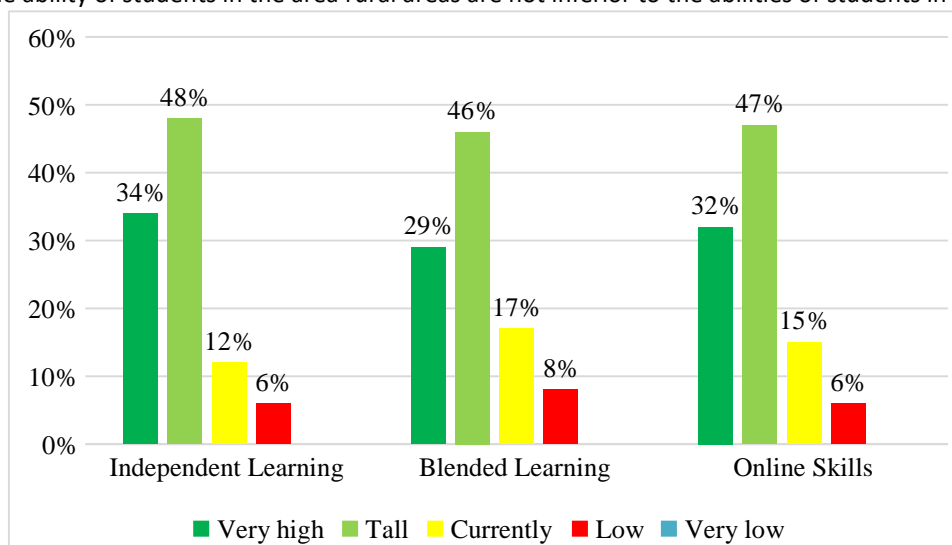
166 Table 4. Descriptive Results of Independent Learning, Management of Blended Learning and 167 Digital Skills

Information	Independent Learning	Blended Learning Online Skills
-------------	----------------------	--------------------------------

N	90	90	90
Mean	4,00	3.92	3,81
Range	2,50	2,81	2,76

Std. Deviation	0,47	0,45	0,48
Maximum	4,73	5,03	4,96
Minimum	2,42	2,09	2,05

0 Based on the descriptive table above it can be seen that the data with the average score obtained by the learning
 1 independence indicator shows that, in North Tapanuli district the level of independence of students in learning is
 2 quite high, this data obtained a fairly good distribution of data by looking at the standard deviation of 0.47 where
 3 the data can be are responsible for the source of the information. By looking at table 4, the blended learning indicator
 4 with an average score obtained is 3.92, meaning that the learning model used in North Tapanuli district has been
 5 running well and is effectively used for the learning process in the future. The same thing can also be seen in the
 6 skills indicator when online, with an average of 3.81, meaning that the skills of students are considered by the
 7 teacher to be very good by comparing the assessment of the maximum score given by the teacher on online skills of
 8 4.96 then, the ability of students in the area rural areas are not inferior to the abilities of students in urban areas.



9
10 Figure 1. Learning Independence Histogram, Blended Learning and Online Skills

11 Based on Figure 1 above, it is known that students who are in the North Tapanuli district have a fairly high
 12 learning independence. This can be seen from diagram 1, of the 90 teachers who were respondents there were 34%
 13 and 48% who said that the students taught by them were very high and had high independence in learning. This is
 14 in line with the average in table 4, which is 4.00 from a maximum scale of 4.73. The blended learning management
 15 indicator presents frequency data from teachers who have blended learning management skills in the "very high"
 16 category of 29% and high 46%. Or 66%. Even so, there are also teachers who think that not all students can fulfill the
 17 blended learning model, there are 17% in the medium category and 8% in the low category. This can be used as
 18 input for education circles to improve and investigate the obstacles of low students in following the blended learning
 19 model. In terms of skills when online, students who are in North Tapanuli are rated by the teacher very high and
 20 there are 32% and 42% high. This has a positive impact on the progress of education in the North Tapanuli area in
 21 dealing with emergency situations such as the Covid pandemic.

22 In knowing the effect of blended learning management (X_1) and online skills (X_2) on student learning
 23 independence (Y), the researcher conducted a multiple regression analysis test. The results of this multiple
 24 regression analysis are shown in the table below:

25 Table 5. Results of Multiple Linear Regression Analysis X_1 and X_2 against Y

Model	Unstandardized		Standardized	t	Sig.
	B	Std. Error	Beta		

26

Constant	0,476	0,243		1.276	0,051
Blended Learning Management	0,510	0,058	0,476	7.085	0,000
Online Skills	0,488	0,053	0,478	5.067	0,000
<u>Student Learning Independence</u>	<u>0.521</u>	<u>0.051</u>	<u>0.467</u>	<u>6.890</u>	<u>0.000</u>

201
 202 Based on the results of multiple linear regression tests as shown in the table above,
 203 that the significance of the Blended Learning Management variable (X_1) is $0.000 < 0.05$, and
 204 $t_{count} 7.0853 > t_{table} 1.984$, this can be interpreted that H_0 is rejected and H_1 is accepted
 205 which means that there is a significant influence of the blended learning management 206 variable in the
 implementation of learning conducted by teachers in the North Tapanuli 207 district on high school level
 students with an effect of 51.0%. On the online skills indicator, a 208 significance of $0.000 < 0.05$, and t_{count}
 $5.0657 > t_{table} 1.984$ is obtained, this can be 209 interpreted as H_0 being rejected and H_1 being accepted.
 This means that there is a 210 significant influence of students' online skills on learning independence. The
 effect is 48.8%.

211 The results of the F test analysis with blended learning management variables (X_1) and
 212 online skills (X_2) on student learning independence (Y) obtained a significance of 0.000
 213 < 0.05 and the calculated F_{value} of $68.90 > F_{table} 2.32$, this is it can be interpreted that H_0 is 214 rejected and H_1 is
 accepted, which means that the teacher's blended learning management 215 model (X_1) and online skills (X_2) have
 a relationship to student learning independence (Y) 216 with a variation in Y of 52.10%.

217 Discussions

218 From the results of the descriptive analysis, it can be seen that the learning 219 independence of high school
 students in the North Tapanuli region shows that 34% is very 220 high and 48% is high. This was assessed by the
 teachers who taught and from 90 teacher 221 respondents, only 6% had a low opinion of independence study high
 school in North 222 Tapanuli and the remaining 12% are moderate. This certainly has a positive impact on the 223
 development of education in the area, especially in the North Tapanuli region, North
 224 Sumatra which is classified as far from urban areas. This finding refutes previous findings 225 which say that
 independent learning is dominantly carried out by participants students who
 226 are in urban areas (Soesilo et al., 2022). These findings show the independence of students
 227 through initiative, responsibility, discipline and self-control as well as skills that are 228 continuously honed through
 the digital media they have. This independence can be
 229 achieved because of the direct impact of government policies that enforce learning from 230 home during the Covid
 pandemic, when at that time they were not allowed to leave the 231 house to carry out the learning process at school or
 were prohibited from working in groups 232 with friends. The online learning method causes teacher-student interaction
 to be very low

233 so that the opportunity for teachers to participate in directing students is very limited. In the 234 online learning
 process, the tasks carried out by the teacher are more dominant so that 235 students have their own initiative to explore
 the subject matter being studied. Learners 236 consciously do the tasks given by the teacher. Through owned facilities such
 as textbooks or 237 smartphones are used to access various learning resources with discipline. Discipline of 238 students
 through their learning activities can be seen from the completion of assignments 239 given on time (Chulsum, 2017).

240 The teachers when giving material and assignments to students by limiting time, this 241 is considered necessary to
 know the seriousness of students and to keep students 242 disciplined. The students enthusiastically completed the
 assignments given according to the 243 time limit agreed by both parties. These assignments are collected in person and
 through 244 social media that the teacher has made links to collect student work. The students realize 245 that learning
 process activities like this are done for their own good, their future and to 246 overcome the spread of epidemic diseases.
 With this self-awareness, students are very 247 concerned and try to achieve maximum learning results. Nonetheless, this
 study noted that 248 the learning outcomes obtained by students were still low in some materials, such as some 249
 materials in mathematics, physics and chemistry. Students in terms of exact lessons, are

250 still not able to study independently and are simply let go by the teacher. They are still very
 251 dependent on the topic and the way the teacher designs the learning given by the teacher 252 to them. In addition,
 the level of confidence to solve problems in learning activities is in a 253 fairly good category. If students do not take
 part in the lesson at the scheduled meeting, 254 they usually try to find other sources, but to ensure their
 understanding of the material is 255 still in doubt. It was also found in this study that some of these students did not

submit 256 assignments given by the teacher. To overcome this, the teacher creates a special strategy 257 to adapt to the problems faced by students. They can apply problem-based learning 258 methods so that students can be more independent in planning and carrying out their 259 learning activities. Their self-confidence can be boosted by giving students more 260 opportunities to communicate what they have learned. This is in line with previous research, 261 that communication can expedite the learning process (Azizah & Widjanti, 2019).

