

Analysis of Student Learning Motivation for Project-Based Online Courses

Putie Maharani^{1*}, Nurullah Sururi Afif², Anantha Zakharia³, Harna Adiando⁴
Universitas Bina Sarana Informatika

Corresponding Author: Putie Maharani putie.pmb@bsi.ac.id

ARTICLE INFO

Keywords: Motivation, Online Courses, Project-based Learning.

Received : 26, June

Revised : 06, July

Accepted: 07, August

©2024 Maharani, Afif, Zakharia, Adiando : This is an open-access article distributed under the terms of the [Creative Commons Attribution 4.0 International](https://creativecommons.org/licenses/by/4.0/).



ABSTRACT

This analysis aims to find out the extent to which motivation affects students in project-based online courses. Where this project-based learning was first applied to religious courses, civic education and other courses at Bina Sarana Informatics University. Data collection was carried out by distributing questionnaires online to 100 students using the respondent achievement level analysis (TCR) research method. With the results, for online learning, 81.6% of students with the very good category can follow. For project-based learning, 78.4 - 79.8 percent are still in the good category, which means that there is still a need for improvement so that students can receive optimally.

INTRODUCTION

Learning motivation is a key factor that affects the success of students in pursuing their academic achievements. In the context of project-based online learning, a deeper understanding of the factors that motivate students can provide valuable insights into the development of effective learning strategies. By understanding students' learning motivation for project-based online courses, educational institutions can identify ways to improve the quality of learning, increase student retention, and promote better academic achievement.

Therefore, research on the analysis of student learning motivation for project-based online courses needs to be carried out to obtain information about factors that affect student motivation in the context of online learning. So that it can provide valuable input for the development of education policies and the implementation of more effective learning strategies. Thus, this introduction aims to introduce relevant research contexts and support the significance of student learning motivation analysis research on project-based online courses.

In this increasingly digital age, online education has become a popular option for many educational institutions. Project-based online courses, in particular, offer students the opportunity to develop practical and critical thinking skills through projects relevant to their field of study. However, to ensure success in the online curriculum, it is important to understand students' learning motivation. Learning motivation is a key factor that affects student participation, performance and learning outcomes.

This Analysis of Student Learning Motivation for Project-Based Online Courses aims to investigate and understand the factors that influence student learning motivation in project-based online curriculum. Using both quantitative and qualitative approaches, this research will identify students' key motivations, challenges faced, and effective strategies to improve learning motivation in the context of a project-based online curriculum.

Thus, the results of this study are expected to make a significant contribution to the development of a more effective and student-centred online curriculum, as well as assisting educational institutions in improving the quality of online education.

Project-based learning (PBL) has been widely recognized for its effectiveness in fostering deep understanding and practical skills. In an online learning environment, PBL can significantly impact student motivation, which is a critical factor in educational success. Understanding the theoretical underpinnings of student motivation in the context of project-based online courses can provide valuable insights for educators and instructional designers.

THEORETICAL REVIEW

Learning Motivation

Students' motivation towards online-based courses can strengthen their understanding of the factors that affect the level of engagement and academic achievement in a virtual learning environment. Intrinsic motivation and extrinsic motivation have a simultaneous influence on performance. The results of this study show that the influence of intrinsic learning motivation and extrinsic learning motivation together on student learning achievement is

significant. The higher the intrinsic and extrinsic learning motivation, the higher the student's learning achievement.(Sulastiah; 2019).

Factors that affect student motivation in the context of online learning can include internal factors (such as interest in the subject, perception of the value of learning, and level of comfort with technology) and external factors (such as social support, interaction with lecturers and classmates, and the quality of learning materials). Dominant internal and external factors on students' cognitive learning outcomes(Gultom, Sibagariang, dan Simatupang; 2022).

The challenges and obstacles that students face in online learning, and how these can affect their motivation. Factors such as poor internet connections, lack of self-discipline, and lack of social interaction between fellow students can be obstacles for some students. Where students lack information on how project-based learning techniques, such as learning must be done in groups, there are videos that must be displayed/submitted to lecturers as evidence of online learning. Indicators of learning motivation are concentration, curiosity, enthusiasm, independence, readiness, enthusiasm or encouragement, never give up, and confidence. Students are expected to continue to have high motivation to learn, even though there are shortcomings found in its implementation, so that the project-based online learning process remains optimal. So that technology that is the link in conveying knowledge from lecturers to students remains maximum. (Fitriyani, Fauzi, dan Sari; 2020)

Online Learning

Online learning is a learning process that takes place in a network, open, and massive so that more people can participate (Surahman, Santaria, and Setiawan; 2020). Where the learning method is carried out virtually through the internet. It involves using digital technology to provide access to learning materials, interactions between teachers and students, and other learning activities.

