



2023 Trend Report

# Higher Education & e-learning in ASEAN

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# The Use of SYAM-OK in e-Learning and Trends in its Use in the Academic Community of Makassar State University

#universitas\_negeri\_makassar #syam\_ok  
#e-learning #lecturer #tren

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System and Application Management Open Knowledge (SYAM-OK) UNM is an online learning platform in the Makassar State University academic community. Implementing SYAM-OK to support online learning has proven successful with the strategies and policies developed by universities. The trend of its use from year to year also continues to increase.

## 01

### The use of SYAM-OK in e-Learning

Makassar State University (UNM) is one of the best tertiary institutions in Eastern Indonesia and one of the higher education institutions focusing on developing online learning platforms. The efforts made by UNM to improve the quality of online learning at tertiary institutions have proven successful. UNM is among the 10 (ten) best tertiary institutions in conducting online learning in 2021 ([www.unm.ac.id](http://www.unm.ac.id), accessed in 2023). This shows recognition of UNM's performance and innovation in implementing online learning, where information technology support in learning is a priority for the current chancellor's leadership (Prof Husain Syam, 2023). This achievement is inseparable from UNM's success in developing an integrated online learning platform called the UNM System and Application Management Open Knowledge (SYAM-OK).

SYAM-OK is an integrated online learning platform that the entire UNM academic community can use. This platform provides various services, such as Learning Management System (LMS), Context Management System (CMS), Merdeka Learning, Permata Sakti, Lecturer Workload, Academic Information Systems, and many more. Especially for online learning, the facilities used are CMS used by lecturers and LMS used by students. Lecturers use CMS to include all learning content in courses taught by lecturers in the current semester. Lecturers can include content in the CMS, including presentation files, reference books, learning videos, discussion forums, chat columns, and much more.

To access the SYAM-OK CMS, the lecturer must have a user and password to enter the platform. The lecturers who can access the CMS are permanent, extraordinary, and guest lecturers. Special lecturers and guest lecturers can access the SYAM-OK CMS if the operator has created a separate account, then disinvited by the subject's permanent lecturer. In this case, special lecturers and guest lecturers are given access to manage class activities and cannot create new classes/courses. The login process to the SYAM-OK CMS is as follows:

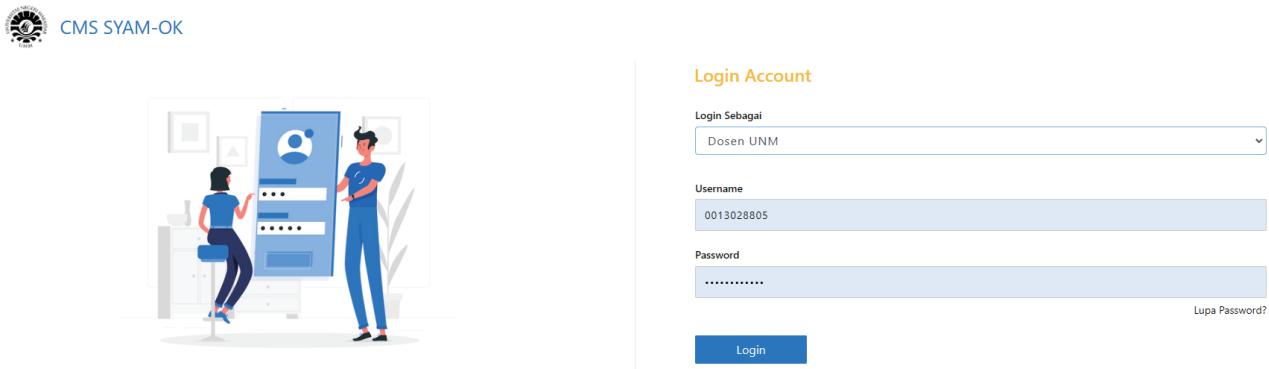


Figure 1-1. Login to the SYAM-OK CMS Platform

After logging in to the SYAM-OK CMS, lecturers must synchronize SIA (Academic Information System) with SYAM-OK so that the course will automatically appear on SYAM-OK. After that, the lecturer can manage course activities by filling in the topics of each meeting to continue filling in the learning content. In addition, lecturers are asked to provide an assessment weight related to the assessment indicators in their teaching subjects. For the importance of the assessment, UNM provides a policy that a minimum of 40% of the weight of the assessment must be allocated to project work or case studies. This shows UNM's support for the Ministry of Education, Culture, Research and Technology's program in implementing case-based and project-based learning in tertiary institutions in Indonesia.

Lecturers can start accessing classes and entering learning content on the SYAM-OK CMS if they have finished creating classes. Data from participants who will take part in class and lecturers who teach courses will be filled in automatically by the system based on existing data in UNM's academic information system (SIA). If a course consists of several classes and the lecturer in question only teaches a few classes in that course, the lecturer can choose or manage which class access can access content created on the SYAM-OK CMS. The following is an example of a course that has been successfully created on the SYAM-OK CMS:

Figure 1-2.  
Courses on CMS SYAM-OK

Pengantar Web Design dan UI/UX

Pengantar Web Design dan UI/UX

Ini adalah pertemuan pertama kita untuk Mata Kuliah Web Design UI/UX.

Pada pertemuan ini akan dibahas mengenai pengantar matakuliah, kontak kuliah dan beberapa definisi mengenai webdesign, UI dan UX. Selain itu, pada pertemuan ini kita juga akan membahas apa yang akan dilakukan untuk 7 (tujuh) pertemuan kedepan yang dibawakan oleh Dosen 1. Silahkan diperbaiki dan selesaikan agar dapat menyeluruh 7 (tujuh) pertemuan kedepan dengan baik.

Silahkan dipelajari Slide Presentasi dibawah ini:

**PERTEMUAN I**

# PENGANTAR WEB DESIGN UI/UX

Disampaikan oleh  
Dr. Valentino Aris, S.Kom., MM.

Diskusi Materi Pertemuan III MK. Web Design UI/UX

**Restricted** Not available unless: You belong to any group

**Tugas Mengelola Hosting dan Domain**

Figure 1-3. The facility on CMS SYAM-OK

Lecturers can also include learning videos embedded in YouTube. Using learning media in the form of videos can help students understand the material provided, especially material that is technical and requires practice.

MK Big Data Pertemuan Ke-7

dalam kolom "keterangan" dengan perintah UPDATE:

Syntax:  
UPDATE <nama\_tabel> SET <nama\_kolom>=<data>

```
mysql> select *from coba_perintah;
+-----+-----+-----+-----+
| nama | kelas | Nilai | keterangan |
+-----+-----+-----+-----+
| Rio Dewanto | Kelas A | 90 | Lulus |
| Nina Hendrawan | Kelas A | 85 | Lulus |
| Andi Sudirman | Kelas A | 100 | Lulus |
| Bayu Setiawan | Kelas A | 75 | Lulus |
| Lisa Herna | Kelas A | 60 | Lulus |
| Delia Hendrawan | Kelas A | 85 | Lulus |
+-----+-----+-----+-----+
```

Note:  
Masih terdapat kesalahan pada data, lihat data dengan nama 'Yayuk Basuki'.

Figure 1-4. Video Embed Facility on CMS SYAM-OK

**Pertemuan Ke-7 (Tatap Muka Virtual)**

**Absensi Pertemuan Ke-7**

**Restricted** Not available unless:

- You belong to 01
- You belong to 02

Figure 1-5. Absensi Pada CMS SYAM-OK

The features that lecturers can use to provide online lectures on the SYAM-OK CMS are:

Lecturers can enter or embed presentation files for each meeting. In the picture beside, we use a presentation slide made using the Canva application. Using the Canva application allows lecturers to create more exciting and interactive presentation slides to motivate students to attend lectures. In addition, lecturers can include other lecture references in digital formats such as \*.doc, \*.pdf, and other formats.

Lecturers can include forums or chat facilities that can be used as a means for students to hold discussions related to lectures. In addition, lecturers can also provide suggestions for students to submit assignments directly through the LMS. The advantage of using this facility is that lecturers can arrange assignment collection times.

Lecturers can conduct virtual face-to-face lectures using the Google meet facility. The Google Meet facility is available in full access, so there is no longer a time limit for completing lectures. If the lecturer wants to use another virtual face-to-face application, enter the meeting link on the SYAM-OK CMS.

Online attendance is also available on the SYAM-OK CMS. Lecturers can use this facility to obtain student attendance data at the end of lectures. This facility allows lecturers to get attendance data more efficiently and validly.

This facility allows lecturers to manage students' attendance time and arrange which classes in the course can fill in attendance. With these features, the resulting attendance data can be much more accurate than using attendance manually.

## Implications

The availability of various facilities in the SYAM-OK CMS application can make it easy for lecturers and students to conduct lectures online. Lecturers can share more learning content through the SYAM-OK CMS. Online learning on the SYAM-OK CMS can also be carried out synchronously and asynchronously to produce better learning outputs.

## 02

### Trends in Using SYAM-OK in the Academic Community of Makassar State University

Online learning is a learning system without face-to-face meetings between lecturers and lecture participants but is carried out online using the internet network. Online learning is becoming a trend in Indonesia following the World Health Organization (WHO) declaring the COVID-19 virus a world pandemic in 2020. The spread of the virus is very fast and endangers the Indonesian people, causing the President of Indonesia, Joko Widodo, to issue a policy of Large-Scale Social Restrictions (PSBB).

The PSBB impacts activities in public spaces, including offices, schools, and universities. In tertiary institutions, this strategy requires all tertiary institutions to replace the face-to-face learning process with an online learning process. Responding to this policy, the Ministry of Education and Culture emphasized learning policies during a pandemic by issuing a study-from-home policy. This policy requires using the internet network through smartphone intermediaries, gadgets, and applications to assist virtual face-to-face learning activities. This condition has also become one of the pioneers in developing a learning management system (LMS) which has become a platform for universities to develop e-learning. With the LMS, lecturers can make the packaging of online learning as attractive as possible for students so that they remain interested in online lectures, changing their perceptions to prefer online lectures.

System and Application Management Open Knowledge (SYAM-OK) is a Learning Management System within Makassar State University. Since it was launched in 2021 by the Chancellor of UNM, Prof. Dr. Ir. H. Husain Syam, M. TP., IPU., SYAM-OK began implementing synchronous and asynchronous online lectures. UNM continues to develop policies to maximize the use of SYAM-OK for online learning through the command of UNM's Deputy Chancellor for Academic Affairs, Prof. Dr. Hasnawi Haris, M. Hum. Several policies in the implementation of SYAM-OK have been made and implemented, including the use of SYAM-OK in learning, which requires lecturers to register their courses on the SYAM-OK platform, the use of SYAM-OK in conducting training in the SYAM-OK environment, the integration of SYAM-OK with other platforms internal to UNM and external to UNM (we will discuss this in the next edition of the ACU Project) and many more. Several of these policies have been implemented successfully in recent years to support using SYAM-OK for online learning.

ELECTINDO STUDENTS BEHAVIOUR DASHBOARD				SOURCE:SYAM-OK - REALTIME
New users	Sessions	Views	Sessions per user	
<b>54.461</b> ↑ 6.1%	<b>826.023</b> ↑ 22.6%	<b>5.861.095</b> ↑ 24.7%	<b>9,6</b> ↑ 8.1%	

Figure 2-1. SYAM-OK User Data Dashboard

Figure 1 shows that as of April 2023, the number of SYAM-OK platform users is 54,461. The number of SYAM-OK users continues to increase, compared to users in March 2023, by 6.1%. The user was recorded as having conducted 826,023 sessions, and each was recorded as having carried out 9.6 sessions. This session shows the interaction between the user and the web page for a certain period, generally counting interactions until the user is inactive for 30 minutes. This indicates that each SYAM-OK user uses the platform for at least 30 minutes in 1 session (288 minutes per user). Therefore, the use of SYAM-OK in the UNM environment is very high in supporting the implementation of online learning.

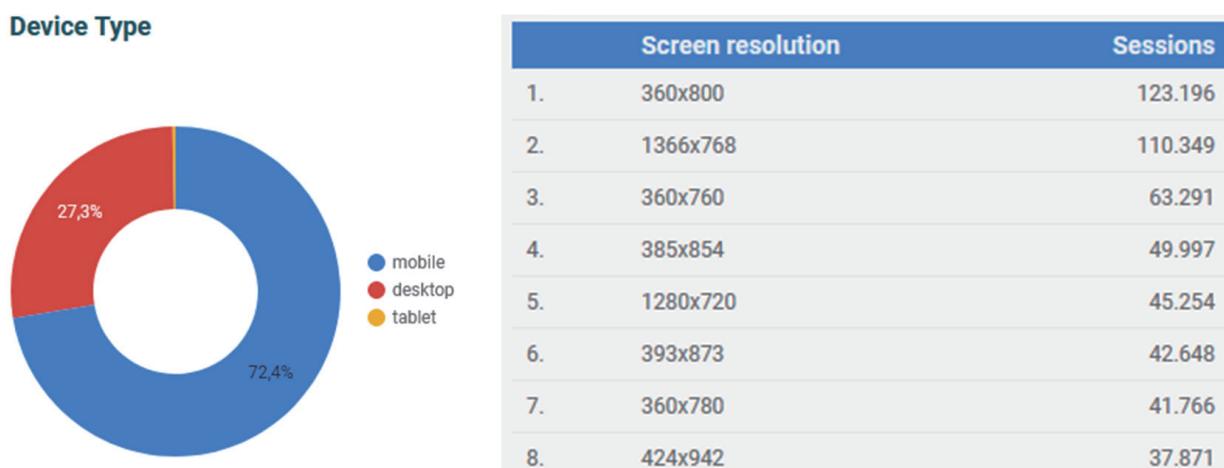


Figure 2-2. Device Type Data Dashboard for SYAM-OK Access

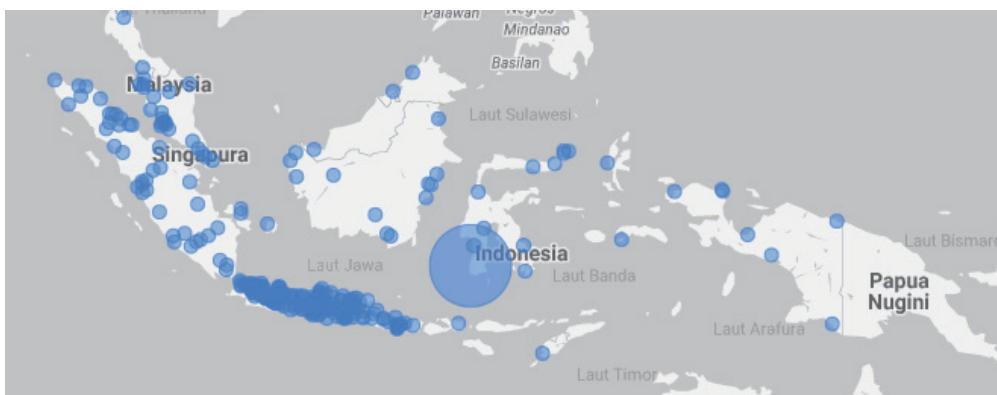
One of the critical factors in implementing information technology and systems is the ease of access using any device. Figure 2 shows the types of devices that can access the SYAM-OK platform. Data indicates that SYAM-OK can be accessed from all types of devices, such as mobile, desktop, and tablet devices. Most SYAM-OK users use mobile devices to access SYAM-OK, a percentage of 72.4%, 27.3% use desktop devices to access SYAM-OK, and 0.3% access SYAM-OK using tablet devices. Apart from that, SYAM-OK is also proven to be accessible with the latest devices and devices that are a bit behind in technology, especially screen resolution. This screen resolution indirectly shows the quality of the device used; the newer and more sophisticated the device, the greater the screen resolution. The data shows that most users use the device screen resolution to access SYAM-OK is 360×800. Resolution quality like this is usually found on lower-middle-class devices, so SYAM-OK is already user-friendly regarding the type of device used to access it.

## Device Model



Figure 2-3. Operating System Type Data Dashboard for SYAM-OK Access

Another critical factor in implementing information technology and systems is compatibility with the operating system. The data in Figure 3 shows that SYAM-OK is compatible with almost all types of operating systems commonly used by users in Indonesia. The data shows that most SYAM-OK users use the Android operating system. This indicates that the majority of users use smartphone devices to access SYAM-OK. This makes it easy for the UNM academic community because almost everyone has smartphones, so all users have equal opportunities to access the SYAM-OK platform. Even though most use smartphone devices, users can still access it using desktop devices such as personal computers (PCs), laptops, etc. The data also shows high use of desktop-based OS such as Windows, Linux, and Macintosh.