262 The results of the descriptive analysis of blended learning management variable data 263 show that teachers in the North Tapanuli region have implemented this model well so that 264 the expected learning objectives can be achieved. Blended learning management is

265 integrated learning between face-to-face and online learning carried out by teachers which 266 includes learning planning, implementation, assessment and development activities. At the 267 learning planning stage, the teacher, through routine activities carried out at school, 268 compiles an annual program and a semester program which will be carried out at the 269 beginning of the school year. Make a semester program as a plan for the next semester's 270 activities to be carried out by the teacher for time management and implementation 271 management. The teacher determines the day and week effectively, based on calculations 272 in the educational calendar by compiling a blended learning curriculum and lesson plan 273 (RPP) so that learning material can be implemented according to the time agreed by the 274 teacher and school principal. The teacher prepares a blended learning-based learning 275 implementation plan as a reference in carrying out learning activities, prepares online and 276 offline learning materials so that each student can easily access them through the links that 277 have been prepared, makes a list of material sites to be studied, and divides topics to be 278 even better in a structured and continuous manner. As well as planning supporting facilities 279 by preparing learning media that are of interest to students such as Google meet and media

280 zoom. Implementation of the learning process includes opening, core, and closing activities. 281 Teachers interact with students and integrate online learning and face-to-face learning. 282 Planned learning is carried out by the teacher in learning activities. Opening activities such 283 as saying greetings, praying, checking student attendance. Furthermore, in the main 284 learning activities, the teacher conveys topics with methods, learning aids with learning 285 media prepared beforehand. In this activity, the teacher builds communication through

286 interaction, gives problem-based assignments to students to work on independently via the
287 WhatsApp group, directs students to conduct studies on certain topics, and holds virtual or 288 face-to-face meetings in class for discussions. Then in the closing activity, the teacher and 289 students draw conclusions about the topic. The teacher provides continuous reinforcement 290 and assistance to students by providing guidance and solutions to those who find it difficult 291 to understand the subject matter. The teacher always facilitates interactions between 292 students such as greeting kindly at every meeting and inviting them to be active in 293 discussions and always providing feedback in every discussion session. At the learning 294 assessment stage, high school teachers in the North Tapanuli region provide an assessment 295 of the results of student learning activities at the end of each subject both online and offline. 296 Evaluation is carried out by providing an assessment of attitudes, knowledge and skills 297 during face-to-face learning in the curriculum. Evaluation is carried out continuously and 298 planned to find out progress and deficiencies in the learning process by providing 299 continuous remedial to students who have not achieved the minimum completeness criteria 300 (KKM) in each subject topic. This is proven, many teachers get appreciation with one proof, 301 students are active in carrying out online and offline learning activities. At the learning 302 development stage, teachers use Google Classroom, zoom, google meet and through 303 WhatsApp the development of learning process management. The teacher organizes 304 blended learning-based learning activities where students can participate face-to-face or 305 virtually through proximity, Google meet at the same time. In the skill variable with

306 descriptive analysis it is known that the teacher gives an assessment of the instrument by 307 32% and 47% in the very high category and the students' ability to operate media online is

308 high. This data provides information that the abilities of students in the North Tapanuli
309 region are very proficient in using online media. These digital skills can be seen from
310 students' skills in using digital devices to learn, communicate digitally, collaborate digitally, 311 and develop creativity by creating digital content and solving problems related to digital
312 technology that they have used so far in finding answers to questions that arise in their
313 minds. Students' skills in using digital information are very good. They can search for the 314 topics they need from online sites. The data they get can be stored in their own computer

315 folder which they can access when they need it again. In online learning activities, they use 316 these skills to share information in solving a problem encountered from the assignment 317 given by the teacher.

318
Technology that connects teachers and students is constrained by regulations made 319 by the government because the
covid factor is no longer an obstacle for them to learn more. 320 They prove this by being able to communicate through
voice calls, video calls, and 321 messages sent via Google Meet and Zoom. Group assignments given by the teacher can be
322 carried out collaboratively through an active virtual world. With the skills they have, they
323 create digital content such as making learning videos and things that become projects or
324 assignments that the teacher gives to students. This can hone student creativity with one 325 proof, students are
more confident and have a lot of time and sources of information 326 obtained online. However, the results of this
study also show that at points in problem
327 solving. Some of the students got scores below the average. Some students experience 328 obstacles in operating the
media used during the learning process. About 8% of teachers 329 think that the students they teach experience difficulties.
This happens because the 330 condition of students who are not evenly distributed in owning electronic devices such as
331 hempon and laptops. In this case, the teacher must be able to provide solutions to the 332 difficulties faced by students
when online learning is carried out. Teachers must be able to 333 direct students who have difficulty using technology at
home or around the house, or invite 334 other students to help each other by lending their communication tools. Based on
the results 335 of the t-test analysis, it is known that the learning model with blended learning has a
336 significant effect on the learning independence of students. Generating self-directed 337 learning requires that each
learner has a well-planned and modifiable strategy. Teachers 338 can organize blended learning very well. Even though this
online learning method is 339 implemented, the teacher is sufficient in its implementation. Teachers can design quality 340
learning, organize learning, and make assessments that are appropriate to the 341 circumstances and conditions of
students. Good learning planning starts with preparing a 342 learning implementation plan using a blended learning model,
and choosing learning media 343 that is appropriate to the subjects to be taught and adapts to the circumstances of
students. 344 With this plan, the teacher is more focused on carrying out each stage of the 345 implementation of learning,
has more control over the subject matter, and is more
346 responsive to any problems that arise in learning activities. Teachers can carry out the
347 process of implementing learning using an online blended learning model. The teacher 348 distributes study material
through the WhatsApp group application or google classroom well 349 before the learning process begins.

350 In the initial stage the teacher provides a learning implementation plan (RPP) and is
351 followed by briefly providing topics and material by giving students the opportunity to
352 discuss problems and difficulties. The teacher also prepares the rubric provided by the 353 teacher which
includes an assessment covering cognitive competence in the form of student 354 worksheets which are
collected via the prepared link. Skills assessment is carried out 355 through products produced by students
such as creating digital content or other products
356 made by students at home. Situation assessment is carried out by involving students in 357 learning activities or
completing assignments appropriately according to the allotted time.
358 The results of the data analysis show that students' digital skills have a significant effect on 359 learning independence.
With this method they can learn according to their circumstances. 360 They can access various learning resources from
their devices independently with a little 361 guidance from the teacher. Various applications that are available for free
support their 362 creativity in creating digital content related to their studies, for example making tutorials on
363 making a product. The ease of content sharing allows them to collaborate on an issue or 364 create content either as
assignments given by the teacher or on their own initiative. They 365 can also find colleagues with the same talent without
being limited to one school but on a 366 larger scale so that they can share ideas and creativity. The management of blended
367 learning and digital skills has a significant impact on student independence. Teachers who
368 are able to apply blended learning planning well will be able to organize fun and challenging 369 learning for students.
Sharing material studied offline and material studied online will be 370 more sustainable. Online learning provides
opportunities for students to explore material 371 without limits, whereas in offline learning, teachers can directly check
the achievements and 372 progress of each student. The teacher can also provide reinforcement of the material that 373
has been delivered. If the Blended Learning Department is supported by good numerical 374 abilities, students will support
each other to increase student learning independence. 375 Students focus more on studying the topic of the lesson, and
it's easy to get good references
376 for the lesson. Obstacles and difficulties faced by students can be found a solution right
377 away by discussing together. The implications of this research can be used as input, 378 reference and discourse on
student learning independence in managing blended learning 379 and students' digital skills. By having good digital
skills and supported by good education 380 management, student learning independence will also increase so that
the impact on 381 improving the quality of education is getting better. In the administrative aspect of blended 382

learning, teachers should provide more intensive guidance to students who experience 383 difficulties in online learning activities by providing lists and recommendations of trusted 384 learning resources to focus more on exploring topics.

385

386

387 Conclusions

388 Learning management using the blended learning model conducted by teachers in the North

389 Tapanuli district has a positive impact on the learning independence of students at the 390 senior high school level. A well-designed and implemented blended learning model will 391 generate interest and provide motivation for students in the independent learning process. 392 The independent learning process will have a positive impact and value for the expected 393 improvement in quality and education. The skills of students when online have an impact on 394 increasing students' interest in learning independently. With these online skills, students 395 have more time to find sources of information to answer questions from the teacher, this 396 makes students more developed and faster in solving problems they face.

397

398 Acknowledgments

399 We express our deep gratitude to the Indonesian Christian University for funding this

400 research. We hope that this research will have a positive impact on developing quality and 401 improving the well-being of teachers in Indonesia, especially Toraja. We hereby declare that 402 we do not have any conflict of interest.