Online learning is not only assignments, but also online guidance from teachers to their students, The use of online applications is easy to implement, as long as teachers are willing to take their time(Sun'iyah; 2020). Through online learning, learning materials can be presented in a variety of formats, including text, video, audio, and interactive. This allows students to learn in a way that suits their individual learning style.

Self-Determination Theory (SDT)

Intrinsic and Extrinsic Motivation : SDT posits that motivation exists on a continuum from intrinsic (internal satisfaction and interest) to extrinsic (external rewards and pressures). PBL can enhance intrinsic motivation by allowing students to pursue projects that align with their interests and passions.
Autonomy, Competence, and Relatedness : SDT emphasizes the importance of these three basic psychological needs. Project-based online courses can support autonomy by giving students choice in their projects, competence through

mastery of skills and knowledge, and relatedness by fostering collaboration and interaction with peers and instructors.

Expectancy-Value Theory (EVT)

- Expectancy : This refers to students' beliefs about their ability to succeed in a task. Clear guidelines, regular feedback, and support in PBL can enhance students' expectancy for success.
- Value : This encompasses the perceived importance, interest, and usefulness of the task. PBL can increase the value students place on their learning by connecting projects to real-world applications and their personal interests.

Goal Orientation Theory

Mastery vs. Performance Goals

Students with mastery goals focus on learning and improvement, while those with performance goals focus on demonstrating competence relative to others. PBL can promote mastery goals by emphasizing the learning process and personal growth over competition.

Project-based Learning

Project-based Learning Project-based learning, according to Saefudin (2014), is a learning method that uses problems as the first step in collecting and integrating new knowledge based on their experiences by doing real activities in life. Meanwhile, according to Fathurrohman (2016), project-based learning is a learning model that uses projects or activities as a means of learning to achieve the attitude competencies, knowledge and skills achieved by students. Project-based learning (PBL) is the application of active learning. In simple terms, project-based learning is defined as a teaching that tries to relate technology to everyday life problems that are familiar to students, or to school projects (Rati, Ni Wayan; 2017).

Where the characteristics of project-based learning are :

1. Focusing on learning participants or students (student-oriented)
2. Project-based in learning
3. Develop active participation of learners
4. Fostering initiative and independence from students
5. Practicing collaboration and responsibility to access and manage information to find solutions
6. Train critical thinking and creativity of students
7. Evaluations are carried out periodically because participants reflect on
8. The learning project produces a clear product or output
9. Facilitator accompanies during the learning process

The advantages of project-based learning are one of them is to increase students' motivation to learn to encourage their ability to do important work (for which they need to be appreciated); Kurniasih in Nurhayati.

Framework of Thought

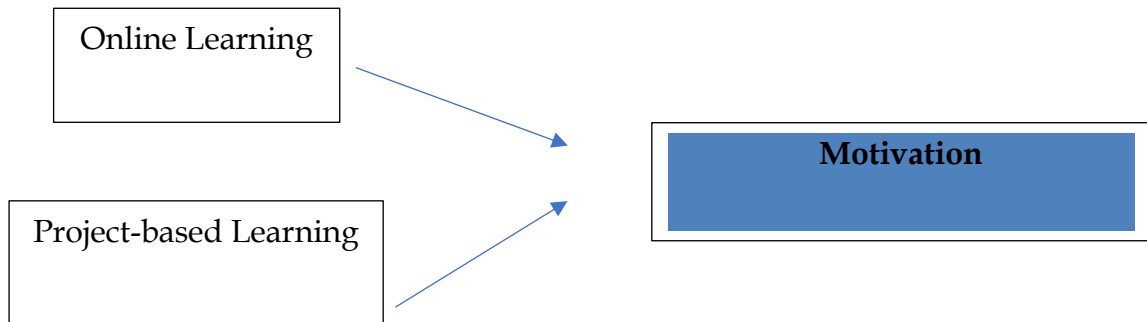


Figure 1. Conceptual Framework

METHODOLOGY

The data source uses primary data obtained from questionnaires distributed in the form of g-forms to students online. The sample size taken in this study was 100 samples from 500 students who were supported by the researcher (for the same course in the 2024/2025 academic year). The next method of data collection through literature is the method of collecting data through reference to books, journals and notes related to the research being conducted.