User Location Data Dashboard When Accessing SYAM-OK

SYAM-OK also makes it easy to use and accessible anywhere and anytime. The data in Figure 4 shows that most users who access SYAM-OK are located in South Sulawesi Province, especially Makassar. Apart from Sulawesi Island, most users also access SYAM-OK on Java and Sumatra Islands. However, overall, users can access SYAM-OK on almost all islands in Indonesia. The data also shows that besides being accessible within the country, the SYAM-OK platform can be accessed abroad. Apart from Indonesia, the SYAM-OK platform is also recorded as accessible in Malaysia, Australia, the United States, countries in Europe (such as Germany, Spain, etc.), and countries in Asia (such as China, South Korea, etc.). This shows that in terms of accessibility, the SYAM-OK platform can be accessed anywhere in the world.

## Implications

The trend of increasing the number of SYAM-OK users shows the high enthusiasm of the Makassar State University academic community for online learning. The data shows an increase in the number of users followed by a higher level of user interaction sessions with the SYAM-OK platform. Ease of access, such as being accessible from all types of devices, compatibility with various media, and accessibility where users can use SYAM-OK from all over the world, are factors that influence the high interest of users to use SYAM-OK.

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- SYAM-OK Google Analytics. <https://analytics.google.com/analytics/web/#/p243661200/reports/intelligenthome>

# Post Pandemic ViLearning Unesa User Trend

Ms. Prima Vidya Asteria / UNESA



In the post pandemic time, courses using the ViLearning Unesa platform experience a sharp decline trend. It has not yet fulfilled the expectations and needs of teachers and students of Universitas Negeri Surabaya. Vilearning Unesa platform must improve the reliability of online meeting features so that it can carry out online learning anytime, anywhere, and can organize quality learning.

## 01

### THE POST PANDEMIC DEVELOPMENT OF UNESA VILEARNING PLATFORM

- The driving motor for the development of online learning in the education system in Indonesia is the Ministry of Education and Culture of the Republic of Indonesia through the Indonesian Open and Integrated Online Lecture Program (KDITT) on a national scale. The objectives of the program are 1) to increase the distribution of educational services, 2) to increase the affordability of educational services, 3) to improve the quality and relevance of educational services, 4) to increase equity in obtaining quality education services, and 5) to increase security in obtaining quality education services (Ministry of Education and Culture, 2014). In 2016, the KDITT program changed to the Indonesian Online Learning System (SPADA) which is managed by the Directorate General of Learning and Student Affairs. The main goal of the SPADA system is the equal distribution of quality online learning. Through SPADA, every student from various tertiary institutions can take courses from other tertiary institutions according to their field of expertise. Furthermore, the results of online learning are equated as study program subjects by the tertiary institution where the student is registered as a student. This is following SPADA's goals, where students can take lectures from campuses that are considered to have better quality so that students gain knowledge, skills, and broader insights.

The presence of SPADA Indonesia can encourage various higher education institutions to build and manage independent online learning platforms that are connected to the SPADA system. Universitas Negeri Surabaya (Unesa) as one of the teacher-based tertiary institutions in Indonesia also launched the Universitas Negeri Surabaya Virtual Learning platform (ViLearning Unesa). ViLearning Unesa is a system specifically designed as a means or facility that supports the teaching and learning process which is carried out without having to meet face-to-face between lecturers and students so that ViLearning can provide better and more effective information services for the teaching and learning process.

Utilization of ViLearning Unesa features is expected to be able to support the implementation of a consistent and quality learning process so that it can increase students' absorption of targeted competency achievements. In addition, learning tools stored in ViLearning can be reviewed anytime and anywhere and can be well structured and scheduled.



- ViLearning Unesa System is a well-integrated system allows students to obtain all the required lecture information and it can carry out the learning system properly via internet network connection. The output obtained from this learning system is also not inferior to conventional lectures. There are many advantages offered by ViLearning Unesa system, including flexible class schedules, learning rhythms according to student abilities, the material can be understood properly, more energy efficiency, cost and time efficient. Some of the facilities provided by Vilarning at Universitas Negeri Surabaya include management of students or students, management of learning materials, management of the learning process including management of learning evaluations, and management of communication between students and facilitators. This facility allows teaching and learning activities to be managed without direct face-to-face meetings between the parties involved.

The flexibility and reliability of the ViLearning Unesa platform have been tested during the co-19 pandemic. At that time, the use of ViLearning Unesa platform reached its peak. Almost all theoretical learning-based courses use online learning models. Implementation of lectures, presence attendance, assistance, guidance, and assignments utilize the features of the ViLearning Unesa platform. This was also encouraged by the Circular of the Minister of Education and Culture concerning Online Learning and Working from Home to Prevent the Spread of Covid-19 since March 17, 2020 (kemdikbud.go.id., 2020). Some of the policies implemented include lectures held without having to face to face, but using online facilities. As for face-to-face academic activities, such as thesis guidance, research guidance, guest lectures, field lectures, proposal meetings, final hearings, student exchanges, or similar activities, their implementation has been postponed or also carried out online. The practice-based courses are carried out with two options, namely the courses are carried out online or carried out with strict co-19 prevention procedures.

Before the Covid-19 pandemic period, the use of ViLearning Unesa was still limited. The courses contained in ViLearning Unesa are courses that come from lecturers who carry out online learning research, lecturers who are members of the Unesa e-learning team, as well as lecturers assigned to study programs to teach online-based courses. Lecturers' interest in utilizing online learning through ViLearning Unesa is still low. This is supported by the condition of the ViLearning platform which is still in the development stage so several facilities and features supporting learning activities are still incomplete or not optimal. To foster interest in online learning, since 2017, Unesa has required each lecturer to develop one online course (Yulianto, 2017; Asteria, 2017; Asteria, dkk, 2018; 2019, 2020). Every learning tool, starting from lesson plans, learning meeting plans, teaching materials, attendance, and assignments, to midterm evaluations and end-semester evaluations use the platform. This is marked by the increasing number of courses that use the Unesa ViLearning platform.

In 2020, during pandemic situation, there has been a significant increase in the use of ViLearning Unesa. From the 74 graduate-level study programs at Universitas Negeri Surabaya that implemented a curriculum shift from a curriculum based on the Indonesian National Qualifications Framework (KKNI) to a curriculum based on the Merdeka Learning Campus Merdeka (MBKM) implemented nearly 5,400 courses. Of these, around 3,268 courses were recorded as using ViLearning Unesa, or 60.52% of the total number of Unesa's environmental study program subjects applying the online learning model. This is supported by the transition from offline to online learning models due to the outbreak of the Covid-19 outbreak in Indonesia. The 2020 pandemic occurred suddenly, forcing every tertiary institution to organize distance learning based on an internet network connection. The surge in online demand has caused the performance of ViLearning Unesa platform to face obstacles in organizing quality learning. Starting from platform instability when the number of users is large at the same time, network connections are cut off when using the virtual sync feature, and the platform is halting and even hangs when learning activities take place. This has an impact on less-than-optimal learning conditions.

The peak use of ViLearning Unesa platform occurred in 2021 when Indonesia experienced the second and third waves of the Covid-19 outbreak. Nearly 84.56% of all courses use the ViLearning Unesa platform. However, reflecting on the experience in 2020, there are restrictions on using the network-based face-to-face meeting feature (virtual sync) on the Unesa ViLearning platform to avoid problems occurring during learning. Specifically for online lectures, lecturers and students use applications from third parties such as Zoom, Google Meet, and others applications. Meanwhile, ViLearning Unesa is only used to provide document-based lectures and chat only. Learning tools such as lesson plans, learning materials, teaching videos, assignments, discussions via messages can still use the features of ViLearning Unesa.

In 2022, courses using the ViLearning Unesa platform experience a sharp decline. Only 43.80% of the total number of courses in the Unesa study program use ViLearning Unesa. This decrease was due to the end of the Covid-19 pandemic so that lectures were held offline. Only a few courses with certain conditions carry out online lectures, for example the Indonesian Language course which is a compulsory subject and is attended by a number of participants that exceeds the capacity of the lecture hall. This was also driven by an increase in the number of new student admissions without being matched by an adequate number of lecturers or sufficient classroom capacity. In addition, the reliability of the virtual meeting feature on ViLearning Unesa platform still needs to be improved so that it is truly able to meet the teaching and learning needs of lecturers and students. The following illustrates the trend in the number of courses using the Unesa ViLearning platform in the last three years.

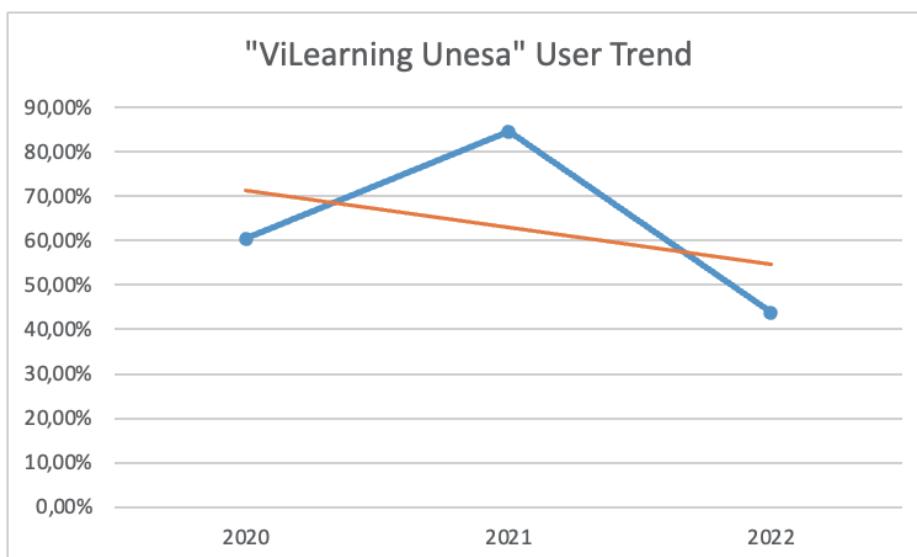


Figure 1.  
Image of ViLearning Unesa  
User Trend

- Based on the description above, it can be concluded that 1) ViLearning Unesa Platform must be able to meet the teaching and learning needs of Unesa lecturers and students to increase learning motivation and create an interactive and communicative learning atmosphere; 2) The reliability of the online meeting feature (virtual sync) must be improved to ensure real-time learning activities. Through these improvements, ViLearning Unesa is expected to be able to become a bridge so that Universitas Negeri Surabaya can carry out online learning anytime, anywhere, and can organize quality learning. This aims to ensure the quality of graduates that is comparable to the needs of graduate users and the wider community, so that all graduates of Universitas Negeri Surabaya will have good quality and be ready to face future challenges.

## Implications

The reliability of the online meeting feature (virtual sync) must be improved to ensure real-time learning activities. Through these improvements, ViLearning Unesa is expected to be able to become a bridge so that Universitas Negeri Surabaya can carry out online learning anytime, anywhere, and can organize quality learning.

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# Gamification for Blended Learning in Higher Education

#gamification #blended\_learning  
#gamification\_in\_higher\_education

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Gamification has the definition of using game-based mechanics, aesthetics, and game thinking to engage people, motivate action, promote learning, and solve problems. Gamification in learning means applying ways of thinking and game elements into the learning process which aims to increase motivation and student engagement. Gamification makes the learning process more fun and challenging so students can learn better.

**01**

## Gamification of Learning to Increase Learning Motivation in Higher Education

An interesting and enjoyable learning process is certainly a dream for all educators and students. Gamification offers a solution to help improve the learning process so that learning feels more enjoyable as if you were playing a game. In simple terms, Gamification is a learning method that applies the working principle of a game in the learning process to grow the target's interest and curiosity. Gamification methods are often used to foster learning motivation and change student behavior. At the beginning of its development, gamification was widely applied to aspects of business and marketing, but now gamification has been widely applied to aspects of learning.

Gamification in learning can increase students' learning motivation. Kapp (2012) defines gamification as using game-based mechanics, aesthetics, and game thinking to engage people, motivate action, promote learning, and solve problems. The concept of learning that applies the gamification method can be interpreted as having patterns of thinking, approaches, and game elements in the learning process. Gamification in learning can be applied by integrating game components such as: challenges/tasks, points, levels, badges, and rankings of users. Meanwhile, game thinking that can be adapted into the learning process can be in the form of freeform to fail, rapid feedback, collaborative processes, and competition.

The application of gamification in learning is different from simply using educational games in learning. Gamification in learning is also different from game-based learning. This difference in concept is still rarely understood by educators. Gamification is an easy thing, maybe even often applied without realizing it.

For example, when a lecturer gives assignments to students then the lecturer gives additional rules that students who submit assignments for the first time will get prizes in the form of additional points or grade scores. It can be said that the lecturer has implemented gamification because the lecturer has implemented one of the game components namely challenges and points. Game based learning can be defined as a learning process that uses games or playing games to improve critical thinking and problem solving. Game -based learning can be completed with digital or non-digital games and can include simulations that allow students to experience learning directly (<https://tophat.com/>). In short, game-based learning aims to make students able to deepen a material using games or games while gamification in learning aims to increase students' motivation to continue learning and involve them in a competitive learning environment.

Gamification in learning can be applied in both online and offline learning contexts. Gamification can also be applied with the help of technology or without technology. Some software or tools (web based) to help implement gamification in online learning: Wordwall, Socrative, Kahoot! FlipQuiz, Duolingo, Ribbon Hero, Quizziz, Padlet, Mentimeter and Goalbook. Gamification can also be applied in the context of a Learning Management System (LMS) such as SYAM-OK Makassar State University. Several LMS features that enable the application of learning gamification, namely: user picture avatar, visibility of students' progress, display of quiz results, levels, feedback, badges, and leaderboard.

## Implications

Gamification in learning can be applied in both online and offline learning contexts. Gamification can also be applied with the help of technology tools or without technology tools. Technological tools in gamification play a role as a support for educators in applying elements and game thinking so educators focus more on material content.

## 02

## How to Apply Gamification in Learning into Blended Learning?

Blended learning is a combination of online and face-to-face learning concepts. Blended learning has synonyms with hybrid learning. Hybrid learning is a learning experience designed to combine online learning and face-to-face learning, so according to the Canadian Digital Learning Research Association (CDLRA) the two terms have the same meaning and can be used interchangeably (Johnson, 2021). Easy steps that educators can take include: (1) analyzing the characteristics of students; (2) determining learning objectives; (3) selecting materials, methods, and media or tools to be used; (4) adding game elements and mechanics; (5) evaluate and revise. The analysis phase of student characteristics is carried out as a basis for needs analysis in developing appropriate learning processes. This stage includes analyzing students' basic abilities in using technology, learning styles, and general characteristics of students. Determining learning objectives is related to the formulation of learning objectives which will be applied to the gamification method. The clearer the objectives are achieved, the easier it will be to determine the appropriate material, media, and tools. Next, the stage of selecting materials, methods, and gamification media or tools. The tools or media used need to be supported by the application of game elements and mechanisms to increase student motivation.

In the final stage an evaluation is needed to assess whether the application of gamification in learning can support the achievement of learning objectives effectively and efficiently or vice versa.

Gamification can be applied to increase students' learning motivation during Blended learning, due to the addition of game elements in the form of challenges/tasks, points, levels, badges, and ranking of users, as well as ways of thinking games that can be adapted into the learning process in the form of freeform to fail, rapid feedback, collaborative processes, and competition can make students more enthusiastic in learning. The focus when applying the gamification method is not on what tools to use but on what activities need to be done to make learning more fun and interesting for students to always listen to. In Blended learning, gamification can be applied to synchronous online learning scenarios, to asynchronous online learning, and to face-to-face learning. Some examples of cases of implementing learning gamification at Makassar State University, including:

- The application of the debate method (2 groups) as a challenge that must be completed by students to get a prize as the winner. In determining the champion, students are directed to carry out collaborative processes and competition in groups. In order to win the debate, each group competes to convince other students with logical and systematic opinions. The debate method is used as a form of challenges that must be completed and as a form of implementing collaborative processes and competition, a class poll is conducted to determine the debate champion.
- Brainstorming uses Padlet media as a challenge for each student to write down their best opinion, then provide rapid feedback for each opinion. Using Padlet makes students do collaborative processes. Each student can also give comments, likes, and ratings to each other's posts.
- The use of the Quizziz application to create lecture quizzes is much more interesting. Quizziz is accessed together as part of the end of lectures to check student knowledge retention. The Quizziz feature allows students to work on evaluations like they are playing games, due to rapid feedback, points, badges, and ranking of users so students are competing to be ranked first.
- Gamification in LMS SYAMOK in the form of Levels. Student activities at SYAMOK are always monitored in the form of a Progress Bar and Level (Badge) which is then processed into a competition for the TOP 5 Completed Students. The accumulated points then turn into star levels and will automatically be sorted according to ranking.
- Gamification in face-to-face learning is carried out in the form of giving appreciation or rewards for winners of lecture assignment challenges.