403

404 References

- 405 Alshwabkeh, A. A., Woolsey, M. L., & Kharbat, F. F. (2021). Using online information
406 technology for deaf students during COVID-19: A closer look from experience. *Heliyon*,
407 7(5), e06915.1-12. <https://doi.org/10.1016/j.heliyon.2021.e06915>
- 408 Azizah, I. N., & Widjajanti, D. B. (2019). Keefektifan pembelajaran berbasis proyek ditinjau
409 dari prestasi belajar, kemampuan berpikir kritis, dan kepercayaan diri siswa. *Jurnal*
410 *Riset Pendidikan Matematika*, 6(2), 233–243. <https://doi.org/10.21831/jrpm.v6i2.15927>
- 411 Bdair, I. A. (2021). Nursing students' and faculty members' perspectives about online
412 learning during COVID-19 pandemic: A qualitative study. *Teaching and Learning in*
413 *Nursing*, 16(3), 220–226. <https://doi.org/10.1016/j.teln.2021.02.008>
- 414 Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, 415 G. J. (2020).
The psychological impact of quarantine and how to reduce it: rapid review
416 of the evidence. *The Lancet*, 395(10227), 912–920. <https://doi.org/10.1016/S0140417> 6736(20)30460-8
- 418 Chiu, T. K. F. (2021). Digital support for student engagement in blended learning based on
419 self-determination theory. *Computers in Human Behavior*, 124(June), 106909.1-10.
420 <https://doi.org/10.1016/j.chb.2021.106909>
- 421 Chulsum, U. (2017). Pengaruh Lingkungan Keluarga, Kedisiplinan Siswa, Dan Motivasi 422 Belajar
Terhadap Hasil Belajar Ekonomi Siswa Di Sma Negeri 7 Surabaya. *Jurnal*
423 *Ekonomi Pendidikan Dan Kewirausahaan*, 5(1), 1–16.
424 <https://doi.org/10.26740/jepk.v5n1.p5-20>
- 425 Dwivedi, A., Dwivedi, P., Bobek, S., & Sternad Zabukovšek, S. (2019). Factors affecting
426 students' engagement with online content in blended learning. *Kybernetes*, 48(7), 427 1500–1515.
<https://doi.org/10.1108/K-10-2018-0559>
- 428 Fadhli, K. (2020). TERHADAP SEMANGAT KERJA DAN KINERJA TENAGA PENDIDIK (Studi 429 Kasus pada Yayasan
Yalatif Indonesia) A . PENDAHULUAN Persaingan yang dihadapi
430 yayaan ataupun lembaga yang bergerak pada wilayah pendidikan dirasakan semakin
431 kompetitif . Persaingan tersebut da. 4(2),
35–50.
432 <https://doi.org/https://doi.org/10.32764/margin.v3i2.907>

- 433 Feitosa de Moura, V., Alexandre de Souza, C., & Noronha Viana, A. B. (2021). The use of
434 Massive Open Online Courses (MOOCs) in blended learning courses and the functional
435 value perceived by students. *Computers and Education*, 161, 104077.
436 <https://doi.org/10.1016/j.compedu.2020.104077>
- 437 Fey, S. B., Theus, M. E., & Ramirez, A. R. (2020). Course-based undergraduate research
438 experiences in a remote setting: Two case studies documenting implementation and
439 student perceptions. *Ecology and Evolution*, 10(22), 12528–12541.
440 <https://doi.org/10.1002/ece3.6916>
- 441 Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative
442 potential in higher education. *Internet and Higher Education*, 7(2), 95–105.
443 <https://doi.org/10.1016/j.iheduc.2004.02.001>
- 444 Gjostvang, B., Høye, S., & Bronken, B. A. (2021). Aspiring for competence in a multifaceted
445 everyday life: A qualitative study of adult students' experiences of a blended learning
446 master programme in Norway. *International Journal of Nursing Sciences*, 8(1), 71–78.
447 <https://doi.org/10.1016/j.ijnss.2020.11.001>
- 448 Grewenig, E., Lergetporer, P., Werner, K., Woessmann, L., & Zierow, L. (2021). COVID-19 and
449 educational inequality: How school closures affect low- and high-achieving students.
450 *European Economic Review*, 140(September), 103920.1-21.
451 <https://doi.org/10.1016/j.euroecorev.2021.103920>
- 452 Handayani, A. S., & Ariyanti, I. (2021). Kemandirian Belajar Matematika Siswa SMP disaat
453 Pandemi COVID-19. *UrbanGreen Conference Proceeding Library*, 6–10.
- 454 Harapan, P., Publishing, E., Collection, B. A., An, U., Leung, D., Accounting, I., Sociology, T.,
455 Reporting, F., & Account, A. (2020). *A Gower Book*.
456 <https://doi.org/https://doi.org/10.4324/9781315573038>
- 457 Hendayani, M. (2019). Problematika Pengembangan Karakter Peserta Didik di Era 4.0. *Jurnal
458 Penelitian Pendidikan Islam*, 7(2), 183–188. <https://doi.org/10.36667/jppi.v7i2.368>
- 459 Jayawardena, P. R., van Kraayenoord, C. E., & Carroll, A. (2020). Factors that influence senior
460 secondary school students' science learning. *International Journal of Educational
461 Research*, 100(June 2019), 101523.1-14.
462 <https://doi.org/10.1016/j.ijer.2019.101523>
- 463 462 Julaeha, S. (2019). *Problematika Kurikulum dan Pembelajaran Pendidikan
464 Karakter*. 7(2), 157–182.
- 465 Laksana, D. N. L. (2021). Implementation of Online Learning in The Pandemic Covid-19: 465 Student Perception
466 in Areas with Minimum Internet Access. *Journal of Education
467 Technology*, 4(4), 502–509.
468 <https://doi.org/10.23887/jet.v4i4.29314>
- 469 Lapitan, L. D., Tiangco, C. E., Sumalinog, D. A. G., Sabarillo, N. S., & Diaz, J. M. (2021). An
470 effective blended online teaching and learning strategy during the COVID-19 pandemic.
471 *Education for Chemical Engineers*, 35(May 2020),
472 116–131.
473 <https://doi.org/10.1016/j.ece.2021.01.012>
- 474 Lavi, R., Tal, M., & Dori, Y. J. (2021). Perceptions of STEM alumni and students on developing
475 21st century skills through methods of teaching and learning. *Studies in Educational
476 Evaluation*, 70, 101002.1-11. <https://doi.org/10.1016/j.stueduc.2021.101002>
- 477 Lee, S. J., Ward, K. P., Chang, O. D., & Downing, K. M. (2021). Parenting activities and the
478 transition to home-based education during the COVID-19 pandemic. *Children and Youth
479 Services Review*, 122(July 2020), 105585.1-10.
480 <https://doi.org/10.1016/j.chilyouth.2020.105585>
- 481 Mali, D., & Lim, H. (2021). How do students perceive face-to-face/blended learning as a
482 result of the Covid-19 pandemic? *International Journal of Management Education*, 19(3), 480 100552.
483 <https://doi.org/10.1016/j.ijme.2021.100552>
- 484 Niemi, H. (2002). Active learning - A cultural change needed in teacher education and
485 schools. *Teaching and Teacher Education*, 18(7),
486 763–780.
487 [https://doi.org/10.1016/S0742-051X\(02\)00042-2](https://doi.org/10.1016/S0742-051X(02)00042-2)