Data analysis uses the respondent achievement level (TRC) which is used to find out how the respondent response leads to the level of satisfaction. With the following formula :

$$TCR = \frac{\sum^n(T_i \times [SL]_i)}{Y}$$

Where T_i = Total Likert score from respondents' answers

SL_i = Skor Likert

n = number of respondents

To find out the TCR index, the formula :

$$\frac{TCR}{Y} \times 100\%$$

Y = Highest score Likert x n

RESULTS AND DISCUSSION

The analysis of the gform distributed online can be explained as follows:

1. Online learning that has been implemented since the Covid'19 pandemic is felt to be easier for students. Where students do not need to go to campus, and they can interact with online course lecturers according to the schedule set by the campus. They can even interact at other times, as long as the lecturer/teacher is willing to take their time (Sun'iyah 2020). This is represented by question no.4 with the result of 54.5% of students can listen to online learning and the TCR index of 81.6% with the very good category.

4. I listened carefully to every explanation of the material presented

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Kurang Baik	2	2.0	2.0	2.0
	Cukup	14	14.1	14.1	16.2
	Baik	54	54.5	54.5	70.7
	Sangat Baik	29	29.3	29.3	100.0
	Total	99	100.0	100.0	

2. For motivation, as explained above, there are internal & external factors such as interest in the subject, desire to ask questions, etc.(Gultom, Sibagariang, and Simatupang; 2022). So the results of the Respondent Achievement Level show good with an index of 74.6% and a result of 45.5%, meaning that there are students who want to ask questions and those who do not want to ask, represented by question no.9

9. Ask questions about the material being taught

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Not Good	4	4.0	4.0	4.0
	Enough	33	33.3	33.3	37.4
	Good	45	45.5	45.5	82.8
	Excellent	17	17.2	17.2	100.0
	Total	99	100.0	100.0	

Project-Based Learning in Religion, Citizenship and several other courses that have just been implemented for the first time at BSI University shows satisfactory results with a TCR index of 88.8%. Where 49.5% of students strive to get good grades by working their projects (this is represented by question no.14).

14. Be serious in doing your PBL duties

			Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Not Good	1	1.0	1.0	1.0	
	Enough	4	4.0	4.0	5.1	
	Good	49	49.5	49.5	54.5	
	Excellent	45	45.5	45.5	100.0	

Total	99	100.0	100.0	
-------	----	-------	-------	--

Based on the following Respondent Achievement Level (TCR) formula:

$$TCR = \frac{\sum^n (T_i \times SL_i)}{Y} \times 100\%$$

Where T_i = Total Likert score from respondents' answers [SL]_i = Likert score n = number of respondents

To find out the TCR index, the formula can be used:

$$\frac{TCR}{Y} \times 100\%$$

Y

Y = Highest score Likert x n

The value categories of the respondents' level of achievement use the score:

Table 1. Category of Degree of Achievement

Percentage	Interpretation
80,1% - 100%	Excellent
60,1% - 80%	Good
40,1% - 60%	Pretty Good
20,1% - 40%	Not so good
0% - 20%	Bad

So the following results are obtained :

No.	TCR	TCR Index	Category
1	405	81	Excellent
2	392	78,4	Good
3	399	79,8	Good
4	408	81,6	Excellent
5	407	81,4	Excellent
6	344	68,8	Good
7	415	83	Excellent
8	400	80	Good
9	373	74,6	Good
10	383	76,6	Good
11	409	81,8	Excellent
12	412	82,4	Excellent
13	436	87,2	Excellent
14	444	88,8	Excellent
15	425	85	Excellent

Source: Results processed by Author Data

The above results were obtained from 15 questions as follows:

1. My attention to the delivery of project based learning (pbl) courses

2. I understand the instructions given by the lecturer regarding the project based learning (pbl) course
3. My concentration on pbl teaching materials and materials
4. I listened carefully to every explanation of the material presented
5. I paid attention to the lecturer's delivery and explanation related to the project based learning (PBL) course
6. I took note of the material delivered during the PBL learning
7. I comply with the rules given at the time of the study
8. Interest in the material and materials presented
9. Ask questions about the material being taught
10. Enthusiasm in conveying ideas and opinions during PBL learning
11. Independence is able to answer or do well the tasks given
12. Readiness to be enthusiastic and ready to answer or do the tasks given
13. Have a desire to get the best grades from each pbl task
14. Be serious in doing your PBL duties
15. Confident in doing pbl tasks

With the Likert score below, SPSS ver.29 analysis is used. The Likert scale score is as follows:

Table. Likert Scale

Answer	Score
Excellent	5
Good	4
Enough	3
Not Good	2
Very bad	1

CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the analysis above, we can conclude that student motivation in online learning is quite good with learning technologies such as zoom, gmeet, etc. Where students can learn anywhere, while for project-based learning, there is still a need for other improvements/strategies that support project-based learning so that students are more active in asking questions, being motivated and others. The input or suggestion that the researcher conveyed for project-based learning is that it is necessary to have a face-to-face meeting at the beginning of the lecture so that students fully understand the technicalities of the implementation of online-based learning.