Gamification focuses on applying game elements and ways of thinking, so that when it is contextualized into learning, the main goal is to apply game elements and components to support the achievement of learning objectives. Gamification of learning does not always have to use technological tools because game ways of thinking such as freeform to fail, rapid feedback, collaborative processes, and competition can also be facilitated directly by teachers to students. The use of the gamification method must have at least 3 main characteristics, namely increasing learner motivation levels, improving knowledge retention, and better learner engagement through social mechanisms like badges, points, or leaderboards (Buljan, 2021). The task objectives, at least can be used as a benchmark for how far the gamification applied in the learning process is said to be successful or not.

## Implications

Easy steps that educators can take when they want to implement learning gamification, include: (1) analyzing the characteristics of students; (2) determining learning objectives; (3) selecting materials, methods, and media or tools to be used; (4) adding game elements and mechanics; (5) evaluate and revise. Furthermore, at the end of learning there are three criteria for success of gamification which include: increasing learner motivation levels, improving knowledge retention, and better learner engagement through social mechanisms.

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# System Integration in “System and Application Management Open Knowledge” (SYAM-OK)

#universitas\_negeri\_makassar #syam\_ok #integration #spada

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System and Application Management Open Knowledge (SYAM-OK) is an online learning platform in the Makassar State University academic community. The implementation of SYAM-OK is related to other internal systems within Makassar State University and external systems at the Ministry of Education, Culture, Research, and Technology. Therefore, it is necessary to integrate the entire system internally and externally.

**01**

## Integration of Learning Management System, Content Management System, and Academic Information System in SYAM-OK

The Development of information and communication technology is very fast, causing organizations to adapt and use information technology. This information technology is used to support business processes within an organization so that it can operate more effectively and efficiently. The application of information technology in today's organizations has covered all fields, without exception, in education. Various information systems have been developed to support core business in tertiary institutions, such as academic information systems, financial information systems, e-learning, library systems, and other information systems. However, these information systems are generally made separately or independently without connection. This stand-alone information system will produce a pile of data and information that needs to be integrated. The climax is when a university uses data for a purpose; there is potential for data redundancy, data inconsistency, and double entry in data, making it difficult to process the data to produce an insight beneficial for universities.

Universities need to think about integrated information systems holistically and have system integration capabilities to overcome problems such as those described above. Data integration is all about the practices, architectural techniques, and tools to achieve consistent data access and delivery across the spectrum. According to Kafel (2016), system integration has many benefits for organizations, such as increasing effectiveness and efficiency, which will help increase customer satisfaction. The benefits of system integration include reduced processing time, many processes completed at one time, reduced data input and correction costs, and reduced input errors and data duplication (Bakar, 2003; Kafel, 2016). With good data integration, the system implementation process in tertiary institutions can be carried out more optimally (Ashabu Khair et al., 2022; Kayanda, AM., 2022; Utomo DW. et al., 2018).



Makassar State University (UNM) has developed an integrated information system to support its academic process. The system is known as System and Application Management Open Knowledge (SYAM-OK). SYAM-OK is an application system that the UNM academic community can use for academic activities. SYAM-OK is then better known for its ability to increase effectiveness and efficiency in implementing online learning. The Learning Management System (LMS) is an application often used in online learning activities by students and lecturers within UNM. LMS SYAM-OK is a platform developed to facilitate the implementation of online learning both synchronously and asynchronously. In addition to online learning for the UNM academic community, SYAM-OK LMS can also be used to maximize the learning process for students from various universities in Indonesia who are taking courses offered at Makassar State University through the Merdeka Learning Campus Merdeka (MBKM) program for the Land Student Exchange scheme. Air Nusantara Credit Transfer System with Information Technology (PERMATA-SAKTI). The SYAM-OK LMS is also used to implement routine training by UNM, such as Basic Instructional Technique Skills Improvement Training (PEKERTI) and Applied Approach (AA).

To support the implementation of online learning, the SYAM-OK LMS is integrated with several systems, namely the Content Management System (CMS). First Volume) and Academic Information System (SIA). SIA is an application used to carry out academic administration, such as registering every semester, filling out a study plan card (KRS), guidance with an academic advisor, and viewing the results of their studies every semester. SIA can also be used to view courses and classes taught, input student grades, view student attendance data, provide guidance as academic advisors, and various other activities. SIA, CMS, and LMS are three integrated applications that interact to support the online learning process through SYAM-OK. The following are some of the integrations carried out in the three applications:

- Students who can fill in the KRS in the SIA have made UKT payments and updated their data in the UNM Financial Information System.
- Students must register and fill in the KRS at SIA at the beginning of the semester to take classes available at the LMS.
- Courses available at the LMS must first be registered with the SIA through inputting
- Courses by the Study Program Operator so lecturers can synchronize classes through the application.
- Lecturers create classes using CMS; students can access these classes on LMS.
- Lecturers who can access courses at CMS are registered as lecturers for the course in the SIA application.
- The student absence feature in the LMS will integrate the data with the SIA, where lecturers can view and print student attendance recaps through the SIA.
- The weighting of scores carried out at the LMS for student assessment is also integrated with the SIA, making it easier for lecturers to give grades at the end of the semester.
- Lecturers can manage content and access rights for students through the CMS, which will later be applied to the LMS when students access classes.
- If there is a change in the data in the SIA, especially the list of students in a particular class, the data in the LMS and CMS will also change. Synchronization must be done to make the data in the three applications identical.

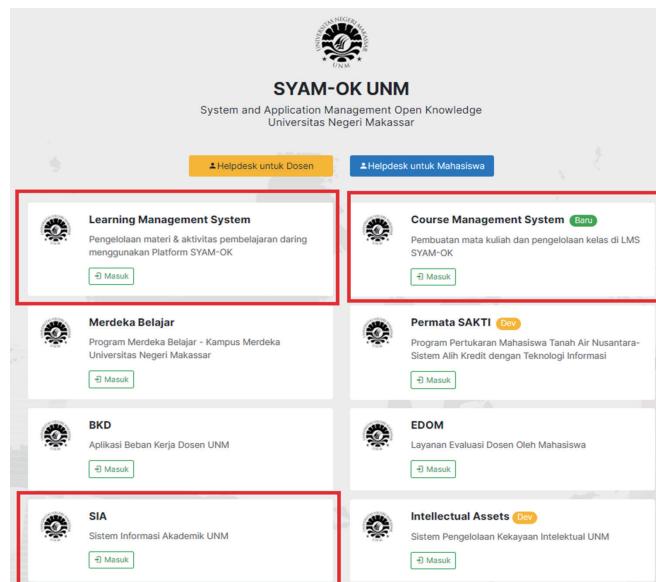


Figure 1.  
Academic Information System,  
Learning Management System  
and Content Management System on SYAM-OK

The success of system integration at UNM must also be supported by the policy of the higher education leadership so that it can be implemented optimally. Higher education leaders make a policy that all courses in SIA must support lecturers to open LMS and CMS classes. This policy is undoubtedly successful, seeing that until now, the activity of using the SYAM-OK LMS is still very high in supporting the implementation of online learning at UNM. Good integration between the three systems in SYAM-OK and policies that support the integration process implemented at UNM have succeeded in getting UNM to gain national recognition, namely being included in the ten best campuses with the best online learning in Indonesia in 2021 and becoming the first best Learning System Online at the 2022 Diktiristek Award Event.

## Implications

System integration and policy development to accommodate this integration are essential factors in successfully using SYAM-OK at UNM to support the implementation of online learning activities. With good integration between systems internally, the developed system can run optimally. To further maximize the system's performance, higher education leaders must make policies to support the integration of the system. This can be a best practice for other tertiary institutions to implement online learning platforms and internally integrate them with other systems.

## 02

### SYAM-OK integration with the Indonesian Online Learning System (SPADA) KEMDIKBUDRISTEK

In the first part of this article, we have discussed the internal integration of SYAM-OK within Makassar State University (UNM). In addition to internal integration, the SYAM-OK Learning Management System (LMS) can be able to integrate its data externally so that it can be accessed on an online learning platform managed by the Ministry of Education, Culture, Research and Technology (Kemendikbud Ristek). This is done to measure the performance of implementing online learning conducted by universities in Indonesia. Therefore, the SYAM-OK LMS must be integrated externally with the Indonesian Online Learning System (SPADA).

SPADA Indonesia is one of the Directorate General of Learning and Student Affairs programs of the Ministry of Research, Technology, and Higher Education to increase equity of access to quality learning in tertiary institutions. With its online learning system, SPADA Indonesia provides an opportunity for students from one tertiary institution to take specific quality courses from other tertiary institutions, and their learning outcomes can be recognized as equal by the tertiary institution where the student is enrolled. SPADA Indonesia was developed to address several higher education challenges, such as the limited capacity of tertiary institutions, low affordability of tertiary institutions due to uneven distribution, there are still many tertiary institutions that do not yet have adequate and quality educational resources, more quality tertiary institutions are still concentrated in the island of Java, there is still a low level of equal and quality higher education services, and there is still an insufficient guarantee of meeting the needs and demands of quality higher education (<https://spada.kemdikbud.go.id/berita/apa-itu-spada-indonesia>, accessed 14 May 2023).

The initial stage for synchronizing SYAM-OK LMS data with SPADA Indonesia is synchronizing lecturer accounts. This lecturer account synchronization can be done if the lecturer already has an account at LMS SYAM-OK with SPADA Indonesia. The following displays the lecturer's account on SYAM-OK if it has been integrated with SPADA Indonesia.

Figure 2. Lecturer accounts at SYAM-OK, which are integrated with SPADA Indonesia

After synchronizing lecturer data, the lecturer can enter class data in SYAM-OK on SPADA Indonesia. Class data can be documented easily by integrating existing data from SYAM-OK into SPADA Indonesia. The trick is to back up class data in the SYAM-OK application, then download the data backup file. After successfully downloading the backup file, the backup file can be restored to the lecturer's account in the SPADA Indonesia application by selecting the create course menu, filling in all course data, and selecting the "Select MBZ File" button to perform data integration. The data integration process of SYAM-OK and SPADA Indonesia can be seen in the following figure.

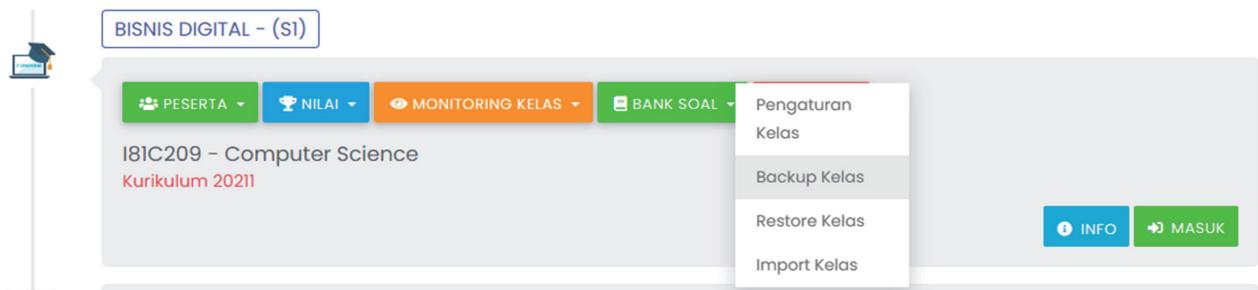


Figure 3. Class settings for backing up class data

Filename	Time	Size	Download	Restore
backup-moodle2-course-19613-20221-85201-14c11c508-20221110-1725-nu.mbz	Thursday, 10 November 2022, 5:25 PM	6.5MB	Download	Restore
backup-moodle2-course-5853-20202-85201-14c11c603-20221110-1448-nu.mbz	Thursday, 10 November 2022, 2:48 PM	2.4MB	Download	Restore
backup-moodle2-course-20045-20221-85201-21c04c109-20221110-1408-nu.mbz	Thursday, 10 November 2022, 2:08 PM	8.9MB	Download	Restore

Figure 4. The backup of class data in SYAM-OK is successful, and data download can be done

Figure 5. Course Development Process at SPADA Indonesia

Figure 6. SYAM-OK Class Data Integration Process with SPADA Indonesia

The data integration process between SYAM-OK and SPADA Indonesia, which can be done very quickly, has made the UNM academic community enthusiastic about integrating the classes they created at LMS SYAM-OK into SPADA Indonesia. Based on the data we have obtained, the number of types that have been integrated into SPADA Indonesia to date is 500 courses. The election of UNM proves this as the first place in the Online Learning System (SPADA) at the 2022 Diktiristek Award event in the Learning and Student Award category in the Higher Education sub-category with the Most Subject Contributions in 2022. With the high level of UNM participation in integrating classes in SPADA Indonesia, it is hoped that the quality of education through online learning in Indonesia can continue to improve.

## Implications

Makassar State University is one of the tertiary institutions that continue developing innovations to improve online learning quality. One of them is by using a single online learning platform known as SYAM-OK. SYAM-OK, in its implementation, has been integrated internally and externally, followed by policy development for the success of the integration process. External integration has been carried out by integrating LMS SYAM-OK with SPADA Indonesia. In 2022 UNM became the tertiary institution with the most contributions of Subjects, and it is hoped that this integration can improve the quality of education through online learning in Indonesia.

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# Vilearning Unesa as MOOCS: Lecturer Problems

#MOOC #UNESA #Vilearning #Online Courses

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In the post pandemic time, courses using the ViLearning Unesa platform has decreased significantly. This is caused by several factors, including the uncertainty of the courses being taught in the coming semester so that preparation on Vilearning Unesa platform is not optimal; the technical ability of lecturers to take advantage of Vilearning Unesa features is not optimal due to limited preparation time; limitations of lecture material that uses a variety of media; display of course pages that are less interactive and communicative, as well as limited internet quota to ensure the smoothness and stability of the internet network.

**01**

## Vilearning Unesa as MOOCS: Lecturer Problems

### ► Backgrounds

Since lectures have been held offline after the Covid-19 pandemic, the use of the Surabaya State University's Virtual Learning platform (Vilearning Unesa) has decreased significantly. Vilearning Unesa is only used to support the implementation of offline lectures by providing course descriptions, lesson plans, online attendance, and making lecture minutes. In general, Vilearning Unesa functions as a documentation database for lecture implementation. Only certain courses are "permitted" to use Vilearning Unesa as an interface for lecture activities. This is influenced by the existence of perceptions and supporting evidence which shows that the achievement of competency targets for online courses is lower when compared to the achievement of competency targets for offline courses. Although many factors affect the mastery of competencies tied to a course, the data on the results of assessments from several samples of online courses in the 2020/2021 academic year and 2021/2022 academic year prove that the average score in the same course is still lower than the grades of courses in previous academic years which were still held offline. This strengthens the emergence of policies from the authorities to limit the use of Vilearning Unesa as an interface for lecture activities. Practice-based courses are not permitted to use online learning models. For theory-based compulsory courses, a maximum of only 25% of the total lecture meetings are allowed to use online facilities. Meanwhile, the rest or at least 75% of the total lectures must be face-to-face. There are only a few courses with certain conditions that are allowed to carry out fully online lectures, especially in university compulsory courses which are attended by students from various study programs at Surabaya State University so that the number of participants in a study group exceeds

the capacity of the existing lecture halls. Various situations and conditions arising from this policy were indeed the main drivers for the decrease in the use of Vilearning Unesa platform. However, an interesting thing that must be observed against the backdrop of the emergence of the policy of limiting online lectures is the lower competency achievement of graduates of courses held online during the Covid-19 pandemic. For almost 4 semesters, it turns out that lecturers are still having difficulties adapting to the online learning model. Training support and assistance in the use of Vilearning Unesa turned out to be ineffective in helping to improve the competency achievements of course graduates. Actually, what are the problems faced by lecturers when using Vilearning Unesa platform as an interface for lecture activities?



## ► Main contents

One of the main problems faced by lecturers is the uncertainty of the courses taught in the coming semester. Indeed, there are core courses that are taught according to the lecturer's field of expertise, but only one or at most two courses of expertise. Even then, it cannot be ascertained if there are other lecturers who have the same field of expertise so that sometimes the subject of expertise takes turns being the supervising lecturer. Not to mention other subjects that experience very high lecturer rotation. If in this semester you are teaching elementary level courses, it is not certain that next semester you will be teaching advanced level in advanced courses. Even though the online learning model requires preparation that takes longer and is more troublesome when compared to the offline learning model, so it is necessary to prepare more comprehensive online learning tools. Therefore, the determination of the teaching load which is carried out at the beginning of each semester causes the lecturer's preparation to seem sudden so that the learning tools made through Vilearning Unesa platform are less than optimal. Meanwhile, if the lecturer takes the initiative to prepare Vilearning Unesa platform for the course in the previous semester or during the semester break, then the uncertainty of the courses taught in the next semester will cause the preparation process to be redundant. When the course platform was already prepared, it turned out that the course was taught by another lecturer so that the platform on Vilearning Unesa remained unused.