- 484 Puspitasari, H. (2018). *STANDAR PROSES PEMBELAJARAN SEBAGAI SISTEM A. Pendahuluan 485 Pendidikan*
486 *Indonesia dihadapkan pada berbagai tantangan , baik tantangan internal*
487 *maupun tantangan eksternal . Tantangan internal adalah banyak sekolah yang belum*
488 *memenuhi delapan Standar Nasional. 1, 339–368.*
489 <https://doi.org/https://doi.org/10.21154/muslimheritage.v2i2.1115>
- 489 Rasheed, R. A., Kamsin, A., & Abdullah, N. A. (2020). Challenges in the online component of
490 blended learning: A systematic review. *Computers and Education, 144*(September
491 2019), 103701.1.17. <https://doi.org/10.1016/j.compedu.2019.103701>
- 492 Rovai, A. P. (2000). Building and sustaining community in asynchronous learning networks.
493 *Internet and Higher Education, 3*(4), 285–297. [https://doi.org/10.1016/S10964947516\(01\)00037-9](https://doi.org/10.1016/S10964947516(01)00037-9)
- 495 Sailer, M., Schultz-pernice, F., & Fischer, F. (2021). Computers in Human Behavior
496 Contextual facilitators for learning activities involving technology in higher education :
497 The C b -model. *Computers in Human Behavior, 121*(March), 106794. 1-13.
498 <https://doi.org/10.1016/j.chb.2021.106794>
- 499 Selvaraj, A., Radhin, V., KA, N., Benson, N., & Mathew, A. J. (2021). Effect of pandemic based
500 online education on teaching and learning system. *International Journal of Educational*
501 *Development, 85*(January), 102444. 1-11.
502 <https://doi.org/10.1016/j.ijedudev.2021.102444>
- 503 Sjølie, E., Strømme, A., & Boks-Vlemmix, J. (2021). Team-skills training and real-time
504 facilitation as a means for developing student teachers' learning of collaboration.
505 *Teaching and Teacher Education, 107, 103477.1-10.*
506 <https://doi.org/10.1016/j.tate.2021.103477>
- 507 Soesilo, T. D., Kristin, F., & Setyorini, S. (2022). Pengaruh Penerapan Model Pembelajaran
508 Terhadap Kemandirian Belajar Di Masa Pandemi Covid-19 Pada Peserta Didik Di Sma
509 Dan Smk Kota Salatiga. *Satya Widya, 37*(2), 79–91.
510 <https://doi.org/10.24246/j.sw.2021.v37.i2.p79-91>
- 511 Sugiarti. (2020). Inovasi Desain Pembelajaran Bahasa, Sastra Berbasis Konsepsi Merdeka
512 Belajar Pada Era Kehidupan Baru. In <https://medium.com/> (pp. 1–142).
513 <https://medium.com/@arifwicaksanaa/pengertian-use-case-a7e576e1b6bf>
- 514 Syahrudin, S., Yaakob, M. F. M., Rasyad, A., Widodo, A. W., Sukendro, S., Suwardi, S., Lani,
515 A., Sari, L. P., Mansur, M., Razali, R., & Syam, A. (2021). Students' acceptance to
516 distance learning during Covid-19: the role of geographical areas among Indonesian
517 sports science students. *Heliyon, 7*(9), e08043.1-9.
518 <https://doi.org/10.1016/j.heliyon.2021.e08043>
- 519 V. J. Caiozzo, F. Haddad, S. Lee, M. Baker, W. P. and K. M. B., Burkhardt, H., Ph, R. O., 520 Vogiatzis, G.,
Hernández, C., Priese, L., Harker, M., O'Leary, P., Geometry, R., Analysis, 521 G., Amato, G., Ciampi, L., Falchi,
F., Gennaro, C., Ricci, E., Rota, S., Snoek, C., Lanz, O.,
- 522 Goos, G., ... Einschub, M. (2019). Kebijakan Pendidikan Di Era New Normal. *Society, 523 2*(1), 1–19.
[https://doi.org/10.3390/educsci11090487](http://www.scopus.com/inward/record.url?eid=2-s2.0.52484865607390&partnerID=tZOtx3y1%0Ahttp://books.google.com/books?hl=en&lr=&id=2LIMMD9FVXkC&oi=fnd&pg=PR5&dq=Principles+of+Digital+Image+Processing+fundamental+techniques&ots=HjrHeuS_Yangari, M., & Inga, E. (2021). Article educational innovation in the evaluation processes within the flipped and blended learning models. <i>Education Sciences, 11</i>(9), 1–24.
529 <a href=)
- 530 Yustina, Syafii, W., & Vebrianto, R. (2020). The effects of blended learning and project-based
531 learning on pre-service biology teachers' creative thinking skills through online learning
532 in the COVID-19 pandemic. *Jurnal Pendidikan IPA Indonesia, 9*(3), 408–420.
533 <https://doi.org/10.15294/jpii.v9i3.24706>
- 534



Contents lists available at [Journal IICET](#)

JPPI (Jurnal Penelitian Pendidikan Indonesia)

ISSN: 2502-8103 (Print) ISSN: 2477-8524 (Electronic)

Journal homepage: <https://jurnal.iicet.org/index.php/jppi>



1
2
3
4
5
6

The Blended Learning Model with Online Skills on the Learning Independence of High School Students

ABSTRACT

Article Info

Article history:

Received Jun 12th, 201x

Revised Aug 20th, 201x

Accepted Aug 26th, 201x

Keyword:

Blended Learning, Online Skills, Independent Learning

The research aims to determine the effectiveness of blended learning management and online skills on student learning independence in the North Tapanuli region. The low learning interaction between teachers and students is caused by restrictions and forcing students to study independently. Therefore, teachers must develop competence by presenting the

right model. Teachers have no other choice but to carry out good blended learning management so that learning activities continue. The method in this research is quantitative with the type of ex post facto research, namely comparative causal research. Data collection techniques by distributing instruments in the form of questionnaires to teacher respondents. The population in this study were all teachers in North Tapanuli Regency with a sample of 90 people from 4 schools that were spread out. Data analysis techniques are correlation and regression. The results of the study show that blended learning management and online skills have an impact on student learning independence. The effect of the blended learning model on students' online skills is 52.10%. Conclusion in increasing student learning independence, teachers use blended learning models to the fullest. However, this model must still be supported by the provision of online student skills.



© 2020 The Authors. Published by IICET.

This is an open access article under the CC BY-NC-SA license (<https://creativecommons.org/licenses/by-nc-sa/4.0>)

Corresponding Author:

Jitu Halomoan Lumbantoruan

Fakultas Keguruan dan Ilmu Pendidikan, Universitas Kristen Indonesia

Email: jituhalomoan.lumbantoruan@gmail.com

7

8 Introduction

9 The emergence of distance learning activities in Indonesia is a policy carried out by 10 the government in striving for the learning and learning process to continue according to

11 expectations from the curriculum that has been planned, even though it is still in a

12 pandemic condition that has not been completed.(Puspitasari, 2018). The government has

2

13 socialized and given authority to schools and tertiary institutions in using the appropriate 14 APA learning model for
the learning process in their schools and tertiary institutions. Taking 15 this policy into account, schools must still
pay attention to and understand that the places
16 that have the most potential to cause crowds large so and have a fairly high risk of 17 spreading Covid-19 (Julaeha,
2019). The application of online distance learning policies
18 requires students to study independently at their respective homes (V. J. Caiozzo, F. Haddad,

1

19 S. Lee, M. Baker et al., 2019). This is due to direct interactions that have been carried out so
20 far and must be avoided and can only communicate through digital media (Brooks et al.,
21 2020). However, with the rapid development of technology and the lack of time in adjusting
22 the ability to master technology. In overcoming this the learning process can be done partly 23 online and partly
face-to-face but limited (Rasheed et al., 2020). With a learning model like 24 this, students are expected to have
their own initiative to explore different learning 25 resources to gain knowledge according to WHAT the students
themselves want and need. 26 This learning process method requires a lot of great responsibility, high self-discipline,
and 27 skills in utilizing learning resources (Niemi, 2002). With the implementation of this hope, the 28 learning
process is ensured to be effective and run as previously planned.

29 In measuring the learning independence of students, it can be measured from the
30 process they learn until they get the specified results (Handayani & Ariyanti, 2021). This
31 independence can be seen from the following characteristics: a) having the ability to plan 32 and choose
learning materials independently; b) Having initiative and self-motivation 33 without having to be directed;
c) is responsible for carrying out his own work; d) critical, 34 logical and open to all; e) have a high sense of
self-confidence. With the appearance of a

35 high sense of confidence, it will also generate high enthusiasm in completing the work
36 (Fadhli, 2020). Student learning independence is influenced by several factors including 37 motivation, place of
study, learning aids, time availability, economic conditions, and skills in 38 using online media (Jayawardena et al.,
2020). Skills in using online media include operating 39 and writing skills in zoom media and Google meet during the
learning process. This skill can 40 be acquired by students by independent study, with independent study will have
an impact 41 on great curiosity, more critical thinking in decision making, innovation and high self42 confidence (Fey
et al., 2020). These indicators are important things that must be possessed

43 by students in learning. With social restrictions having a negative impact on students in 44 carrying out independent
learning at home. Adult interference in learning for students can 45 have a negative impact on the development of their
independent learning. While very 46 limited interaction between teachers and students, it will reduce enthusiasm for 47
independent learning (Grewenig et al., 2021). The motivation that is usually obtained from 48 face-to-face learning is very
useful. This is what requires teachers to have the obligation to 49 balance between direct interaction and monitoring
developments in online media mastery 50 (Rovai, 2000).

51 Recognizing the importance of student learning independence, teachers should look 52 for appropriate learning
methods to meet current government policies in online and offline

53 learning (Selvaraj et al., 2021). Learning with a new life order requires teachers to make
54 changes by developing basic skills. This is based on the fact that there is an ongoing 55 transition process from the
face-to-face learning process method to the online learning 56 process method (Sugiarti, 2020). One choice of
suitable method is to combine online and

57 face-to-face learning, which is known as a learning style by combining the two methods
58 which is called the blended learning model. The blended learning model has many
59 advantages, including flexibility, cost-effectiveness, and interactivity (Mali & Lim, 2021). The 60 blended learning
application model can be adapted to the current state of students (Yangari 61 & Inga, 2021). Online learning or
online learning allows students to access various learning 62 resources online from anywhere they want, anytime
and anywhere (Bdair, 2021). This can 63 also be done during direct discussion activities in the classroom face-to-
face or online from

64 home. The concept of blended learning management is one of the steps that must be
65 implemented so that quality learning activities are carried out (Dwivedi et al., 2019). Steps 66 that must be done by
the teacher is Lapitan et al., (2021): 1) Implement learning plans, 2) 67 material for learning activities based on

blended learning, must be able to be discussed in 68 face-to-face and online meetings; 3) It must be in the form of an assessment by the teacher,

69 namely the teacher provides an assessment or assessment, both attitude, knowledge and 70 skills assessment according to the characteristics of blended learning; 4) teachers can 71 implement blended learning management methods, for example carrying out learning 72 activities using hybrid learning methods.

73 However, in carrying out this learning model, teachers face different obstacles in 74 carrying out blended learning management (Feitosa de Moura et al., 2021). Learning

75 methods are applied suddenly, resulting in them not understanding in depth how the 76 blended learning form of learning management can work well (Gjestvang et al., 2021).