FURTHER STUDY

For the next research, it can be expanded by the number of questions and sharpen the questions themselves, so that more information is obtained. Where the author asks 15 questions to 100 students, for the next research it can be added to 20 or 30 questions to the same number of respondents.

ACKNOWLEDGMENT

In this section, I would like to thank Mr. Nurullah Sururi Afif for motivating me to use the SPSS statistical tool as a comparison of my manual calculation tool in the form of excel. And other colleagues, support in terms of material.

REFERENCES

- Fitriyani, Yani, Irfan Fauzi, and Mia Zultrianti Sari. 2020. "Motivasi Belajar Mahasiswa Pada Pembelajaran Daring Selama Pandemi Covid-19." *Jurnal Kependidikan: Jurnal Hasil Penelitian Dan Kajian Kepustakaan Di Bidang Pendidikan, Pengajaran Dan Pembelajaran* 6(2):165. doi: 10.33394/jk.v6i2.2654.
- Fathurrohman, M. (2016). *Model Pembelajaran Inovatif: Alternatif desain Pembelajaran yang Menyenangkan*. Yogyakarta: Ar-Ruzz Media Group.
- Gultom, Iyen Yulieta Anggreni, Susy Alestriani Sibagariang, and Leo Fernando Simatupang. 2022. "Analisis Faktor Internal Dan Eksternal Yang Mempengaruhi Hasil Belajar Kognitif Pada Mata Pelajaran Ips Kelas Viii Smp Negeri 4 Pematang Siantar Tahun Ajaran 2022/2023." *Jurnal Darma Agung* 30(3):492. doi: 10.46930/ojsuda.v30i3.2264.
- Hanifah Salsabila, Unik, Lailli Irna Sari, Khusna Haibati Lathif, Ayu Puji Lestari, and Asyharinur Ayuning. 2020. "Peran Teknologi Dalam Pembelajaran Di Masa Pandemi Covid-19." *Al-Mutharahah: Jurnal Penelitian Dan Kajian Sosial Keagamaan* 17(2):188-98. doi: 10.46781/al-mutharahah.v17i2.138.
- Nurhayati, Ai Sri & Harianti, Dwi. 2020. *Model Pembelajaran Project Based Learning(PjBL)[online].Link:https://sibatik.kemdikbud.go.id/inovatif/asets/file_upload/pengantar/pdf/pengantar_5.pdf*
- Nevi Dila Restu Anggraeni. 2023. "Pengembangan Media Pembelajaran Berbasis Website Dengan Model Pembelajaran Problem Based Learning Pada Mata Pelajaran Cloud Computing Di SMKN 1 Kemlagi." 09:26-31.
- Rati, Ni Wayan. 2017. *Model Pembelajaran Berbasis Proyek, Kreativitas dan Hasil Belajar Mahasiswa*. *Jurnal Pendidikan Indonesia* 6(1):60-71.
- Sugiyono. 2017. *Metode Penelitian Pendidikan (Pendekatan Kuantitatif, Kualitatif Dan R&D)*. Bandung: alfabeta.

- Sulasiah, Farihah. 2019. "Pengaruh Motivasi Intrinsik Dan Ekstrinsik Terhadap Hasil Belajar Peserta Diklat Penguatan Kepala Sekolah Negeri Di Provinsi DKI Jakarta Tahun 2019." *Jurnal Sumber Daya Aparatur* 1(2):129-52.
- Sun'iyah, Siti Lathifatus. 2020. "Media Pembelajaran Daring Berorientasi Evaluasi Pembelajaran Pada Mata Pelajaran Pai Di Tingkat Pendidikan Dasar." *Jurnal Studi Keagamaan, Pendidikan Dan Humaniora* 7(1):1-18.
- Sunarya, Fitri Rachmiati. 2022. "Urgensi Teori Hirarki Kebutuhan Dari Abraham Maslow Dalam Sebuah Organisasi." *SALAM: Jurnal Sosial Dan Budaya Syar-I* 9(2):647-58. doi: 10.15408/sjsbs.v9i3.25916.
- Surahman, Evi,, Rustan Santaria, and Edi Indra Setiawan. 2020. "TANTANGAN PEMBELAJARAN DARING DI INDONESIA Pendahuluan Pembelajaran Daring Adalah Proses Pembelajaran Yang Dilakukan." *Journal of Islamic Education Management* 5(2):94-95.