In addition to changes in teaching schedules, the technical abilities of lecturers to utilize Vilearning Unesa features are also not optimal. Even though they have received training and assistance in making the course interface using Vilearning Unesa, the time constraints since the assignment of the teaching load with the lecture implementation schedule are very tight. This causes the features used in lectures to tend to be monotonous between the first meeting and the next meeting. In fact, the online learning model creates a learning atmosphere and learning environment that is very different from the learning model in the classroom. The limited interaction between lecturers and students causes lecturers to be unable to apply a variety of innovative learning models so that the learning atmosphere tends to be monotonous and interactions only go in one direction. If in face-to-face, the lecturer can provide a variety of models to change the learning atmosphere. As for the online learning model, once students lose motivation, the learning atmosphere becomes "silent". Interactive inducements made by the lecturer to liven up the atmosphere were only responded to in a "cold" manner by the students participating in the lectures. Therefore, online learning is learning that is very dependent on the features and learning media used so that lecturers' skills in using Vilearning Unesa are honed even more when given sufficient deadlines to prepare the interface for the course they are teaching (Asteria, 2021).

Another weakness possessed by lecturers is the limited lecture material that uses a variety of media. Generally, the material is in written form using PowerPoint, Canva or similar formats. It is still rare for lecturers to make lecture material based on audio-visual. Even though Vilearning Unesa has the ability to support content that is packaged in many formats, including audio-visual media and provides access to take advantage of all the attributes of the media. Indeed, network limitations and network stability have prevented audio-visual content, especially large ones, from being able to run smoothly. However, by limiting the theme and cutting the sub-competencies, it is hoped that it will be able to limit the capacity of the audio-visual media that is made. Clips of learning videos, for example, can run smoothly and be downloaded without problems, so that knowledge or tips and tricks can be used by lecturers to make learning videos. However, again the facilities and infrastructure owned by lecturers often also limit the production of quality learning videos. If made using a cellphone, the video image is sometimes too small or even the image is broken. Therefore, it is necessary to collaborate with lecturers, study program managers, and the Unesa KeceTV Unit to help lecturers develop learning media that are more interesting and in accordance with the needs of their courses (Yulianto, et al, 2022).

The appearance of the courses contained in Vilearning Unesa generally shows a uniform "face". On the first page, the content looks less communicative. Opening interactions in the form of greetings are sometimes absent or very monotonous. Explanations between content are very formal, like reading a report book. There is a lack of appreciation sentences, command sentences, or explanatory sentences or audio visuals that provide information like manuals so that the interface on the course page only looks like a collection of learning content. Therefore, lecturers need to evaluate the appearance of their course pages so that they are more interactive and communicative with variations between text and audio-visual media, perhaps by adding features like those on international-scale MOOCs pages (Asteria, 2021).

The characteristic of the online learning model is to create a learning environment that is not bound by time and place of educational interaction. However, the need for a large quota from Vilearning Unesa, especially when utilizing audio-visual features requires speed and stability of the internet network. Adequate internet capacity is needed to access a very large content repository in each subject, including content created by lecturers and students so that these learning resources can be accessed in every home and workplace. Finally, fast and stable network capacity is needed to support human-machine and human-human interaction in various formats; text, audio, video, images, etc., are learning assets that are carried out asynchronously and synchronously to create interactive learning contexts as compensation for the online learning model (Anderson, 2008).

## ► Conclusions

The problems faced by lecturers in using Vilearning Unesa cause the competence achievements of graduates of online courses to be lower than the competency achievements of offline courses. This is caused by several factors, including the uncertainty of the courses being taught in the coming semester so that preparation on Vilearning Unesa platform is not used; the technical ability of lecturers to take advantage of Vilearning Unesa features is not optimal due to limited preparation time; limitations of lecture material that uses a variety of media; display of course pages that are less interactive and communicative, as well as limited internet quota to ensure the smoothness and stability of the internet network.

## Implications

It is necessary to increase coordination and collaboration between institutions and lecturers to provide certainty of teaching load, provide adequate preparation deadlines with the start of lectures, provide training on making international standard MOOCs, and set standards for implementing online learning activities by providing a fast and stable internet network for all components education.

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# Gamification in Higher Education: A Comprehensive Review of Educational Apps

#gamification #blended\_learning #gamification\_in\_higher\_education

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This article presents an overview of gamification applications in higher education, with an emphasis on gamification elements such as challenges/tasks, points, levels, badges, and rankings of users. The applications studied include Quizizz, Padlet, Wordwall, and Kahoot. This article provides insights and recommendations for educators who wish to implement gamification in higher education.

**01**

## Exploring the Application of Gamification Elements and Game Thinking in Educational Apps

Higher education institutions are constantly seeking innovative approaches to enhance student engagement and improve the learning experience. In recent years, gamification has emerged as a promising solution that effectively combines elements of game design with educational practices. Kapp (2012) defines gamification as using game-based mechanics, aesthetics, and game thinking to engage people, motivate action, promote learning, and solve problems. Gamification leverages the inherent human desire for competition, achievement, and rewards to motivate students and make learning more enjoyable. The use of technology tools (applications) can facilitate response and reinforcement to students. Applications that apply gamification principles must have gamification elements such as challenges/tasks, points, levels, badges, and rankings of users (Kiryakova, et.al., 2014). Game elements such as: challenges/tasks, points, levels, badges, and rankings of users can be found in several learning applications such as Wordwall, Socrative, Kahoot! FlipQuiz, Duolingo, Ribbon Hero, Quizziz, Padlet, Mentimeter and Goalbook. The use of game elements in gamification will basically continue to change according to developments in people's tastes and information technology, besides that there is no minimum standard for using elements in a gamification (Ariani, 2020).

This article presents an analysis of gamification-based applications based on indicators of gamification elements (challenges/tasks, points, levels, badges, and rankings of users) and game thinking (freedom to fail, rapid feedback, collaborative processes, and competition). These applications encompass a range of disciplines and educational activities, such as interactive quizzes, virtual simulations, and collaborative challenges. Some of the applications that will be discussed in depth in this article are: Quizziz, Padlet, Wordwall, and Kahoot. These applications were selected based on our experience in implementing gamification at Makassar State University. The selection of applications is also based on their level of popularity in the world of education or the majority of their use by educators globally.



## ► 1) Quizizz

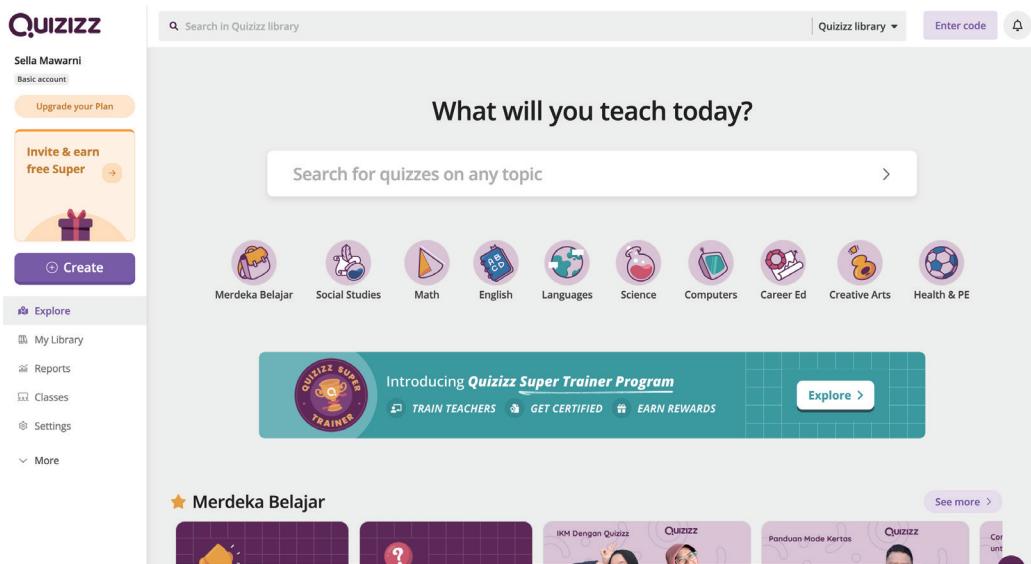


Figure 1. Quizizz Home Page

Quizizz (<https://quizizz.com/>) is a game-based learning platform that allows educators to create interactive and fun quizzes for students. In Quizizz, educators can create multiple choice questions, jumble (move elements to arrange them correctly), answer in the correct order, and other types of questions. Students can access the quiz via their own device, such as a cell phone or computer, and answer questions within a set time. A live score is shown when a question is answered, and a final rating is shown after the quiz is over. Interactive features and gamification elements, such as points, rankings, and leaderboards, are used to encourage student involvement and motivation in the learning process. Quizizz also provides reports that provide information about individual performance as well as the whole class. Quizizz applies a game thinking pattern which includes: (1) freedom to fail, that is when students answer questions or questions; (2) rapid feedback, that is when there is feedback on the answers given by students; and (3) competition, that is when Quizizz is played directly in class guided by a lecturer, competition will be created to achieve the highest ranking in class.

Table 1. Gamification Elements on Quizizz

Gamification Elements	Quizizz Features
Points and score	Quizizz provides a point and score calculation system when students answer questions that are displayed directly, so that students are motivated to get the highest points.
Rankings of users	At the end of the quiz, Quizizz displays a ranking and a leaderboard so students can see where they stand in a class or group. Students can reflect on how well their learning results compare to their peers. This can be used as follow-up material from lecturers to strengthen student learning motivation and compete positively.
Challenges/tasks	Quizizz allows setting the time in answering questions. This time limit becomes a form of challenge that creates positive anxiety and trains responsive skills in the context of the game.

We provide tutorials for making quizzes using Quizizz via the link (<https://youtu.be/lEUs9kZyltE>) or QR Code below.



## ► 2) Padlet

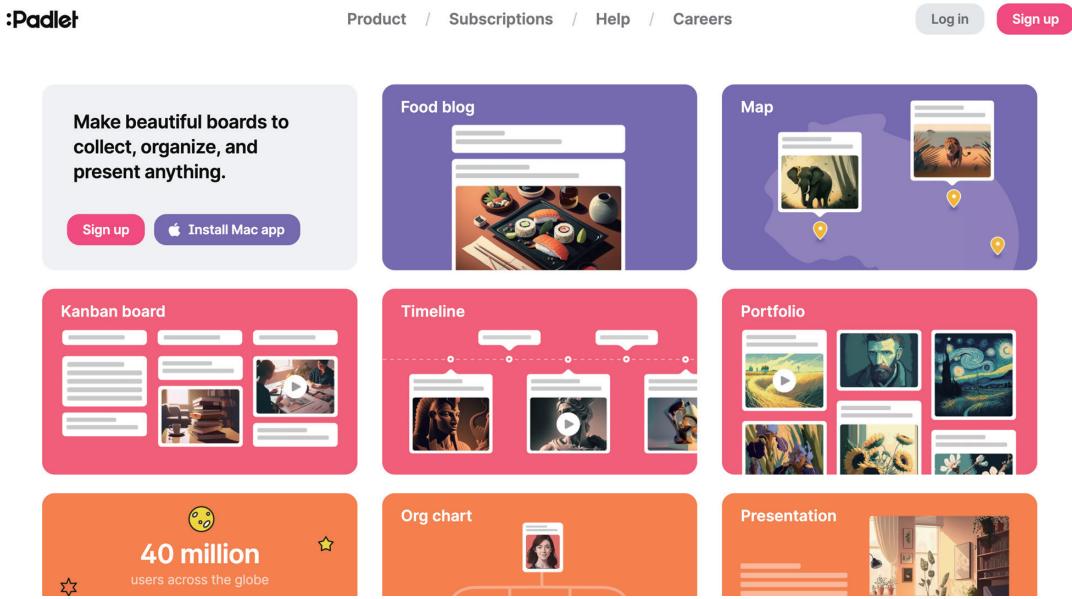


Figure 2. Padlet Front Page

Padlet (<https://padlet.com/>) is a collaborative platform that allows users to create and share virtual idea boards. Although Padlet itself is not an application specifically built with the aim of gamification, but with proper use, the principles of gamification can be applied in the use of Padlet. In Padlet, users can create boards similar to virtual walls, where they can add notes, images, videos, links, and many other types of content. This content can be freely arranged on boards, enabling collaboration and interaction between users. Students can collaborate in activities such as class discussions, group projects, or joint problem solving. Padlets provide additional features such as comments, likes, and the ability to set access permissions. Padlet applies a game thinking pattern that includes: (1) collaborative process, that is when Padlet is used in groups, cooperation between group members will be created so that they are able to produce the best projects; and (2) competition, i.e. if the Padlet setting allows scoring/scores for each post so that the Padlet will calculate the average score obtained based on the class assessment.

Table 2. Gamification Elements on the Padlet

Gamification Elements	Padlets Features
Points and score	Padlet provides a scoring system for each post. Scoring (1-100) can be found in the "Reactions" settings menu. Apart from that, in this menu there are also several other response settings such as liking posts, votes (upvotes and downvotes), and giving stars (1-5 stars).
Challenges/Tasks	Padlet provides a wide selection of post formats, such as in canvas, timeline, grid, list, wall, and map formats. When creating posts, users can insert image, audio, video files, links, and locations so that each student can produce different posts. Padlet posting criteria can be a challenge for students to be able to display their best posts.

We provide a tutorial video on making a digital classroom wall using Padlet via the link (<https://youtu.be/C4SOltxmSTU>) or QR Code below.



### ► 3) Wordwall

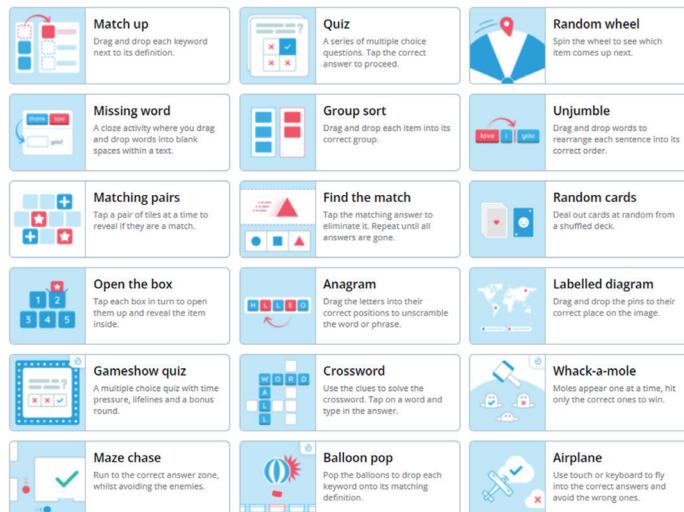


Figure 3. Various Game Options in Wordwall

Wordwall (<https://wordwall.net/>) is a learning platform that provides various types of interactive activities and games that can be used for learning. Several interactive activity templates provided by Wordwall include Match Up, Quiz, Open the Box, Unjumble, Flash Cards, Random Wheel, Wordsearch, etc. One feature that stands out from Wordwall is the ability to arrange activities collectively or collaborate with fellow educators. Wordwall can increase student interactivity, engagement, and participation in learning, through the use of well-designed activities.

Using Wordwall can strengthen conceptual understanding, build vocabulary, practice language skills, and involve students in the learning process actively. As a gamification tool, Wordwall applies a game mindset which includes: (1) freedom to fail, that is giving students the opportunity to answer questions correctly or incorrectly; (2) rapid feedback, that is providing a direct response from each input answer given by students so that they can learn from mistakes and improve their understanding; (3) competition, that is through the work of questions or quizzes students can compete to get the top ranking.

Table 3. Gamification Elements on Wordwall

Gamification Elements	Wordwall Features
Points and score	Wordwall provides a scoring system for each answer. The score obtained will be calculated and accumulated at the end of the session. Lecturers can choose quiz settings, whether at the end of the game the correct answers will be displayed, leaderboards, and the opportunity to repeat the quiz. The score of the game will automatically be adjusted according to the number of questions given.
Challenges/Tasks	Wordwall has several special settings that can be set by the lecturer, such as setting the timeline for taking quizzes, when to take quizzes, and how many times you have the opportunity to take quizzes. These regulations will certainly have different impact challenges. This game challenge will provide playing and learning experiences for students.
Rankings of users	After completing the quiz, Wordwall will display a ranking and leaderboard based on their performance in answering questions or completing activities. Students can reflect on how well their learning results compare to their peers. This can encourage healthy competition and motivation to increase the score on the next quiz opportunity.

We provide a video tutorial on creating tasks in game form using Wordwall via the link (<https://youtu.be/aNxaw-ln0UA>) or QR Code below.