77 Teachers do not have extensive experience with applying this model and little information 78 about the blended learning methods they receive (Chiu, 2021). Teachers in carrying out 79 dominant online learning only give assignments to students without a clear division between 80 material that will be done independently and that which is done during face-to-face learning

81 (Garrison & Kanuka, 2004). Independent learning according to the development of the

82 current technological era requires special skills in obtaining information or sources that can

83 be used in developing the material they will teach (Lavi et al., 2021). Special skills when

84 online provide opportunities for students to be able to define a problem with their own 85 thinking concepts, gather information, analyze it, and freely find solutions to the problem.

86 This skill is particularly useful in today's times as it saves time and money and can obtain 87 information quickly (Sjølie et al., 2021). But the fact is, there is still a gap in the skills of 88 students (Alshawabkeh et al., 2021).

89 In general, when viewed from its geographical location, students who live in 90 dominant urban areas have the ability to use technology and operate online media properly 91 (Syahrudin et al., 2021). This is supported by the facilities and infrastructure available in 92 the student environment. But on the other hand, skills in using this technology will be seen 93 in rural areas, where students still experience limited facilities and infrastructure, for 94 example the limited availability of internet access in their environment. In addition, students 95 also need assistance from adults, especially regarding ethical and safety factors in the use 96 of technology (Laksana, 2021). Previous research stated that 21st century skills require 97 online skills in technical aspects, information and communication, collaboration, critical 98 thinking, creativity, and specific skills in solving problems through the use of the latest 99 technology (Yustina et al., 2020). Other research shows that digital skills have a positive

100 effect on the work readiness of the millennial generation in urban areas such as Jakarta

101 (Hendayani, 2019). Interest in learning is also strongly influenced by the ability to operate 102 technology, students who are equipped with good technological knowledge can access 103 various learning resources properly (Sailer et al., 2021). With a good interest in learning, 104 students will automatically be independent in carrying out learning activities (Lee et al.,

105 2021). In this case, there is a gap between expectations and reality, it is clear that teachers

106 in Tapanuli still need certainty about the right model to use. In theory, it is argued that the

107 blended learning model is very appropriate for use in emergency situations. While the reality 108 on the ground is that not all teachers use the blended learning model, because there is no

109 research that provides certainty about the effectiveness of this model. This study focuses on

110 research to find out how effectively students use online skills with the blended learning 111 model used by teachers to support independent learning processes. Based on the 112 background above, the sub focus that will be examined in this study is whether there is an 113 effect of the management of the blended learning model with online skills on the learning 114 independence of North Tapanuli district students? The purpose of this study was to 115 determine the effectiveness of blended learning management and online skills on student 116 learning independence in the North Tapanuli region. Introduction.

117 Method

118 In this study using a quantitative method with the type of export facto where the research is

119 causal comparative (Harapan et al., 2020). Researchers try to find causal linkages in certain

120 problems. The problem in this research is the link between blended learning management 121 and online skills on students' learning independence. The location of this research was

122 conducted at public and private high schools (SMA) in North Tapanuli Regency, North

123 Sumatra. At the time of testing the instrument was conducted on 20 teacher respondents 124 who were not part of the research sample. The population in this study were all public and

125 private high school (SMA) teachers in North Tapanuli district, with the research sample being 126 teachers who taught at public high school (SMA) 1 and PGRI 20 Si borong-borong, high 127 school Negeri 1 and Negeri 2 Tarutung with a total of 90 teachers who were directly involved 128 as respondents. The data collection technique was by distributing instruments in the form of

129 a questionnaire directly to the respondent's WhatsApp number by making a Google form link 130 that had been prepared by the researcher and could be accessed by respondents via 131 cellphone or laptop. The instrument is a statement that has alternative answers as follows:

132 SL = Always (5), S = Often (4), K = Sometimes (3), J = rarely (2), TP = Never (1).

133 Table. 1 Validation Instrument 137
134 Pearson Correlation 1 138 Based on Table 1 it
135 Sig. (2-tailed) can be seen that the
136 Validation N 94 instrument items on the
certified teacher indicator 139 are greater than 0.05. In this sense, all instruments in this study are declared "Valid",
140 because each question item is greater than R_{Table} or R_{count} is greater than R_{Table}.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.849	.910	25

141 Table 2. Instrument reliability
142 All instruments given to teachers in this study were considered reliable because Cronbach's
143 Alpha was greater than 0.7, namely 0.849. The instruments given to teachers can be used to 144 test and standardize in determining the effectiveness, the following are indicators and 145 research grids:

Table 3. Learning Independence Instrument Grid

Number	Indicator
1	Have Initiative
2	Have high responsibility
3	Self-Discipline
4	Self-control

Table 4. Grid of Blended Learning Management Instruments

Number	Indicator
1	Blended Learning planning management
2	Management of the implementation of Blended Learning
3	Blended Learning learning evaluation management
4	Blended Learning development management

Number	Indicator
1	Information Skills online
2	Intelligence Communicate online (Communication Digital Skills)
3	Media collaboration (Collaboration Digital Skills)
4	Creative (Creative Digital Skills)

162 Tabel 5. Kisi- 5 Problem solving (Problem solving skills) kisi

Instrumen

Ketrampilan Online

163

164

165

166

167 Data

168 analysis techniques with correlation and regression analysis methods. The variables in this 169 study are
blended learning management (X_1), Online Skills (X_2), and independent learning (Y).

170 In this study, researchers conducted a t test (partial test) which aims to find out how 171 significant the independent
variable is to the dependent variable with a temporary 172 assumption that the other independent variables are considered
constant. Whereas the F 173 test in this study was to determine the effect of all the independent variables contained in 174
the model simultaneously on the dependent variable.

175 Results and Discussions

176 Results

177 Based on research conducted in North Tapanuli district, from a sample of 4 schools in two

178 different sub-districts, namely state 1 high school and PGRI 20 high school in Si Borong

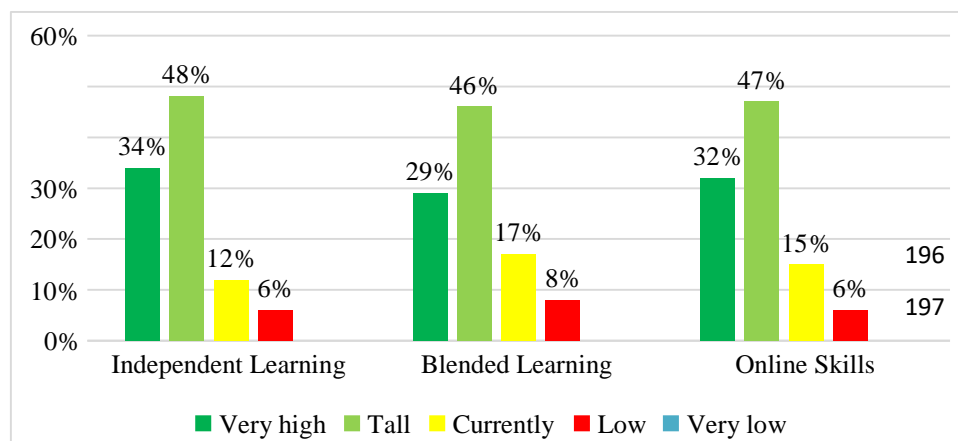
179 Borong district and Tarutung state 1 and state 2 high school, the data is as follows following. 180 The results of
research on aspects of learning independence, blended learning 181 management, and online skills can be seen
descriptively in the following table.

181 Table 4. Descriptive Results of Independent Learning, Management of Blended Learning and Digital Skills

Information	Independent Learning	Blended Learning	Online Skills
N	90	90	90
Mean	4,00	3,92	3,81
Range	2,50	2,81	2,76
Std. Deviation	0,47	0,45	0,48
Maximum	4,73	5,03	4,96
Minimum	2,42	2,09	2,05

182 Based on the descriptive table above it can be seen that the data with the average score obtained by the learning
 183 independence indicator shows that, in North Tapanuli district the level of independence of students in learning is
 184 quite high, this data obtained a fairly good distribution of data by looking at the standard deviation of 0.47 where
 185 the data can be are responsible for the source of the information. By looking at table 4, the blended learning indicator
 186 with an average score obtained is 3.92, meaning that the learning model used in North Tapanuli district has been
 187 running well and is effectively used for the learning process in the future. The same thing can also be seen in the
 188 skills indicator when online, with an average of 3.81, meaning that the skills of students are considered by the
 189 teacher to be very good by comparing the assessment of the maximum score given by the teacher on online skills of

190 4.96 then,
 191 of students
 192 rural areas
 193 inferior to
 194 abilities of
 195 urban



the ability
 in the area
 are not
 the
 students in
 areas.