## ► 4) Kahoot



Figure 4. Kahoot Front Page

Kahoot (<https://kahoot.com/schools-u/>) is a web-based application that can be used to create quizzes, polls, and discussions in the form of games. This app is specially designed for learning purposes and serves as an engaging and entertaining tool to engage students in the learning process. Kahoot has several main features including: (1) interactive quizzes in multiple choice format, right or wrong answers, and short answers; (2) multiplayer which allows Kahoot to be played by many players simultaneously, (3) music and animation that is entertaining and creates a fun experience; and (4) there is analysis and feedback at the end of the session about student performance, this helps educators identify the learning abilities of each student. As a gamification tool, Kahoot applies a game thinking pattern which includes: (1) freedom to fail, that is in the quiz work session at Kahoot students are free to choose and try to answer each question to measure their understanding; (2) rapid feedback, that is providing feedback from each student's input (in the form of quiz answers for example) which helps create a learning environment that is dynamic, responsive, and centered on improvement; (3) competition, that is students can compete between friends in answering quizzes or questions on Kahoot so as to create motivation, involvement, and positive participation from students.

Table 4. Gamification Elements in Kahoot

Gamification Elements	Kahoot Features
Points and score	Kahoot is more suitable for face-to-face classes with the help of a projector screen display in front of the class to make the playing experience more tense as well as fun. Kahoot has a score and point calculation system on quizzes that have the correct answers as in quiz, puzzle, and type answer formats.
Challenges/Tasks	Kahoot provides several special settings that can be set by lecturers, such as the duration of answering questions. Speed is an interesting challenge for students to be able to give the best answers so they can become quiz winners. These regulations will certainly have different impact challenges. This game challenge will provide playing and learning experiences for students.
Rankings of Users	The leaderboard in Kahoot shows how participants rank based on their scores. This leaderboard is constantly updated during the game, allowing participants to see their position in real time and compare it with other competitors. This leaderboard feature encourages competition and motivation to reach the top spot in the game.

We provide a video tutorial on making games in class to measure student understanding using Kahoot via the link (<https://youtu.be/j7tdKcSiLg0>) or QR Code below.



Each application or gamification tool that has been discussed above, has a variety of varied features and of course has its own characteristics. In the mixed learning pattern, these four applications can be used in face-to-face or online (synchronous and asynchronous) learning formats. Based on our experience in implementing blended learning with the principle of gamification, the Quizizz and Padlet applications are more suitable for face-to-face and virtual face-to-face synchronous learning patterns, the Kahoot application is more suitable for face-to-face learning, while the Wordwall application is more suitable for use as independent assignments and carried out independently. async. Applications that are interactive quizzes (Quizizz, Wordwall and Kahoot) can be used to test student understanding at the beginning or end of learning, while the Padlet application can be used for material that requires brainstorming and in-depth discussion.

## Implications

Learning applications are a tool for implementing gamification. Assistive devices can support the achievement of learning objectives if they are also supported by the use of appropriate learning strategies and settings. The role of lecturers or educators as learning designers, must be able to integrate elements of learning strategies, learning tools, and class settings proportionally and mutually support each other so that the application of gamification can increase student involvement in the learning process.

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# Creating a Good and Attractive Content for E-Learning

#content #good #attractive # e-learning

Valentino Aris & Rahmatullah / Universitas Negeri Makassar  
Arini Lestari / Universitas Andi Djemma



Makassar State University (UNM) is one of the best tertiary institutions in Eastern Indonesia and one of the higher education institutions focusing on developing online learning platforms. The efforts made by UNM to improve the quality of online learning at tertiary institutions have proven successful. UNM is among the 10 (ten) best tertiary institutions in conducting online learning in 2021 ([www.unm.ac.id](http://www.unm.ac.id), accessed in 2023). This shows recognition of UNM's performance and innovation in implementing online learning, where information technology support in learning is a priority for the current chancellor's leadership (Husain, 2023). This achievement is inseparable from UNM's success in developing an integrated online learning platform called UNM's System and Application Management Open Knowledge (SYAM-OK).

The rapid development of technology is currently causing disruption, which also has an impact on the Education Sector in Indonesia. The implementation of learning in the education sector is different from the previous few years. Learning that used to be carried out face-to-face can now be carried out virtually using technology. Human resources in tertiary institutions must be able to use the latest technologies in the learning process. The Industrial Revolution 4.0 also demands the skills of graduates from educational institutions, which are very different from those of 10 (ten) years ago. These skills include higher-order thinking skills, unprecedented problem-solving, social skills, critical thinking, and cognitive abilities ([www.ui.ac.id](http://www.ui.ac.id), 2022). These changes must be responded to by universities also using adaptation, flexibility, and agility in responding to these changes. One of the most appropriate steps to deal with this is the use of e-learning in the learning process. At Makassar State University (UNM), we use the UNM System and Application Management Open Knowledge (SYAM-OK) platform. SYAM-OK allows lecturers to carry out synchronous and asynchronous (ASL) learning processes. Synchronous learning is face-to-face online learning using conference applications, while asynchronous learning is an online learning process that indirectly provides teaching materials and assignments. Teaching materials and assignments can be in the form of presentation files, books, other materials, sounds, videos, discussion forums, and other teaching materials. SYAM-OK can be said to have been successfully implemented in our universities (see the article in the previous volume). We then surveyed students in Makassar City who had used e-learning for learning at the college where they studied. The survey results showed that out of all respondents, there were 48.5% of students who said they preferred offline lectures, followed by 39.4% of students who said they preferred hybrid lectures, and the remaining 12.1% liked online lectures. This data shows that even though they have successfully implemented e-learning in their respective tertiary institutions, the majority of student interest in implementing learning is still in offline learning in class. Data can be seen in the following figure:

## Are you more interested in attending lectures?

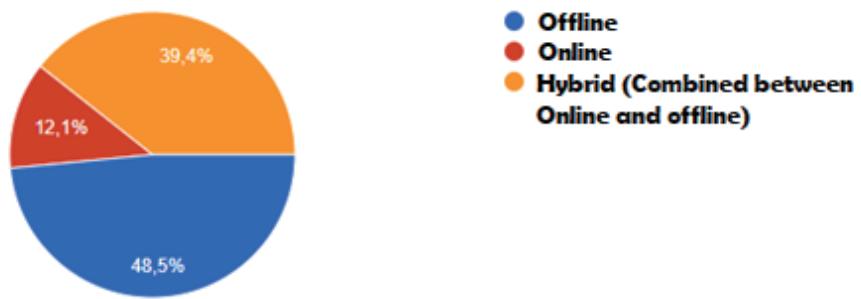


Figure 1. Results of a Survey of student interest in online lectures

Based on our interviews with all of these students, the majority said that their lack of interest in online lectures using e-learning was because the content or material on the e-learning platform was boring, poorly understood, unable to ask questions if something was not known and there was no synchronous interaction. Therefore, in this article, we will share our experiences in developing e-learning content so that the learning process can be more attractive to students.

### 1. Provide complete information, a warm and friendly welcome

The initial stage in using the e-learning platform for learning, of course, is to make an introduction regarding the subjects that will be taught on the e-learning platform. At this stage, enter a description of the course to be taught with the most complete information such as the name of the course, number of credits, a brief description of the course, subject matter, references used, and expected output from the course. The following is an example of the display of the e-learning page that the author has:

The screenshot shows a course page for 'Web Design UI/EX'. At the top, there's a header with a gear icon, the course name, and an 'Edit' button. Below the header, the course details are listed: 'Nama Mata Kuliah : Web Design UI/EX', 'Jumlah SKS 3 (1 : 2)', 'DESKRIPSI MATA KULIAH', 'Bismillah', 'Assalamu'alaikum Wr. Wb.', and a note about blended learning. The main text describes the course as a blended learning experience (Luring dan Daring) over 16 sessions, mentioning it's a mandatory part of the Business Digital Studies Program. It highlights the creation of websites from design ideation to final website development. A note at the bottom says 'Bahan Kajian Pada Mata Kuliah Ini yaitu:' followed by a numbered list of topics: 1. Pengenalan Web design and UI/UX, 2. Desain UI/UX - Teori Desain, and 3. Web Design: Wireframing, Hosting, Domain.

Figure 2. Courses on CMS SYAM-OK

For subsequent topics on the e-learning page, don't make it a habit to only include material files, presentation files, video files, and learning files. Provide detailed information for each subject and words that motivate and convince lecture participants that you will continue to accompany them during lectures and provide tools for discussion.

PENGANTAR WEB DESIGN UI/UX

⊕ PENGANTAR WEB DESIGN UI/UX

Ini adalah pertemuan pertama kita untuk Mata Kuliah Web Design UI/UX.

Pada pertemuan ini akan dibahas mengenai pengantar matakuliah, kontrak kuliah dan beberapa definisi mengenai webdesign, UI dan UX. Selain itu, pada pertemuan ini kita juga akan membahas apa yang akan dilakukan untuk 7 (tujuh) pertemuan kedepan yang dibawakan oleh Dosen 1. Silahkan diperhatikan dengan seksama agar anda dapat menyelesaikan 7 (tujuh) pertemuan kedepan dengan baik. Kami menyediakan kolom untuk berdiskusi dibawah slide materi, jadi jangan ragu untuk menyampaikan pendapat dan pertanyaan anda jika terdapat bagian dari materi yang tidak anda mengerti. Kami akan terus mengikuti dan memantau perkembangan pembelajaran anda.

Silahkan dipelajari Slide Presentasi dibawah ini:

PERTEMUAN I

# PENGANTAR

Figure 3. Examples of the subject matter of e-learning content

## 2. Creating an Attractive Presentation File

The next step for making lectures online in e-learning attract students is to create a presentation file that is visually appealing and content. Visually attractive, namely referring to the design of the presentation file template used and interesting in content, the contents of the presentation file are the latest knowledge that is up to date with current conditions. Another tip is to avoid using a font size below 20 on your presentation slides. You can read references on how to make a good presentation file with a bit of input from the author. Also, you can read references from Guy Kawasaki and apply them in your learning presentation file.

Another way to make it easier to create visually appealing presentation files is to take advantage of the Artificial Intelligence (AI) feature which is currently widely used in applications for making presentations. For example, for those of you who use Microsoft Powerpoint, if you are still making presentations with a design like in Figure 4, you should use the AI feature in Microsoft Powerpoint to produce a presentation like in Figure 5. As the method is quite easy, you just need to type the main theme from 1 page of the presentation slide, then select the Designer button on the Home Tab. Then AI will work to make you a template that best suits the presentation to be made. You just have to choose the best template that best suits the learning material you are making.

**Algorithm**

Oleh Dr. Valentino Aris, S.Kom., MM.

**Costumer Feedback**

- + Rude
- + Expensive
- + Delicious

**Algorithm**

Oleh Dr. Valentino Aris, S.Kom., MM.

**Costumer Feedback**

<span style="color: #80c080;">+</span>	Rude
<span style="color: #80c080;">+</span>	Expensive
<span style="color: #80c080;">+</span>	Delicious

Figure 4. Basic Template Design

Figure 5. Template Generate Design from AI

Several other applications that can be used to create interesting presentation files that the author has used are Canva and Pitch. Canva can be accessed at [canva.com](https://canva.com), and the pitch can be accessed at the [pitch.com](https://pitch.com) link. The following shows the presentation template that the author made with these two applications:



Figure 6. Design Using the Canva Application



Figure 7. Template Generate Design from AI

### 3. Making Interesting Learning Videos

Another step that can be taken so that online lecture participants don't feel bored and feel lectures like in class is to make learning videos. This learning video may be in the form of a video presentation by the course lecturer or an animated video explaining lecture material. Based on the author's experience, the use of video as lecture content in e-learning is usually if the lecture material has a practicum element that must be practiced by students. Combining presentation files and animated video explanations of material can be done to prevent online lecture participants from getting bored with the material content provided.

In general, making learning videos can be directly carried out using a digital camera or a camera on a smartphone and then put into the e-learning platform. However, based on the author's experience, editing should be done first so that the video output is much better. Avoid using Zoom-recorded videos because based on the author's experience, students tend to get bored if the video provided is a recording of a Zoom meeting. Some video editing tools that can be used are Wondershare Filmora, Kinemaster, and Adobe Premiere.

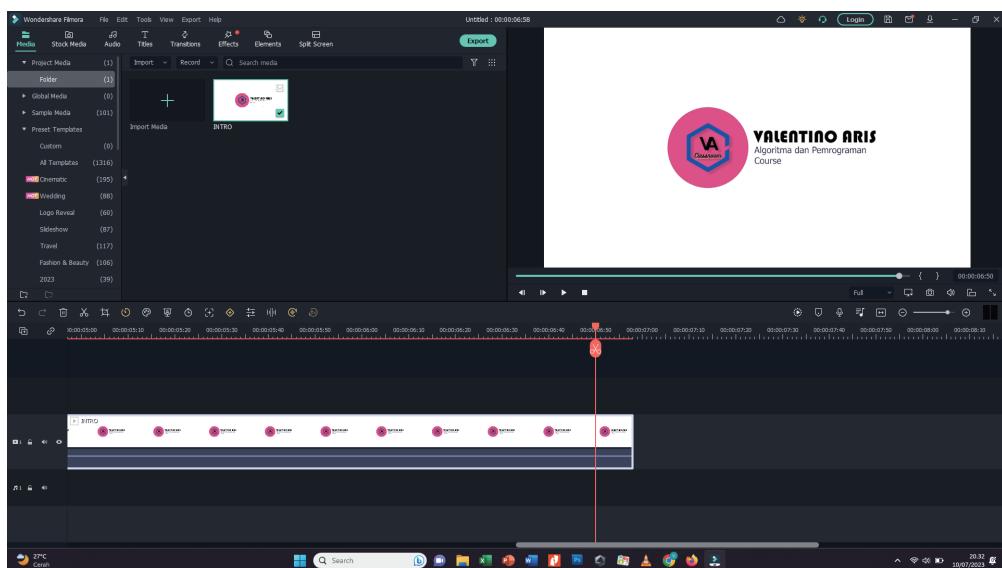


Figure 8. Editing e-learning video content using Filmora

The use of Artificial Intelligence (AI) for video editing for e-learning purposes has also proven capable of producing interesting learning content. One of the AI features that can be used to make interesting learning videos is text-to-video or text-to-animation. The application that can be used is Steve AI which can be accessed at <https://www.steve.ai>. Other AI applications that can be used are InVideo (<https://invideo.io>), Fliki (<https://fliki.ai>), and Clipchamp (<https://clipchamp.com>). The use of the Steve AI application can be seen in the following figure:

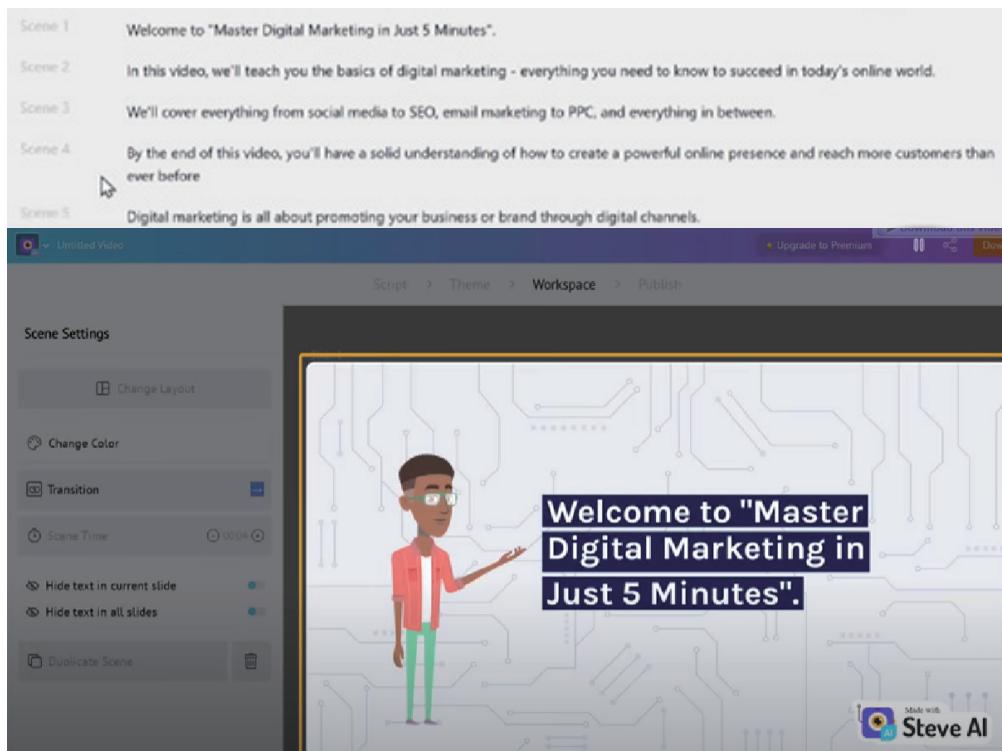


Figure 9. Steve AI to create learning videos

#### 4. Combination of Synchronous and Asynchronous Learning

The use of e-learning allows learning to be carried out online without the need to meet face-to-face with lecture participants. Therefore, the success of a class made on e-learning is very dependent on the content in it. The content must be a mix of good and interesting book files, presentations, and videos. However, considering that the lecture participants in e-learning are generally around 30 to 45 participants with various characteristics, there are times when no matter how interesting the content is made, it will not be able to satisfy the lecture participants as a whole. We suggest that learning done on e-learning should be a combination of synchronous and asynchronous learning. Preferably in 3 or 4 meetings, there is 1 meeting that is held synchronously, to be able to find out the progress of lecture participants regarding the material provided in 4 meetings.