198 Figure 1. Learning Independence Histogram, Blended Learning and Online Skills

199 Based on Figure 1 above, it is known that students who are in the North Tapanuli district have a fairly high
 200 learning independence. This can be seen from diagram 1, of the 90 teachers who were respondents there were 34%
 201 and 48% who said that the students taught by them were very high and had high independence in learning. This is
 202 in line with the average in table 4, which is 4.00 from a maximum scale of 4.73. The blended learning management
 203 indicator presents frequency data from teachers who have blended learning management skills in the "very high"
 204 category of 29% and high 46%. Or 66%. Even so, there are also teachers who think that not all students can fulfill the
 205 blended learning model, there are 17% in the medium category and 8% in the low category. This can be used as
 206 input for education circles to improve and investigate the obstacles of low students in following the blended learning
 207 model. In terms of skills when online, students who are in North Tapanuli are rated by the teacher very high and
 208 there are 32% and 42% high. This has a positive impact on the progress of education in the North Tapanuli area in
 209 dealing with emergency situations such as the Covid pandemic.

210 In knowing the effect of blended learning management (X_1) and online skills (X_2) on student learning
 211 independence (Y), the researcher conducted a multiple regression analysis test. The results of this multiple
 212 regression analysis are shown in the table below:

213 Table 5. Results of Multiple Linear Regression Analysis X_1 and X_2 against Y

Model	Unstandardized		Standardized	t	Sig.
	Coefficients		Coefficients		
	B	Std. Error	Beta		
Constant	0,476	0,243		1.276	0,051
Blended Learning Management	0,510	0,058	0,476	7.085	0,000
Online Skills	0,488	0,053	0,478	5.067	0,000
<u>Student Learning Independence</u>	<u>0,521</u>	<u>0,051</u>	<u>0,467</u>	<u>6,890</u>	<u>0,000</u>

217
 218 Based on the results of multiple linear regression tests as shown in the table above,
 219 that the significance of the Blended Learning Management variable (X_1) is $0.000 < 0.05$, and
 220 $t_{count} 7.0853 > t_{table} 1.984$, this can be interpreted that H_0 is rejected and H_1 is accepted
 221 which means that there is a significant influence of the blended learning management 222 variable in the
 implementation of learning conducted by teachers in the North Tapanuli 223 district on high school level
 students with an effect of 51.0%. On the online skills indicator, a 224 significance of $0.000 < 0.05$, and t_{count}
 5.0657 $> t_{table} 1.984$ is obtained, this can be 225 interpreted as H_0 being rejected and H_1 being accepted.
 This means that there is a 226 significant influence of students' online skills on learning independence. The
 effect is 48.8%.

227 The results of the F test analysis with blended learning management variables (X_1) and
 228 online skills (X_2) on student learning independence (Y) obtained a significance of 0.000
 229 < 0.05 and the calculated F_{value} of $68.90 > F_{table} 2.32$, this is it can be interpreted that H_0 is 230 rejected and H_1 is
 accepted, which means that the teacher's blended learning management 231 model (X_1) and online skills (X_2) have
 a relationship to student learning independence (Y) 232 with a variation in Y of 52.10%.

233 **Discussions**

234 From the results of the descriptive analysis, it can be seen that the learning 235 independence of high school
 students in the North Tapanuli region shows that 34% is very 236 high and 48% is high. This was assessed by the
 teachers who taught and from 90 teacher 237 respondents, only 6% had a low opinion of independence study high
 school in North 238 Tapanuli and the remaining 12% are moderate. This certainly has a positive impact on the 239
 development of education in the area, especially in the North Tapanuli region, North
 240 Sumatra which is classified as far from urban areas. This finding refutes previous findings 241 which say that
 independent learning is dominantly carried out by participants students who
 242 are in urban areas (Soesilo et al., 2022). These findings show the independence of students
 243 through initiative, responsibility, discipline and self-control as well as skills that are 244 continuously honed through
 the digital media they have. This independence can be
 245 achieved because of the direct impact of government policies that enforce learning from
 246 home during the Coved pandemic, when at that time they were not allowed to leave the 247 house to carry out the
 learning process at school or were prohibited from working in groups 248 with friends. The online learning method
 causes teacher-student interaction to be very low
 249 so that the opportunity for teachers to participate in directing students is very limited. In the 250 online learning
 process, the tasks carried out by the teacher are more dominant so that 251 students have their own initiative to explore
 the subject matter being studied. Learners 252 consciously do the tasks given by the teacher. Through owned facilities such
 as textbooks or 253 smartphones are used to access various learning resources with discipline. Discipline of 254 students
 through their learning activities can be seen from the completion of assignments 255 given on time (Chulsum, 2017).
 256 The teachers when giving material and assignments to students by limiting time, this 257 is considered necessary to
 know the seriousness of students and to keep students 258 disciplined. The students enthusiastically completed the
 assignments given according to the 259 time limit agreed by both parties. These assignments are collected in person and
 through 260 social media that the teacher has made links to collect student work. The students realize 261 that learning
 process activities like this are done for their own good, their future and to 262 overcome the spread of epidemic diseases.
 With this self-awareness, students are very 263 concerned and try to achieve maximum learning results. Nonetheless, this
 study noted that 264 the learning outcomes obtained by students were still low in some materials, such as some 265
 materials in mathematics, physics and chemistry. Students in terms of exact lessons, are

266 still not able to study independently and are simply let go by the teacher. They are still very
267 dependent on the topic and the way the teacher designs the learning given by the teacher 268 to them. In addition,
the level of confidence to solve problems in learning activities is in a 269 fairly good category. If students do not take
part in the lesson at the scheduled meeting, 270 they usually try to find other sources, but to ensure their
understanding of the material is 271 still in doubt. It was also found in this study that some of these students did not
submit 272 assignments given by the teacher. To overcome this, the teacher creates a special strategy 273 to adapt
to the problems faced by students. They can apply problem-based learning 274 methods so that students can be
more independent in planning and carrying out their 275 learning activities. Their self-confidence can be boosted by
giving students more 276 opportunities to communicate what they have learned. This is in line with previous
research, 277 that communication can expedite the learning process (Azizah & Widjajanti, 2019).

278 The results of the descriptive analysis of blended learning management variable data 279 show that teachers in the
North Tapanuli region have implemented this model well so that 280 the expected learning objectives can be achieved.
Blended learning management is

281 integrated learning between face-to-face and online learning carried out by teachers which 282 includes learning
planning, implementation, assessment and development activities. At the 283 learning planning stage, the teacher, through
routine activities carried out at school, 284 compiles an annual program and a semester program which will be carried out
at the 285 beginning of the school year. Make a semester program as a plan for the next semester's 286 activities to be
carried out by the teacher for time management and implementation 287 management. The teacher determines the day
and week effectively, based on calculations 288 in the educational calendar by compiling a blended learning curriculum and
lesson plan 289 (RPP) so that learning material can be implemented according to the time agreed by the 290 teacher and
school principal. The teacher prepares a blended learning-based learning 291 implementation plan as a reference in carrying
out learning activities, prepares online and 292 offline learning materials so that each student can easily access them
through the links that 293 have been prepared, makes a list of material sites to be studied, and divides topics to be 294
even better in a structured and continuous manner. As well as planning supporting facilities 295 by preparing learning media
that are of interest to students such as Google meet and media

296 zoom. Implementation of the learning process includes opening, core, and closing activities. 297 Teachers interact with
students and integrate online learning and face-to-face learning. 298 Planned learning is carried out by the teacher in
learning activities. Opening activities such 299 as saying greetings, praying, checking student attendance. Furthermore, in
the main 300 learning activities, the teacher conveys topics with methods, learning aids with learning 301 media prepared
beforehand. In this activity, the teacher builds communication through

302 interaction, gives problem-based assignments to students to work on independently via the
303 WhatsApp group, directs students to conduct studies on certain topics, and holds virtual or 304 face-to-face
meetings in class for discussions. Then in the closing activity, the teacher and 305 students draw conclusions about
the topic. The teacher provides continuous reinforcement 306 and assistance to students by providing guidance and
solutions to those who find it difficult 307 to understand the subject matter. The teacher always facilitates
interactions between 308 students such as greeting kindly at every meeting and inviting them to be active in 309
discussions and always providing feedback in every discussion session. At the learning 310 assessment stage, high
school teachers in the North Tapanuli region provide an assessment 311 of the results of student learning activities
at the end of each subject both online and offline. 312 Evaluation is carried out by providing an assessment of
attitudes, knowledge and skills 313 during face-to-face learning in the curriculum. Evaluation is carried out
continuously and 314 planned to find out progress and deficiencies in the learning process by providing 315
continuous remedial to students who have not achieved the minimum completeness criteria 316 (KKM) in each
subject topic. This is proven, many teachers get appreciation with one proof, 317 students are active in carrying out
online and offline learning activities. At the learning 318 development stage, teachers use Google Classroom, zoom,
google meet and through 319 WhatsApp the development of learning process management. The teacher organizes
320 blended learning-based learning activities where students can participate face-to-face or 321 virtually through
proximity, Google meet at the same time. In the skill variable with

322 descriptive analysis it is known that the teacher gives an assessment of the instrument by 323 32% and 47% in the very
high category and the students' ability to operate media online is

324 high. This data provides information that the abilities of students in the North Tapanuli
325 region are very proficient in using online media. These digital skills can be seen from 326 students' skills in using
digital devices to learn, communicate digitally, collaborate digitally, 327 and develop creativity by creating digital
content and solving problems related to digital

328 technology that they have used so far in finding answers to questions that arise in their

329 minds. Students' skills in using digital information are very good. They can search for the 330 topics they need from
online sites. The data they get can be stored in their own computer
331 folder which they can access when they need it again. In online learning activities, they use 332 these skills to share
information in solving a problem encountered from the assignment 333 given by the teacher.