## Implications

The development of technology and the internet in Indonesia has brought new changes in the learning and teaching process, especially in higher education. Universities are currently developing platforms for online learning, one of which is SYAM-OK at Makassar State University. The use of e-learning, of course, also faces various obstacles, one of which is how to attract the interest of learning participants so they don't get bored, the material can be easily understood, and there is interaction between participants and the teacher. One of the steps that can be taken is to develop good and interesting content on the e-learning platform. By following the steps that we apply based on experience, it is hoped that we can overcome obstacles in using e-learning for learning.

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# Designing Gamification for Blended Learning in Higher Education

#gamification #blended\_learning  
#gamification\_in\_higher\_education

Sella Mawarni / Makassar State University  
Hartoto / Makassar State University



Effective gamification of learning can only be achieved if it has careful planning before it is implemented in class. Gamification-based learning planning has special characteristics compared to traditional learning stages.

## 01

## Learning Gamification Design Stage

Applying gamification in learning is not just using game components, learning applications, or even rewarding students. Effective gamification of learning can only be achieved if it has careful planning before it is implemented in class. Gamification-based learning planning has special characteristics compared to traditional learning stages. We propose a gamification instruction planning template, which can be used by educators who plan to implement blended learning-based gamification in the classroom. In this gamification instruction planning template, there are several stages that need to be considered comprehensively.

### 1. Needs Analysis

Needs analysis is a critical step in designing a gamification-based learning plan. By doing this analysis, educators can get a comprehensive picture of the students who will be involved in the learning process. First of all, identify the general characteristics of students, such as age, grade level, and cultural background. Next, focus on specific characteristics that are the focus of attention, such as the level of cognitive abilities and technological literacy possessed by students. This information helps educators to develop appropriate and relevant approaches to using gamification elements. By understanding the abilities and needs of students in-depth, learning planning can be directed to provide learning experiences that are challenging but equally accessible to all students. In addition, needs analysis also allows educators to adapt challenges and assessments to suit students' abilities, thus creating a learning environment that is inclusive and beneficial to the development of each individual.



### 2. Formulating learning objectives

Formulating learning objectives is a crucial next step in gamification-based learning planning. Learning objectives are the main pillars in determining the design and implementation of learning activities and the assessment system to be used. Learning objectives must be formulated

clearly and specifically to provide proper guidance for students in achieving the expected results. The measurability of goals is also an essential aspect because this allows educators to measure student progress and achievement objectively. By having specific and measurable goals, educators can assess the extent to which these goals have been achieved and whether an expansion of learning is needed. In addition, learning objectives that can be achieved provide encouragement and motivation for students to work hard to achieve the expected achievements. By formulating learning objectives carefully, gamification-based learning planning will be more directed and effective in achieving optimal learning outcomes.

### **3. Storyboard (sketch out) your game**

After identifying the challenge ideas in gamification-based learning, the next step is to develop a storyboard or gameplay. At this stage, educators need to design in detail how the game will take place and how the challenges will be arranged in a certain order. Game flow can be enriched with interesting game elements, such as rewards (points, levels, progression, badges, authority, virtual items, physical goods, severance, gifting, free items, virtual money); reward schedules (fixed interval reward schedules, fixed ratio reward schedules, variable intervals reward schedules, variable ratio reward schedules); avoidance (disincentives, leaky buckets); leader board (macro leaderboard, micro leaderboard, indirect competition, direct competition); status (avatar, social graph); quest (content unlocking, countdown, lottery, communal discovery, scaffolding) (Kim, S., Song, K., Lockee, B., & Burton, J. 2018). Each element must have a consistent and challenging relationship for students. In compiling storyboards, make sure that the rules for points and prizes given have clear objectives and can motivate students to participate and try to achieve higher achievements. It is also necessary to set clear criteria or rules for achieving a level up or earning a certain badge so that students have clear guidance in navigating the learning game. By carefully compiling storyboards, gamification-based learning plans will be more structured, and students will be involved in learning experiences that are both challenging and fun. For example, in the example of the challenge idea, students must collect at least 5 international course certificates to get top-up points for their midterm exam scores. The lecturer needs to write down the criteria for the point prizes that are obtained if students succeed in collecting 5 certificates, which of course, will be different for students who can collect more certificates. The difference in the number of certificates can be accumulated as additional points for top-up midterm scores.

### **4. Identifying resources**

In this stage, identifying learning resources will become the basis for students in answering the challenges of gamification-based learning games. This learning resource plays an essential role in providing information, materials, or content needed by students to complete the challenges given. Learning resources can be provided before class starts so that students can study them at home before the learning session takes place. Learning resources can also be provided during class as a reference or guide for students in carrying out learning games.

One form of learning resources that can be used in blended learning patterns is learning applications or technology that supports gamification. Digital platforms or special applications can provide relevant content, challenges, or learning activities that match learning objectives. This approach not only adds to the attractiveness of learning games but also makes it easier for students to access learning materials whenever needed.

## **5. Identifying in-Class Activities**

Furthermore, in gamification-based learning planning in a blended learning environment, it is necessary to identify in-class activities that will be carried out during face-to-face sessions. Face-to-face sessions are a valuable opportunity to reinforce the understanding and knowledge students have gained from previous challenges and activities. The form of in-class activities can be in the form of whole group discussions, differentiation/individualization, group activities, gameplay, or think-aloud activities. In-class activities can be designed to facilitate whole group discussions, which allow students to share understandings and experiences in achieving learning objectives. Differentiation or individualization approaches can be applied to accommodate the different needs of each student so that they can learn optimally according to their individual ability levels. Group activities can also be an important part of face-to-face sessions, where students work together to complete collaborative tasks and achieve common achievements. In addition, gameplay or learning games in class can be a driving force for student enthusiasm and participation. Gameplay adapted to the gamification theme can make learning more interesting and fun. Furthermore, think-aloud activities or open-minded activities can also be included as part of in-class activities. Through this activity, students are invited to verbally process their thoughts while completing challenges and explain the strategies used to achieve learning objectives. For example, when students have successfully collected 5 international course certificates, students are then asked to work in groups to discuss problems during the course for further discussion together.

## **6. Creating the assessment**

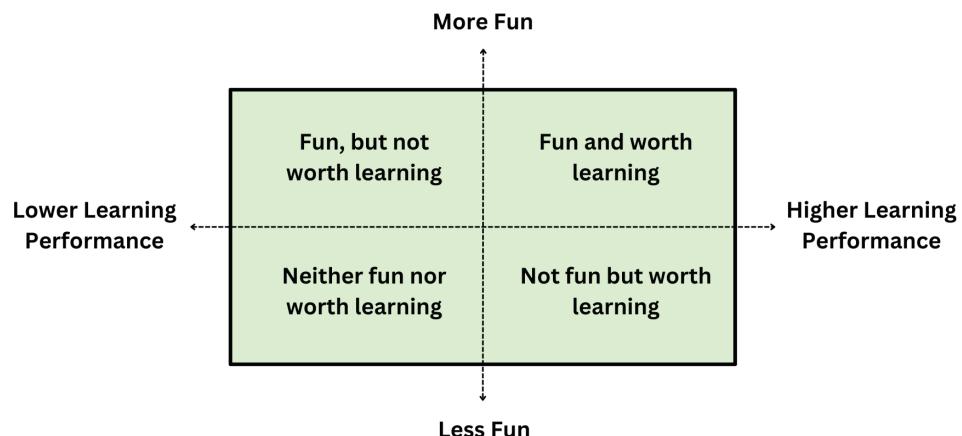
This stage aims to assess student understanding to measure the achievement of learning objectives. This allows educators to track student progress, identify potential improvements, and provide helpful feedback. Assessments can be designed in various forms, depending on the learning objectives and student needs. Assessments can be formative/summative, challenging questions, interactive quizzes, presentations, or traditional tests. Formative assessment aims to provide feedback throughout the learning process, so students can continue to improve their understanding, while summative assessment is used to evaluate the achievement of learning objectives in the end. Interactive quizzes can also be used to test student understanding in an interesting and fun way. Meanwhile, the traditional test remains an effective choice for measuring students' understanding of learning material in a more comprehensive manner. For example, after students get 5 international course certificates and carry out group discussions to assess understanding, students are given interactive quizzes regarding the MOOC instructional components in the course.

## **Implications**

Gamification-based learning planning must consider the significance and relevance of using game elements in order to create an effective and fun learning environment in higher education. Through careful evaluation and appropriate improvement, gamification-based learning is expected to provide meaningful learning experiences and motivate students to achieve higher achievements in a blended learning environment. Thus, the use of gamification in learning can be an effective tool for improving the quality of education in tertiary institutions.

## 02

# Learning Results that Apply Gamification



The purpose of applying gamification in learning is to create learning experiences that are "fun and worth learning." Finally, the application of gamification in learning can be grouped into four results. Namely, learning can be fun and worth learning, fun but not worth learning, not fun but worth learning, and neither fun nor worth learning. If the learning experience cannot achieve both elements of fun and worth learning or fun and relevant for students, their motivation and interest in further learning will decrease (Faghihi et al., 2017). If experiential learning is meaningful but not fun, students cannot discern the difference between a gamified learning experience and a traditional learning experience. Meanwhile, if the learning experience is fun but not useful for learning, the learning design that includes the game's dynamics must be evaluated.

## Implications

Learning that applies gamification can be classified into four outcomes: learning can be fun and worth learning, fun but not worth learning, not fun but worth learning, and neither fun nor worth learning. The ultimate goal is to create a learning experience that is fun and worth learning so that learning not only makes students feel happy but is also able to master learning material in accordance with the learning outcomes set.

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# Using Collaborative Tools to Support E-learning for student collaboration in online learning

#collaborative tools #e-learning

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Arini Lestari / Universitas Andi Djemma



The use of e-learning certainly has a positive impact on learning, such as learning can be done virtually and accessed easily, costs are cheaper in implementing learning, and makes it easier to share learning content and references. However, despite all these advantages, e-learning is also not free from its opposing sides, one of which is the emergence of individualistic attitudes among students (Sunu IGKA, 2021). The lack of direct interaction between students and lecturers has been suggested as one of the causes of this condition (Amarulloh et al., 2019; Handarini & Wulandari, 2020).

Another issue that needs to be considered in using e-learning is the diversity in the classroom. This diversity is an obstacle because class participants come not only from one region but from various regions with different attitudes and cultures. Educators must be able to manage and accommodate a wide variety of class participants so that learning objectives can be achieved. Some of the differences between students in e-learning classes can be cultural differences, differences in economic conditions, physical and mental disabilities, and differences in knowledge of using technology. Diversity related to economic conditions and differences in knowledge of using technology certainly greatly influence the use of e-learning. So, it must be understood that when students with such diversity study in a virtual space without interaction, there will be differences in the quality of learning output if it is not managed well.

This is also an obstacle to using e-learning in the Digital Business Study Program at Makassar State University. The low level of student participation and collaboration causes students to have difficulty working together in a team. This especially happens if one uses the Case Method Learning and Project Based Learning methods. In this learning method, students are expected to be able to work as a team to solve a given case or project. To anticipate this problem, we use applications or software tools that allow them to collaborate online, combined with the use of SYAM-Ok, an e-learning platform at Makassar State University.

The following are several application references or software tools that students can use to collaborate online:

## **(1) Figma**

This collaborative web-based application is used to create user interface designs available in desktop applications for Windows and macOS. This application makes it easier for designers to create collaborative designs online. Generally, this application is used to create prototypes or user interface workflows for web or mobile-based applications. However, Figma is also mighty for use in creating business model blueprints, flowcharts, and other diagrams. This application also provides a live chat feature so that participants can communicate directly during the design process. This application can be used for free with limited features, but users who use it for educational purposes can use its features for free by registering with an educational account.

## **(2) Canva**

Canva is a platform for creating graphic design and publication content that is easier and faster than other graphic software. In the classroom learning process, Canva is very useful for building more attractive presentation files because there are various templates available. Apart from that, components to beautify presentation files are also available in full, such as border elements, charts, animation elements, and software that can be installed to make it easier to design presentation materials. Users can collaborate in creating a presentation file, making it very interesting to collaborate online. Users can also communicate in real time using the chat feature. Apart from presentations, Canva can also be used to design other content such as posters, infographics, banners, websites, learning videos, and other content. Artificial intelligence features are also available to make it easier for users to design their content.

## **(3) Miro**

Miro is a virtual whiteboard application where users can connect and collaborate to develop ideas. Virtual whiteboards can be a canvas to accommodate and communicate users' ideas with the team. This application can be used for free according to the user's needs. In this application, users can use sticky notes to collaborate on developing ideas. Miro can also load images, PDFs, Office files, videos, documents from Google Drive, and much more. The advantage of this application is that the whiteboard is unlimited, so it can open many files at once on the whiteboard. Because it is a collaboration tool, all changes that occur in Miro are displayed in real-time. After a project is completed and approved, Miro users can immediately export the whiteboard in PDF or image format to upload anywhere, for example, to social media or websites.

## **(4) Microsoft Teams**

Microsoft Teams is a product that allows users to collaborate online. The advantage of this application is that the information available here will be immediately available to all team members. This application allows users to post tasks, collect tasks, schedule activities, and create meetings more efficiently. In this application, we can create channels that are categorized per team (for example, Marketing team, IT, HR, and so on), so that communication within the team becomes easier and more focused. Another advantage of Microsoft Teams is that there are more than 450 integrated applications, so the collaboration process on several of the applications mentioned above can be done directly through Microsoft Teams. Not only that, you can also integrate Teams with your Office Outlook so that all meeting schedules and activities can be directly accessed through one application. This application can be used for free with limited features, but users who use it for educational purposes can use its features for free by registering with an educational account.

The following are examples of our students' work using these online collaboration applications in conjunction with SYAM-OK for online learning:



Figure 1. Prototype Design using collaboration applications combined with e-learning

## Implications

Collaboration is a very important element in online learning, especially nowadays, where universities are encouraged to apply Case Method Learning and Project Based Learning. Several e-learning platforms currently do not have this facility, making it difficult to carry out this collaboration. One solution that can be used is to use software tools or applications that support collaboration, such as Figma, Canva, Miro, and Microsoft Teams. This application has been used in several courses in the Makassar State University Digital Business study program, which has proven to be successful as a medium for students to collaborate, especially for developing business ideas, creating business models, prototyping, and creating flowcharts.

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# Student Responses to the Implementation of Gamification in Blended Learning at Universitas Negeri Makassar

#blended\_learning #gamification\_in\_higher\_education

Sella Mawarni / Universitas Negeri Makassar  
Hartoto / Universitas Negeri Makassar



This study highlights the implementation of gamification principles in online and face-to-face learning at Universitas Negeri Makassar, especially in the blended learning model. The application of gamification is discussed in detail in the cases of online learning (synchronous and asynchronous) and face-to-face learning (with and without learning applications). The application of gamification is assessed through student responses during lectures for half a semester (July - September 2023), while the assessment indicators consist of aspects of the usefulness of gamification, engagement skills, and interaction involvement.

## 01

### Application of Gamification in Mixed Learning

One of the trends in implementing learning in the 21st century is the application of gamification, which is expected to be able to increase students' learning enthusiasm and motivation significantly. This concept combines game elements into the learning environment to increase student motivation, involvement, and achievement or learning outcomes. Kapp (2012) defines gamification as using game-based mechanics, aesthetics, and game thinking to engage people, motivate action, promote learning, and solve problems. Gamification leverages the inherent human desire for competition, achievement, and rewards to motivate students and make learning more enjoyable. This gamification has been implemented in the learning process at Universitas Negeri Makassar. Since the post-COVID-19 pandemic, many educational institutions have carried out blended learning and learning processes. Blended learning, which embraces various combinations of classroom presence and online study, is now considered a mainstream approach to learning in most educational organizations (Ossiannilsson, 2017). The learning process at Universitas Negeri Makassar is currently carried out more in blended learning, namely combining the use of video conference platforms, the Learning Management System (<https://syam-ok.unm.ac.id/>), and face-to-face learning in class. Gamification is implemented as an effort to implement fun learning that can increase student enthusiasm for learning in mixed learning patterns.