334 Technology that connects teachers and students is constrained by regulations made 335 by the government because
the covid factor is no longer an obstacle for them to learn more. 336 They prove this by being able to communicate through
voice calls, video calls, and 337 messages sent via Google Meet and Zoom. Group assignments given by the teacher can be
338 carried out collaboratively through an active virtual world. With the skills they have, they
339 create digital content such as making learning videos and things that become projects or
340 assignments that the teacher gives to students. This can hone student creativity with one 341 proof, students are
more confident and have a lot of time and sources of information 342 obtained online. However, the results of this
study also show that at points in problem
343 solving. Some of the students got scores below the average. Some students experience 344 obstacles in operating the
media used during the learning process. About 8% of teachers 345 think that the students they teach experience difficulties.
This happens because the 346 condition of students who are not evenly distributed in owning electronic devices such as
347 hempon and laptops. In this case, the teacher must be able to provide solutions to the 348 difficulties faced by students
when online learning is carried out. Teachers must be able to 349 direct students who have difficulty using technology at
home or around the house, or invite 350 other students to help each other by lending their communication tools. Based on
the results 351 of the t-test analysis, it is known that the learning model with blended learning has a
352 significant effect on the learning independence of students. Generating self-directed 353 learning requires that each
learner has a well-planned and modifiable strategy. Teachers 354 can organize blended learning very well. Even though this
online learning method is 355 implemented, the teacher is sufficient in its implementation. Teachers can design quality 356
learning, organize learning, and make assessments that are appropriate to the 357 circumstances and conditions of
students. Good learning planning starts with preparing a 358 learning implementation plan using a blended learning model,
and choosing learning media 359 that is appropriate to the subjects to be taught and adapts to the circumstances of
students. 360 With this plan, the teacher is more focused on carrying out each stage of the 361 implementation of learning,
has more control over the subject matter, and is more
362 responsive to any problems that arise in learning activities. Teachers can carry out the
363 process of implementing learning using an online blended learning model. The teacher 364 distributes study material
through the WhatsApp group application or google classroom well 365 before the learning process begins.

366 In the initial stage the teacher provides a learning implementation plan (RPP) and is
367 followed by briefly providing topics and material by giving students the opportunity to
368 discuss problems and difficulties. The teacher also prepares the rubric provided by the 369 teacher which
includes an assessment covering cognitive competence in the form of student 370 worksheets which are
collected via the prepared link. Skills assessment is carried out 371 through products produced by students
such as creating digital content or other products
372 made by students at home. Situation assessment is carried out by involving students in 373 learning activities or
completing assignments appropriately according to the allotted time.

374 The results of the data analysis show that students' digital skills have a significant effect on 375 learning independence.
With this method they can learn according to their circumstances. 376 They can access various learning resources from
their devices independently with a little 377 guidance from the teacher. Various applications that are available for free
support their 378 creativity in creating digital content related to their studies, for example making tutorials on
379 making a product. The ease of content sharing allows them to collaborate on an issue or
380 create content either as assignments given by the teacher or on their own initiative. They 381 can also find colleagues
with the same talent without being limited to one school but on a 382 larger scale so that they can share ideas and
creativity. The management of blended 383 learning and digital skills has a significant impact on student
independence. Teachers who
384 are able to apply blended learning planning well will be able to organize fun and challenging
385 learning for students. Sharing material studied offline and material studied online will be 386 more sustainable.
Online learning provides opportunities for students to explore material 387 without limits, whereas in offline
learning, teachers can directly check the achievements and 388 progress of each student. The teacher can also
provide reinforcement of the material that 389 has been delivered. If the Blended Learning Department is supported
by good numerical 390 abilities, students will support each other to increase student learning independence. 391
Students focus more on studying the topic of the lesson, and it's easy to get good references

392 for the lesson. Obstacles and difficulties faced by students can be found a solution right
393 away by discussing together. The implications of this research can be used as input, 394 reference and discourse on
student learning independence in managing blended learning 395 and students' digital skills. By having good digital
skills and supported by good education 396 management, student learning independence will also increase so that
the impact on 397 improving the quality of education is getting better. In the administrative aspect of blended 398
learning, teachers should provide more intensive guidance to students who experience 399 difficulties in online
learning activities by providing lists and recommendations of trusted 400 learning resources to focus more on
exploring topics.

401

402

403 Conclusions

404 Learning management using the blended learning model conducted by teachers in the North
405 Tapanuli district has a positive impact on the learning independence of students at the 406 senior high school level.
A well-designed and implemented blended learning model will 407 generate interest and provide motivation for
students in the independent learning process. 408 The independent learning process will have a positive impact and
value for the expected 409 improvement in quality and education. The skills of students when online have an impact
on 410 increasing students' interest in learning independently. With these online skills, students 411 have more time
to find sources of information to answer questions from the teacher, this 412 makes students more developed and
faster in solving problems they face.

413 Acknowledgments

414 We express our deep gratitude to the Indonesian Christian University for funding this
415 research. We hope that this research will have a positive impact on developing quality and 416 improving the well-
being of teachers in Indonesia, especially Toraja. We hereby declare that 417 we do not have any conflict of interest.

418 References

- 419 Alshwabkeh, A. A., Woolsey, M. L., & Kharbat, F. F. (2021). Using online information
420 technology for deaf students during COVID-19: A closer look from experience. *Heliyon*, 421 7(5), e06915.1-12.
<https://doi.org/10.1016/j.heliyon.2021.e06915>
- 422 Azizah, I. N., & Widjajanti, D. B. (2019). *KEEFEKTIFAN PEMBELAJARAN BERBASIS PROYEK*
423 *DITINJAU DARI PRESTASI BELAJAR, KEMAMPUAN BERPIKIR KRITIS, DAN KEPERCAYAAN*
424 *DIRI SISWA*. *Jurnal Riset Pendidikan Matematika*, 6(2), 233–243.
425 <https://doi.org/10.21831/jrpm.v6i2.15927>
- 426 Bdair, I. A. (2021). Nursing students' and faculty members' perspectives about online
427 learning during COVID-19 pandemic: A qualitative study. *Teaching and Learning in*
428 *Nursing*, 16(3), 220–226. <https://doi.org/10.1016/j.teln.2021.02.008>
- 429 Brooks, S. K., Webster, R. K., Smith, L. E., Woodland, L., Wessely, S., Greenberg, N., & Rubin, 430 G. J. (2020).
The psychological impact of quarantine and how to reduce it: rapid review
431 of the evidence. *The Lancet*, 395(10227), 912–920. [https://doi.org/10.1016/S01404326736\(20\)30460-8](https://doi.org/10.1016/S01404326736(20)30460-8)
- 433 Chiu, T. K. F. (2021). Digital support for student engagement in blended learning based on
434 self-determination theory. *Computers in Human Behavior*, 124(June), 106909.1-10. 435
<https://doi.org/10.1016/j.chb.2021.106909>
- 436 Chulsum, U. (2017). Pengaruh Lingkungan Keluarga, Kedisiplinan Siswa, Dan Motivasi
437 Belajar Terhadap Hasil Belajar Ekonomi Siswa Di Sma Negeri 7 Surabaya. *Jurnal*
438 *Ekonomi Pendidikan Dan Kewirausahaan*, 5(1), 1–16.
439 <https://doi.org/10.26740/jepk.v5n1.p5-20>
- 440 Dwivedi, A., Dwivedi, P., Bobek, S., & Sternad Zabukovšek, S. (2019). Factors affecting
441 students' engagement with online content in blended learning. *Kybernetes*, 48(7), 442 1500–1515.
<https://doi.org/10.1108/K-10-2018-0559>
- 443 Fadhli, K. (2020). *TERHADAP SEMANGAT KERJA DAN KINERJA TENAGA PENDIDIK (Studi 444 Kasus pada Yayasan*
Yalatif Indonesia) A . PENDAHULUAN Persaingan yang dihadapi
445 *yayasan ataupun lembaga yang bergerak pada wilayah pendidikan dirasakan semakin*