This article will review how gamification has been used at Universitas Negeri Makassar in the context of synchronous and asynchronous online learning, as well as in face-to-face learning, both with and without the use of learning applications. Apart from that, we will also present the results of the student response questionnaire regarding their experiences in learning that adopted the gamification concept after running for half a semester (between July – September 2023).

## ► Gamification in Online Learning

Online learning held at Universitas Negeri Makassar can be categorized into synchronous and asynchronous online learning types. Synchronous online learning refers to a learning pattern that is carried out in real-time or at the same time between lecturers and students. At Universitas Negeri Makassar, the majority of synchronous online learning is carried out using video conferencing applications such as Zoom Meetings and Google Meet. The implementation of asynchronous online learning is able to provide better flexibility in study time because it cannot be accessed at the same time by lecturers and students. Asynchronous e-learning, commonly facilitated by media such as e-mail and discussion boards, supports work relations among learners and teachers, even when participants cannot be online at the same time (Hrastinski, 2008). At Universitas Negeri Makassar, a Learning Management System platform called SYAM-OK supports this asynchronous online learning pattern. We can see the practice of implementing gamification in these two online learning patterns in the explanation below.

## ► Gamification in Synchronous Online Learning

Online learning that takes place via Zoom Meeting and Google Meet often shows minimal student involvement during learning. This is generally caused by a lack of interaction and feeling connected with friends or lecturers in a virtual (online) environment; one example is when lectures are held online via video conference applications, some students choose to turn off the camera while students who turn on the camera are not necessarily present. Gamification can be chosen to solve this problem with the assumption that fun and challenging learning can trigger the urge to actively participate in learning voluntarily. Some practices for implementing gamification in synchronous lectures at Universitas Negeri Makassar include polling and immersive view features in Zoom Meetings. In the example below, a poll was conducted to gather student opinions regarding the best group ranking combined with an immersive display from Zoom. The immersive display is used so students are more focused and can create a simulated atmosphere in a real classroom.



Figure 1. Immersive Zoom Meetings display

## ► Gamification in Asynchronous Online Learning

In the asynchronous online learning pattern, student study time becomes more flexible and varied depending on the conditions of each student. This flexibility in terms of time and place needs to be supported by good self-regulation of learning, but sometimes, in practice, quite a few students tend to be 'negligent' in their learning assignments in the Learning Management System. Materials and assignments in the LMS are sometimes 'less interesting' to access. The LMS platform used at Universitas Negeri Makassar is Moodle-based. This LMS is used by lecturers as a form of fulfilling independent assignments to fulfill the number of credits according to curriculum demands, as well as an alternative if real-time lectures are not possible. The role of the LMS, as crucial as in-person lectures, should be enhanced by fully leveraging its gamification elements. In the example below, we use the levels feature. The ranking is based on students' activities in accessing the LMS, so the more diligent they are in accessing the material and completing all activities, the higher their level will be.

### Ladder

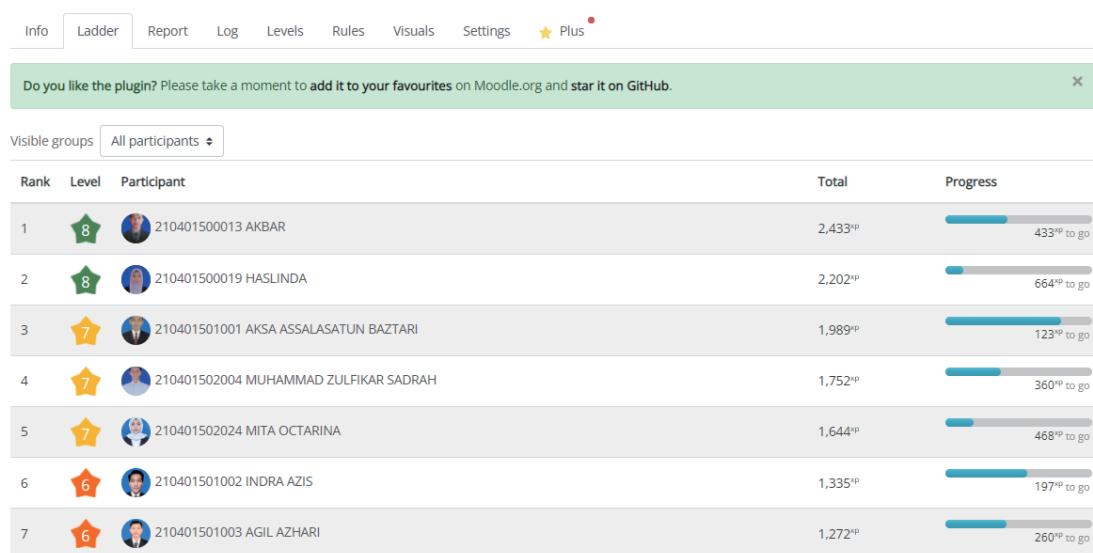


Figure 2. Level features in LMS SYAM-OK Universitas Negeri Makassar

## ► Gamification in Face-to-Face Learning

Blended learning certainly cannot be separated from face-to-face (on-site) learning patterns. Gamification can also be applied in the context of face-to-face learning. Based on the use of technology (learning applications), the discussion of gamification in face-to-face learning is divided into two, namely, learning with technology and without technology. The technology in question uses gamification-based learning applications such as Quizziz, Mentimeter, Padlet, Wordwall, and Kahoot (Mawarni & Hartoto, 2023).

## ► Gamification in Face-to-Face Learning using Learning applications

Implementing learning that integrates technology applications provides space for the application of these applications to facilitate the implementation of gamification in the classroom. Several applications that have been applied in lectures at Universitas Negeri Makassar, especially in the Educational Technology study program, are the Quizizz, Kahoot, and Padlet applications. For example, in the Learning Models & Strategies lecture, a hybrid learning pattern is applied (some students are online and some are in class) with a discussion learning method, followed by a presentation, and at the end of the session, closed with an understanding test using the Quizizz application. This comprehension test is carried out to assess students' understanding of listening to the material. Quizizz is done classically so that students compete to get the highest score in class. Motivation for taking quizzes also makes students volunteer to always focus during discussions and presentations. The use of learning applications can make it easier for lecturers to implement gamification in class because, through this platform or application, points, scores, levels, and leader boards are calculated automatically by the system. Lecturers can strengthen the gamification effect by implementing reward and punishment rules if there are students who have low scores. In the case of the Learning Models & Strategies course, students who had low scores (could not answer the questions) received additional assignments, namely making a summary of the material in the form of an infographic.

## ► Gamification in Face-to-Face Learning that does not use learning applications

Gamification without using an application can be implemented simply, but still fulfills game elements so that its implementation will still be fun and increase student engagement. In the case that occurred at Universitas Negeri Makassar, especially in the Educational Technology study program, the practice of gamification in face-to-face learning patterns without using applications was carried out by applying narrative elements, points, and challenges. In the Message Design course, for example, the narrative presented to students is in the form of rules of the game that are mutually agreed upon. The rules of the game are made; for example, at the beginning of each lecture session, students must read the material at home before attending class, then there will be a quiz at the beginning of the lecture with 3 questions to be answered by 3 randomly selected students. An additional rule is that students who cannot answer the questions will be subject to additional assignments. This narrative was implemented as support for the flipped classroom learning model implemented in the Message Design class. Points are given to students who are able to answer questions and to those who provide opinions in class. Points are recorded manually and recapitulated as a value for student activity during lectures (contributing 20% of the final grade). Based on observations during lectures, students appear to be trying to learn so they can answer questions, and on the other hand, some students are pursuing activity points to get the maximum final score.



## Implications

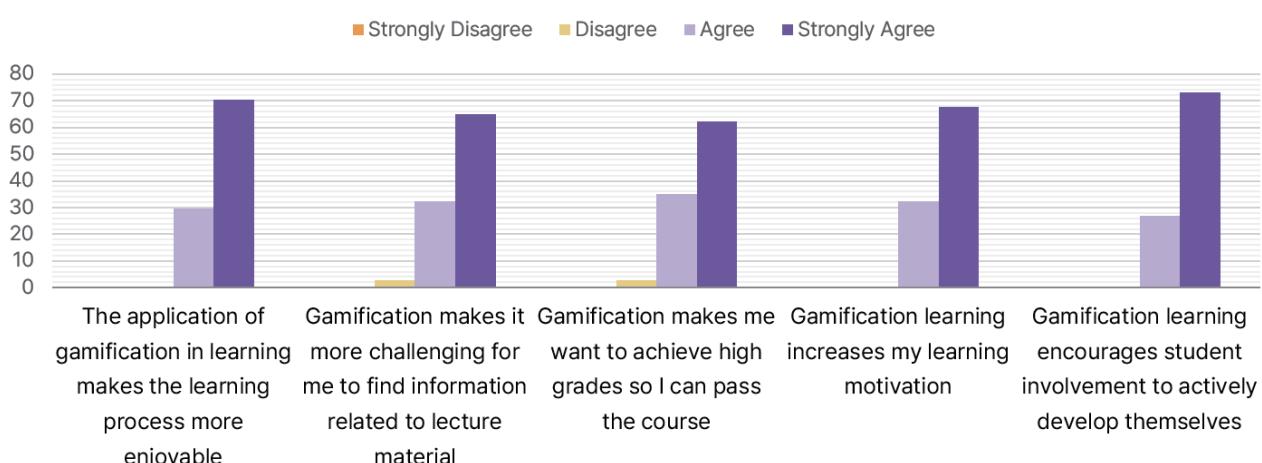
The implementation of blended learning at Universitas Negeri Makassar has implemented the principles of gamification in online and face-to-face learning. The lack of interaction in synchronous online learning causes students to be less involved in the learning process, but using the polling and immersive view features in Zoom Meetings can be an easy alternative to increase student involvement. On the other hand, the flexibility offered by asynchronous online learning often faces the problem of a lack of interest in accessing material on the Learning Management System platform. Therefore, LMS SYAM-OK Universitas Negeri Makassar uses the level feature to increase student enthusiasm. The use of gamification applications, such as Quizizz, Kahoot, and Padlet, is able to encourage student engagement through comprehension tests and automatic point systems in face-to-face learning sessions in class. The use of gamification in face-to-face learning can also be implemented without learning applications, for example, by using game narratives, giving activity points, and challenges to encourage active student participation.

## 02

### Student Response to the Implementation of Gamification

The application of gamification in learning needs to be evaluated as a continuous evaluation of quality learning. Gamification must be able to increase student engagement and provide a fun learning impact, which is a key indicator in its implementation. To evaluate the implementation of learning gamification at Universitas Negeri Makassar, especially in the Educational Technology study program, we distributed a survey in the form of a questionnaire. Students are asked to reflect on the learning process that has been going on for half a semester (8 meetings). The aspects assessed are related to assessing the usefulness of gamification (5 question items), engagement skills (2 items), and interaction involvement (4 items).

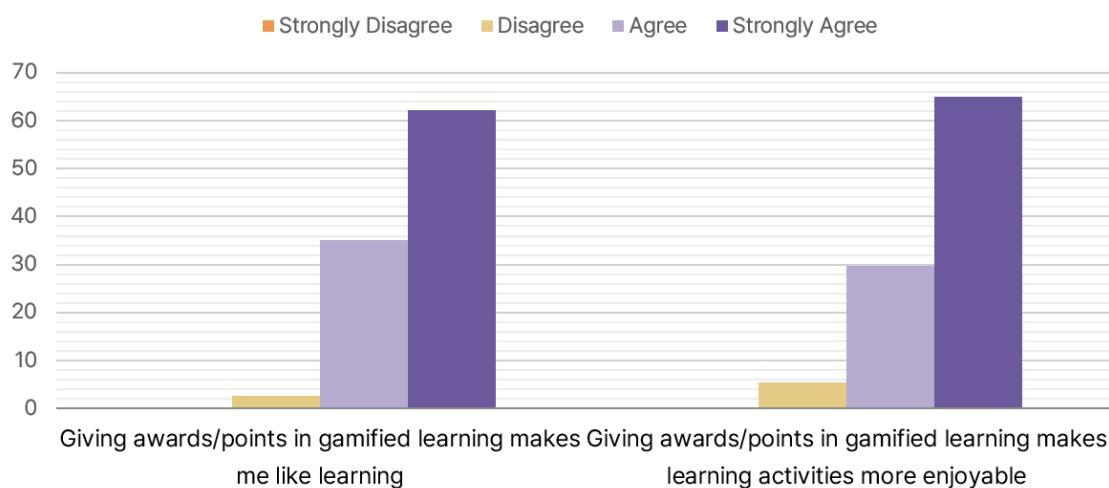
#### The Use of Gamification Responses



The results of the student response questionnaire show that the application of gamification in learning at Universitas Negeri Makassar, especially in the Educational Technology study program, has received positive responses from students. Most students think that gamification makes learning more enjoyable, with 70.3% of respondents strongly agreeing and 29.7% agreeing. This shows that gamification has created a more positive and entertaining learning experience for students. Apart from that, gamification also increases learning motivation, with 67.6% of students strongly agreeing and 32.4% agreeing. This shows that the use of game elements in learning has succeeded in stimulating student learning motivation. Apart from that, most students also feel that gamification encourages them to develop themselves in the learning process actively. As many as 73% strongly agree, and 27% agree that gamification encourages student involvement in developing themselves. This indicates that gamification not only makes learning more fun but also encourages students to take an active role in their learning process.

However, several things need to be considered. A number of students think that the use of gamification makes it more difficult to find information related to lecture material, with 64.9% strongly agreeing and 32.4% agreeing. This shows that several aspects need to be improved in the implementation of gamification, especially related to ease of access to learning materials. Despite this, most students still stated that they would like to achieve high grades in the subject because of gamification, with 62.2% strongly agreeing and 35.1% agreeing. Thus, gamification has motivated most students to try harder to achieve good academic performance.

## The Skill Engagement Responses

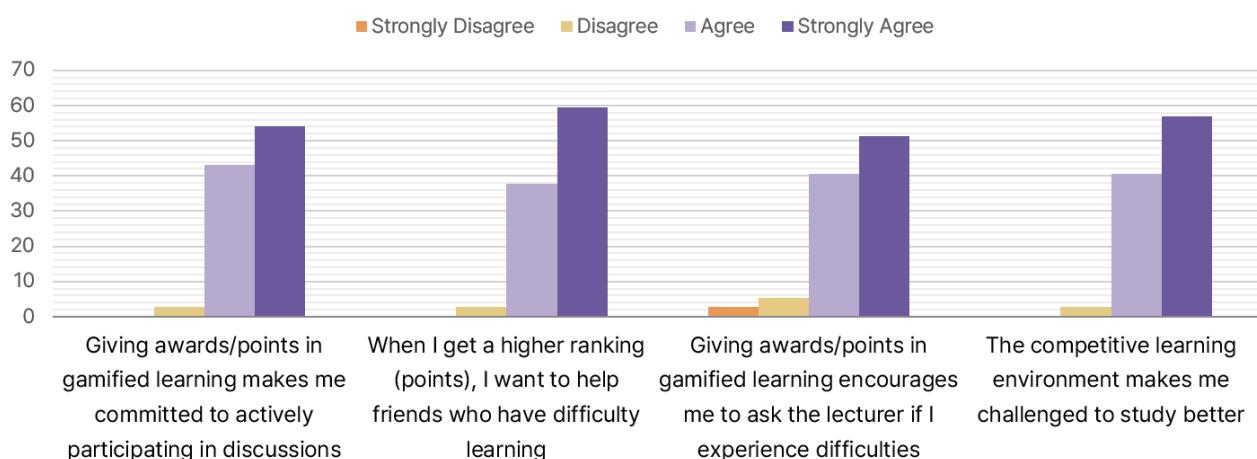


Further results from the student response questionnaire show that awards or giving points in gamified learning influences student involvement and commitment in the learning process. First, in the question of whether giving awards/points in gamified learning makes them more committed to actively participating in discussions, only 2.7% of students disagree. The majority, namely 54.1%, strongly agreed that rewards/points in gamification made them more committed to actively participating in discussions. This shows that the use of awards or points in gamification has succeeded in stimulating student involvement in discussion activities, which is an important aspect of learning.

Second, in the question of whether, when they get a higher ranking (points), they want to help friends who have learning difficulties, only 2.7% of students disagree. The majority, namely 59.5%, strongly agreed that giving awards or points in gamification encouraged them to help friends who faced learning difficulties. This shows that the point awarding system in gamification encourages cooperation and mutual care among students. Then, in the question of whether giving awards/points in gamified learning encourages them to ask the lecturer if they experience difficulties, only 2.7% strongly disagreed, and 5.4% disagreed. The majority, namely 51.4%, strongly agreed that the use of awards or points in gamification encouraged them to dare to ask the lecturer if they encountered difficulties. This illustrates that gamification elements encourage better communication between students and lecturers, as well as stimulate the initiative to seek help if necessary.