- 446 kompetitif . Persaingan tersebut da. 4(2),
35–50.
- 447 <https://doi.org/https://doi.org/10.32764/margin.v3i2.907>
- 448 Feitosa de Moura, V., Alexandre de Souza, C., & Noronha Viana, A. B. (2021). The use of
449 Massive Open Online Courses (MOOCs) in blended learning courses and the functional
450 value perceived by students. *Computers and Education*, 161, 104077.
451 <https://doi.org/10.1016/j.compedu.2020.104077>
- 452 Fey, S. B., Theus, M. E., & Ramirez, A. R. (2020). Course-based undergraduate research
453 experiences in a remote setting: Two case studies documenting implementation and
454 student perceptions. *Ecology and Evolution*, 10(22), 12528–12541.
455 <https://doi.org/10.1002/ece3.6916>
- 456 Garrison, D. R., & Kanuka, H. (2004). Blended learning: Uncovering its transformative
457 potential in higher education. *Internet and Higher Education*, 7(2), 95–105.
458 <https://doi.org/10.1016/j.iheduc.2004.02.001>
- 459 Gjestvang, B., Høye, S., & Bronken, B. A. (2021). Aspiring for competence in a multifaceted
460 everyday life: A qualitative study of adult students' experiences of a blended learning
461 master programme in Norway. *International Journal of Nursing Sciences*, 8(1), 71–78.
462 <https://doi.org/10.1016/j.ijnss.2020.11.001>
- 463 Grewenig, E., Lergetporer, P., Werner, K., Woessmann, L., & Zierow, L. (2021). COVID-19 and
464 educational inequality: How school closures affect low- and high-achieving students.
465 *European Economic Review*, 140(September), 103920.1-21.
466 <https://doi.org/10.1016/j.eurocorev.2021.103920>
- 467 Handayani, A. S., & Ariyanti, I. (2021). KEMANDIRIAN BELAJAR MATEMATIKA SISWA SMP 468 DISAAT PANDEMI
COVID-19. *UrbanGreen Conference Proceeding Library*, 6–10.
- 469 Harapan, P., Publishing, E., Collection, B. A., An, U., Leung, D., Accounting, I., Sociology, T.,
470 Reporting, F., & Account, A. (2020). A
Gower Book.
471 <https://doi.org/https://doi.org/10.4324/9781315573038>
- 472 Hendayani, M. (2019). Problematika Pengembangan Karakter Peserta Didik di Era 4.0. *Jurnal Penelitian
Pendidikan Islam*, 7(2), 183–188. <https://doi.org/10.36667/jppi.v7i2.368>
- 474 Jayawardena, P. R., van Kraayenoord, C. E., & Carroll, A. (2020). Factors that influence senior
475 secondary school students' science learning. *International Journal of Educational
476 Research*, 100(June 2019), 101523.1-14.
<https://doi.org/10.1016/j.ijer.2019.101523>
- 477 Julaeha, S. (2019). PROBLEMATIKA KURIKULUM DAN PEMBELAJARAN
PENDIDIKAN KARAKTER.
478 7(2), 157–182.
- 479 Laksana, D. N. L. (2021). Implementation of Online Learning in The Pandemic Covid-19: 480 Student Perception
in Areas with Minimum Internet Access. *Journal of Education
481 Technology*, 4(4), 502–509.
<https://doi.org/10.23887/jet.v4i4.29314>
- 482 Lapitan, L. D., Tiangco, C. E., Sumalinog, D. A. G., Sabarillo, N. S., & Diaz, J. M. (2021). An
483 effective blended online teaching and learning strategy during the COVID-19 pandemic.
484 *Education for Chemical Engineers*, 35(May 2020),
116–131.
<https://doi.org/10.1016/j.ece.2021.01.012>
- 485 Lavi, R., Tal, M., & Dori, Y. J. (2021). Perceptions of STEM alumni and students on developing
487 21st century skills through methods of teaching and learning. *Studies in Educational
488 Evaluation*, 70, 101002.1-11. <https://doi.org/10.1016/j.stueduc.2021.101002>
- 489 Lee, S. J., Ward, K. P., Chang, O. D., & Downing, K. M. (2021). Parenting activities and the
490 transition to home-based education during the COVID-19 pandemic. *Children and Youth
491 Services Review*, 122(July 2020), 105585.1-10.
<https://doi.org/10.1016/j.chilyouth.2020.105585>
- 492 Mali, D., & Lim, H. (2021). How do students perceive face-to-face/blended learning as a
493 result of the Covid-19 pandemic? *International Journal of Management Education*, 19(3),
495 100552. <https://doi.org/10.1016/j.ijme.2021.100552>
- 496 Niemi, H. (2002). Active learning - A cultural change needed in teacher education and

- 497 schools. *Teaching and Teacher Education*, 18(7),
763–780.
- 498 [https://doi.org/10.1016/S0742-051X\(02\)00042-2](https://doi.org/10.1016/S0742-051X(02)00042-2)
- 499 Puspitasari, H. (2018). *STANDAR PROSES PEMBELAJARAN SEBAGAI SISTEM A . Pendahuluan 500 Pendidikan*
501 *Indonesia dihadapkan pada berbagai tantangan , baik tantangan internal*
502 *maupun tantangan eksternal . Tantangan internal adalah banyak sekolah yang belum*
503 *memenuhi delapan Standar Nasional. 1,* 339–368.
504 <https://doi.org/https://doi.org/10.21154/muslimheritage.v2i2.1115>
- 505 Rasheed, R. A., Kamsin, A., & Abdullah, N. A. (2020). Challenges in the online component of
506 blended learning: A systematic review. *Computers and Education*, 144(September
507 2019), 103701.1.17. <https://doi.org/10.1016/j.compedu.2019.103701>
- 508 Rovai, A. P. (2000). Building and sustaining community in asynchronous learning networks.
509 *Internet and Higher Education*, 3(4), 285–297. [https://doi.org/10.1016/S10965097516\(01\)00037-9](https://doi.org/10.1016/S10965097516(01)00037-9)
- 510 Sailer, M., Schultz-pernice, F., & Fischer, F. (2021). Computers in Human Behavior
511 Contextual facilitators for learning activities involving technology in higher education :
512 The C b -model. *Computers in Human Behavior*, 121(March), 106794. 1-13.
513 <https://doi.org/10.1016/j.chb.2021.106794>
- 514 Selvaraj, A., Radhin, V., KA, N., Benson, N., & Mathew, A. J. (2021). Effect of pandemic based
515 online education on teaching and learning system. *International Journal of Educational*
516 *Development*, 85(January), 102444. 1-11.
517 <https://doi.org/10.1016/j.ijedudev.2021.102444>
- 518 Sjølie, E., Strømme, A., & Boks-Vlemmix, J. (2021). Team-skills training and real-time
519 facilitation as a means for developing student teachers' learning of collaboration.
520 *Teaching and Teacher Education*, 107, 103477.1-10.
521 <https://doi.org/10.1016/j.tate.2021.103477>
- 522 Soesilo, T. D., Kristin, F., & Setyorini, S. (2022). Pengaruh Penerapan Model Pembelajaran
523 Terhadap Kemandirian Belajar Di Masa Pandemi Covid-19 Pada Peserta Didik Di Sma
524 Dan Smk Kota Salatiga. *Satya Widya*, 37(2), 79–91.
525 <https://doi.org/10.24246/j.sw.2021.v37.i2.p79-91>
- 526 Sugiarti. (2020). Inovasi Desain Pembelajaran Bahasa, Sastra Berbasis Konsepsi Merdeka
527 Belajar Pada Era Kehidupan Baru. In <https://medium.com/> (pp. 1–142).
528 <https://medium.com/@arifwicaksanaa/pengertian-use-case-a7e576e1b6bf>
- 529 Syahrudin, S., Yaakob, M. F. M., Rasyad, A., Widodo, A. W., Sukendro, S., Suwardi, S., Lani,
530 A., Sari, L. P., Mansur, M., Razali, R., & Syam, A. (2021). Students' acceptance to 531 distance learning during
532 Covid-19: the role of geographical areas among Indonesian
533 sports science students. *Heliyon*, 7(9), e08043.1-9.
534 <https://doi.org/10.1016/j.heliyon.2021.e08043>
- 535 V. J. Caiozzo, F. Haddad, S. Lee, M. Baker, W. P. and K. M. B., Burkhardt, H., Ph, R. O., 535 Vogiatzis, G.,
536 Hernández, C., Priese, L., Harker, M., O'Leary, P., Geometry, R., Analysis, 536 G., Amato, G., Ciampi, L., Falchi,
537 F., Gennaro, C., Ricci, E., Rota, S., Snoek, C., Lanz, O.,
- 537 Goos, G., ... Einschub, M. (2019). Kebijakan Pendidikan Di Era New Normal. *Society*, 538 2(1), 1–19.
538 [https://doi.org/10.3390/educsci11090487](http://www.scopus.com/inward/record.url?eid=2-s2.053984865607390&partnerID=tZ0tx3y1%0Ahttp://books.google.com/books?hl=en&lr=&id=2LIMMD9FVXkC&oi=fnd&pg=PR5&dq=Principles+of+Digital+Image+Processing+fundamental+techniques&ots=HjrHeuS_Yangari, M., & Inga, E. (2021). Article educational innovation in the evaluation processes within the flipped and blended learning models. <i>Education Sciences</i>, 11(9), 1–24. <a href=)
- 544 Yustina, Syafii, W., & Vebrianto, R. (2020). The effects of blended learning and project-based
545 learning on pre-service biology teachers' creative thinking skills through online learning
546 in the COVID-19 pandemic. *Jurnal Pendidikan IPA Indonesia*, 9(3), 408–420.
547 <https://doi.org/10.15294/jpii.v9i3.24706>
- 548
- 549