Finally, in the question of whether a competitive learning environment makes them feel challenged to study better, only 2.7% of students disagreed. The majority, 56.8%, strongly agreed that the competitive learning environment in gamification made them feel challenged to improve learning outcomes. This shows that competition in gamification can be a strong motivating factor for students to achieve better results. These results indicate that the use of gamification elements that involve giving awards or points in learning has succeeded in stimulating student engagement, cooperation, communication, and learning motivation, thereby encouraging more effective and meaningful learning.

## The Interaction Engagement Responses



Further results from the student response questionnaire show that awards or giving points in gamified learning influences student involvement and commitment in the learning process. First, in the question of whether giving awards/points in gamified learning makes them more committed to actively participating in discussions, only 2.7% of students disagree. The majority, namely 54.1%, strongly agreed that rewards/points in gamification made them more committed to actively participating in discussions. This shows that the use of awards or points in gamification has succeeded in stimulating student involvement in discussion activities, which is an important aspect of learning.

Finally, in the question of whether a competitive learning environment makes them feel challenged to study better, only 2.7% of students disagreed. The majority, 56.8%, strongly agreed that the competitive learning environment in gamification made them feel challenged to improve learning outcomes. This shows that competition in gamification can be a strong motivating factor for students to achieve better results. These results indicate that the use of gamification elements that involve giving awards or points in learning has succeeded in stimulating student engagement, cooperation, communication, and learning motivation, thereby encouraging more effective and meaningful learning.

## Implications

The application of gamification in learning at Universitas Negeri Makassar through a questionnaire survey shows students' positive responses to the use of gamification. The majority of students think that gamification makes learning more fun (70.3%) and increases learning motivation (67.6%). Gamification also encourages student engagement (73%) and increases enthusiasm for learning. The use of awards or points in gamification succeeded in creating a positive and entertaining learning experience (62.2% liked learning, and 64.9% felt learning was more fun). Apart from that, awards or points also encourage student commitment in discussions (54.1%), helping each other (59.5%), daring to ask lecturers (51.4%), and challenging themselves to learn better (56.8 %). Thus, the use of gamification in mixed learning at Universitas Negeri Makassar has succeeded in stimulating active participation, cooperation, communication, and student learning motivation, which overall has a positive impact on more effective and meaningful learning.

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# Student Independency Facing the Online Learning Era

Ms. Prima Vidya Asteria / UNESA



The online learning achievements of students are proportional to the level of teacher preparation in planning and developing online learning tools. However, the average results of online learning outcomes can be said to be still far away when compared to the average results of offline learning achievements. This can be used as a basis for measuring the independency level of students in implementing online learning models.

01

## STUDENT INDEPENDENCY FACING THE ONLINE LEARNING ERA

### ► Backgrounds

The use of Virtual Learning Unesa as an online learning platform at Universitas Negeri Surabaya is experiencing a peak performance period when facing the COVID-19 pandemic. The Unesa Information Technology Development Center (PPTI Unesa) has been working hard to complement, improve, and refine the features and performance of Virtual Learning Unesa to support the smooth implementation of the fully online learning system at Universitas Negeri Surabaya for more than three years from the beginning of 2020 until the end of the covid-19 pandemic in Indonesia. Support for the reliability of the Virtual Learning Unesa platform is followed by massive teacher efforts to prepare for online learning. The struggle of teachers in planning and making learning tools that are used in every online lecture meeting shows that preparation for online learning takes a long time period and cannot be implemented suddenly to guarantee the quality of online learning. This is what distinguishes the characteristics of online learning from the characteristics of offline learning. The application of learning scenarios that accommodate student characteristic preferences, followed by the preparation of teaching materials in the form of instructional videos, and ends with an evaluation of learning outcomes that are comprehensive (Tait et al., 2008), for example, making videos based on case analysis in the field, is a preparatory stage that the most teacher's time and mind consuming when using Virtual Learning Unesa.

Thorough preparation can guarantee the quality of the online learning implementation so that the students show enthusiasm and better learning outcomes than online lectures, which are structured based on offline scenarios. In these conditions, teachers tend to compile lesson plans similar to offline learning, then upload teaching materials in the form of presentation materials and reference books, and end with uploading evaluation tests as applied to offline learning, namely multiple choice and closed/open questions.

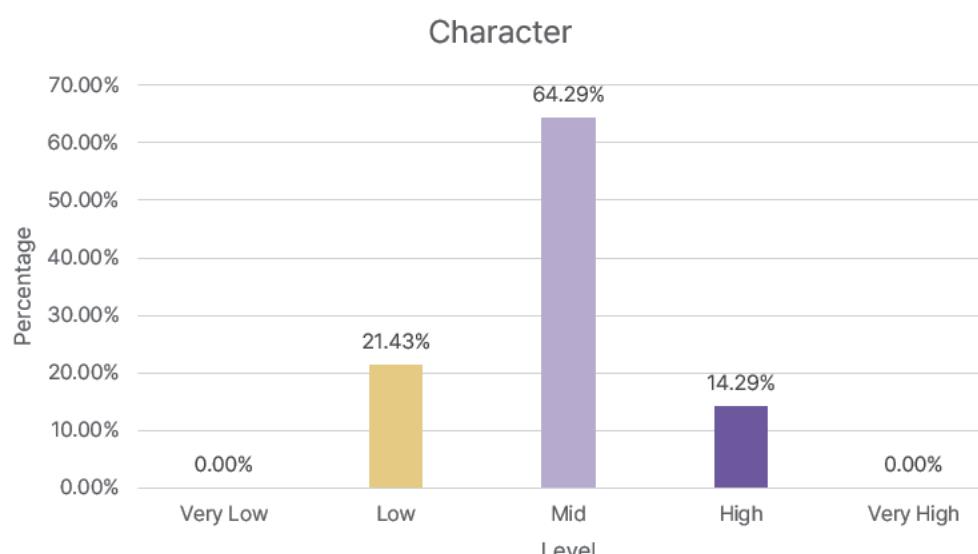
Even though the learning results achieved by students are proportional to the seriousness level of the teachers in preparing online courses, the average results of online learning achievements can be said to be still very far from the average results of offline learning achievements. The class average score obtained from the learning evaluation results shows that the average offline class score in previous years was higher than the average online class score during the COVID-19 pandemic. This can be used as a basis for measuring the independence level of students in responding to and dealing with online learning models.

## ► Main contents

The level of independency can be said to be proportional to the psychological age development of each individual (Affrida, 2017; Simatupang, Widayati, Adhe, & Shobah, 2021; Budiman, 2010; Ahsan, Kumboyono, & Faizah, 2018). Students at Universitas Negeri Surabaya are generally aged 18-25 years, during this period students have responsibility for their developmental period, including having responsibility for their lives to enter adulthood. Malcolm Knowles defines adults based on five premises, namely character, experience, learning readiness, learning orientation, and learning motivation (Belawati, 2019). Based on the explanation of these premises, a questionnaire was developed regarding the indicators for each premise which described the extent to which the level of suitability of the indicators corresponded to each individual. The following is an overview of the level of independency of Unesa students based on the premise of character, experience, learning readiness, learning orientation, and learning motivation.

### (1) Character

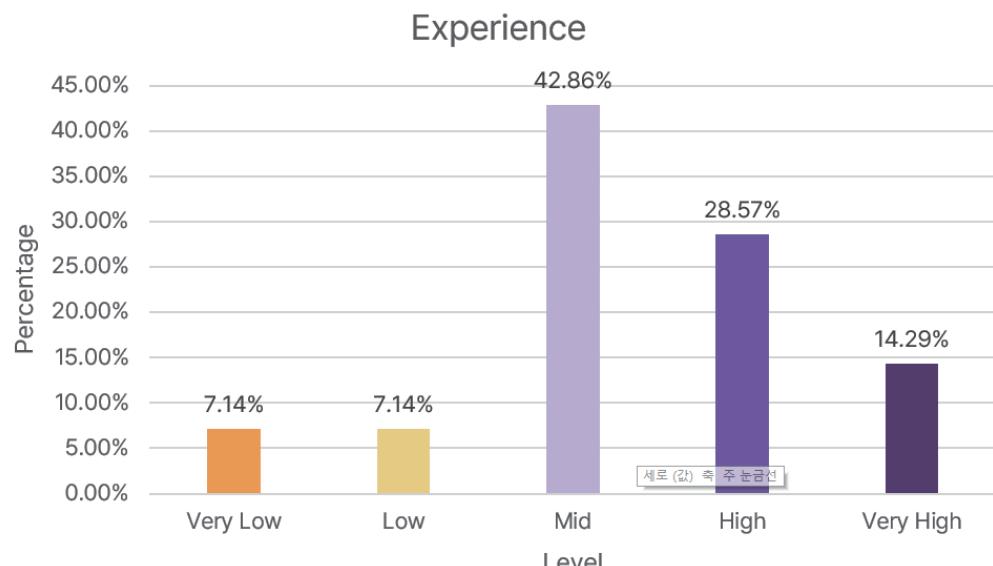
Adults who have a low level of dependence can direct themselves. Therefore, teachers only need to provide motivation and enthusiasm for studying diligently. In addition, other characteristics are making decisions on their own, assuming responsibility, and being aware of their duties and roles. The assumption is that an individual grows and develops toward maturity over time.



Graph of Self-Character Understanding Levels

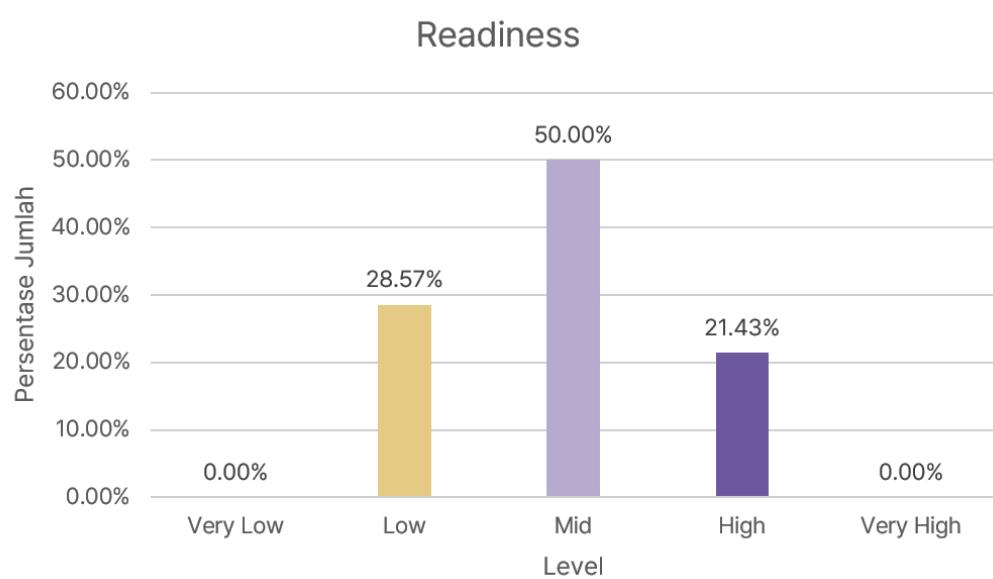
## (2) Experience

Experience is an observation that is a combination of sight, smell, hearing, and past experiences (Saparwati, 2012). Experience is something that has been experienced, lived, or felt, which is then stored in memory. Adults have had many life experiences that are rich sources of learning. Therefore, appropriate learning methods applied to adult learners are discussions, problem-solving, etc.



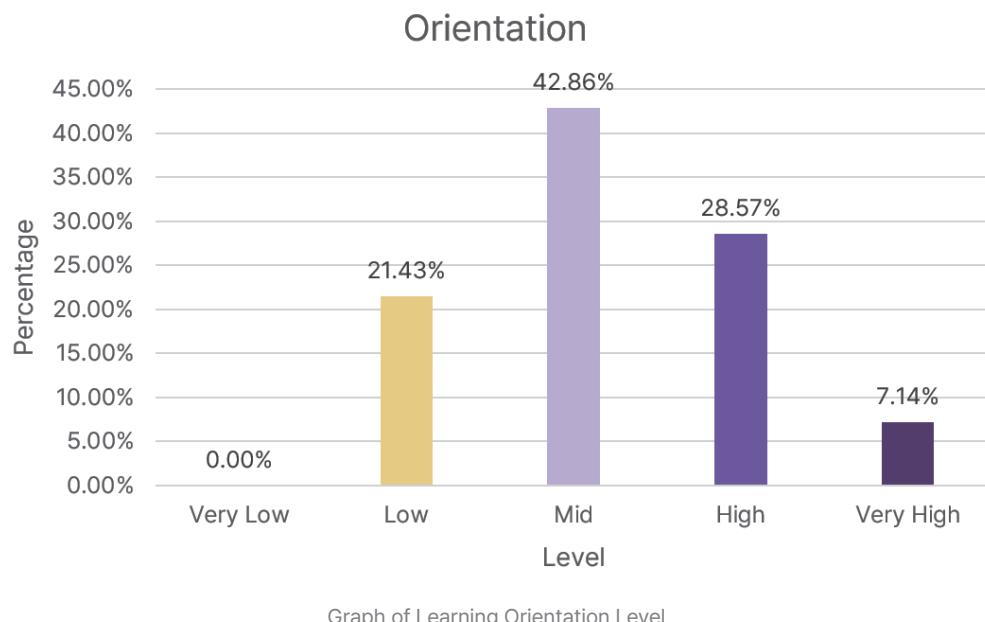
## (3) Learning Readiness

Readiness to learn is the initial condition of a learning activity that makes it ready to give responses/answers that exist in students in achieving certain teaching goals. Adults tend to learn for the completion of tasks and social roles. Adults learn according to their needs, so learning programs are organized according to real-life applications.



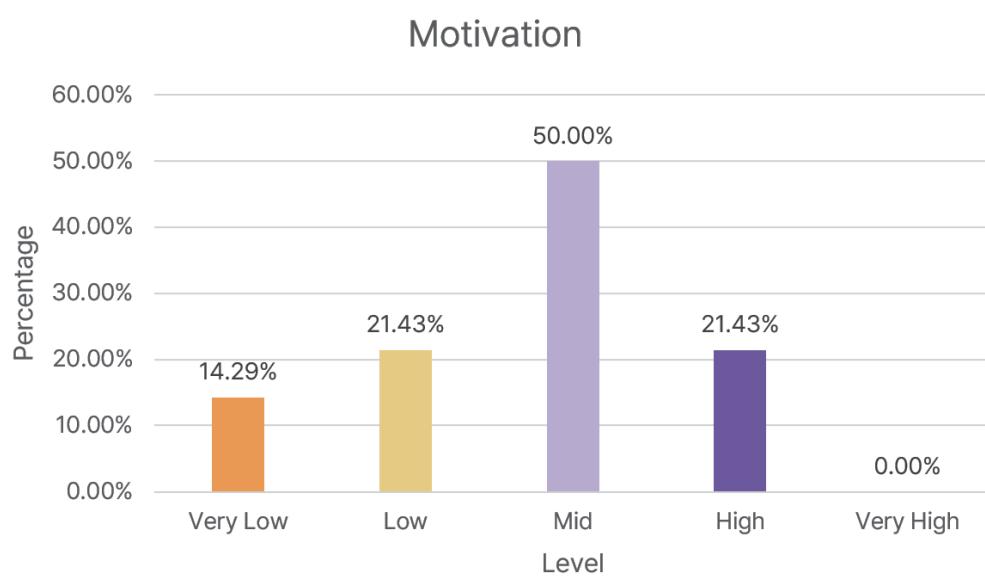
#### (4) Learning Orientation

Student orientation toward learning includes student goals, objectives, motives, and concerns concerning their studies (Vermunt & Donche, 2017). Adults want to be able to apply their learning results immediately to solve the problems they face. Learning activities must be developed according to and in harmony with the experiences of students because the orientation of adult learning is to solve the problems they face.



#### (5) Learning Motivation

Motivation to learn consists of internal and external incentives or driving forces that propel one to engage in educational activities.



Graph of Learning Motivation Levels

## ► Conclusions

Although the number of respondents is limited, based on the graph of student knowledge level on the premise of self-character, personal experience, learning readiness, learning orientation, and learning motivation, it can be concluded that Unesa students' independence level is mostly still at the intermediate level. This naturally occurs when students are still transitioning from the group of adolescent thinking to the level of adult thinking. This also shows that the learner's character with the nature of the online learning model is still not aligned because this model requires a high level of awareness and independence from students. Because the level of student independence is still at the middle level, it is only natural that learning outcomes from online courses are prone to not meeting the target.

## Implications

The independence level of Unesa students needs to be increased immediately to support the effectiveness and efficiency of implementing Virtual Learning Unesa. Efforts to increase the level of student independence can be measured through indicators of developing self-character, personal experience, learning readiness, learning orientation, and learning motivation.

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