# Integrating Virtual Class Unila with Online Multimedia Platforms in Case-Based and Project-Based Undergraduate ESL Classes

Fajar Riyantika[✉]

English Department, University of Lampung, Lampung, Indonesia
`fajar.riyantika@fkip.unila.ac.id`

**Abstract.** Implementing learning management system and multimedia platforms has been common practice in this era of online-learning. This study investigates the integration of Virtual Class Unila, an online learning management system, and some multimedia platforms such as YouTube, Quizziz, HTML5, and Google Meet in undergraduate English as a Second Language classes. The design of this study is classroom action research where the primary objective is to find out which multimedia platforms might be suitable to be integrated with Virtual Class Unila in order to improve students' learning experience. The participants of this study are 100 undergraduate students of Pre-Intermediate Reading Classes in English Education Department, Lampung University. The participants will be involved in several activities with multiple platforms applied in order to support the learning process. The participants then assessed and interviewed to see whether each platform is able to provide satisfying learning experience. This research is targeted to become reliable guidance for the development of Virtual Class Unila in the future.

**Keywords:** Virtual Class Unila · Online Multimedia Platforms · Case-based learning · Project-based learning

## 1    Introduction

Virtual Class Unila has been implemented excessively to optimize online learning and also blended learning within the last three years at the University of Lampung. The learning management system provides both synchronous and asynchronous modes for all courses. This study is focused on the implementation of Virtual Class Unila in supporting project-based and case-based courses in the English Education Department.

Virtual Class Unila is a learning management system that provides various features to support online learning, both in synchronous and asynchronous ways. Virtual Class Unila has been used actively during the critical pandemic phase within 2020 to beginning of 2022, and it is continued to be implemented to support blended and also hybrid learning after the pandemic.

During its implementation, Virtual Class Unila has been able to provide a versatile learning environment, especially when it comes to scheduling, providing interactive

modes to attach learning materials and flexibility of having both synchronous and asynchronous media simultaneously. However, during its practice, lecturers still face several challenges in optimizing the Virtual Class since there are some features that are not really suitable for different types of activities, or some media that force the lecturers to implement certain kinds of techniques such as applying case-based discussion in a discussion forum or implementing project-based for assignment column.

Thus, based on the early observation and also the finding of previous research regarding Virtual Class Unila, it was found that the vast options of features have not been used optimally [1]. Moreover, students engagement plays a very crucial role in optimizing the learning management system. Therefore, further analysis on Virtual Class Unila is expected to make the Learning Management System develop even better in the futurue.

This research is classroom action-based that the primary objective is to investigate and analyze the process of Virtual Class implementation by carrying out some problem-solving and product-making activities in Intermediate EFL Reading Course. Furthermore, the other objective is to identify the efficacy of multiple digital media in Virtual Class Unila during the project-based and case-based teaching and learning process by seeing students active participation and performance in each activity.

## 2 Literature Review

This part of the article highlights the urgency of learning management system in EFL teaching and learning context, different types of digital media in learning management system, case-based and project-based classes in EFL context, the concept of classroom action research (CAR), and findings from related previous studies.

Learning management system (LMS) in EFL online learning and blended learning. Dang and Robertson conducted research that focused on the impact of using LMS towards students independent learning ability in EFL classes [2]. It was found that students with vast knowledge of digital media and having proper digital literacy could learn more independently. Moreover, Dang and Robertson stated that students who were capable to operate the LMS easily were expected to assist those who find it difficult to use the LMS. In this case, the teacher should be able to make sure that the group of students work well together in optimizing the LMS, so they could perform better as a whole class.

Basal identifies learning management system (LMS) as a web-based software that scaffold and support the process of teaching and learning [3]. He added that LMS should be able to provide vast variations of media and platforms that can be accessed to obtain materials, exercises, and also assessment. Furthermore, Basal (2016) also mentioned that in language learning context, a special feature is needed to provide actual experience in language production during the learning process [4].

Bradley stated that learning management system (LMS) is an integrated platform that optimizes the process of online learning. Moreover, LMS should also be able to provide asynchronous activities such as group chat discussion, assignments, and also asynchronous quizzes.

Assapari mentioned some advantages and weaknesses of learning management system (LMS). LMS is used mostly for online learning situation and it allows learners to

access multiple media, and unlimited sources of learning. Moreover, its versatility and ease of access allow students to learn anywhere. Despite the values, LMS also has some drawbacks such as the dominance of asynchronous process, and also its technical issues when connection is disrupted.

A.  *Variations of Multimedia*

Amine, Benachaiba, and Guemide conducted a case study on a graduate TEFL classroom. It was found that the use of various types of multimedia in English classes at the master's level was able to motivate students and have a positive impact on their learning outcomes. Gilakjani examines the role of various types of multimedia as a means of learning English. He found that teachers play a vital role in creating authentic sources of teaching materials by utilizing various types of multimedia in order to create a natural and effective English learning atmosphere.

Mardiana conducted a qualitative survey-based study related to the use of various types of digital media. The survey involved intern English teachers and high school students. It was found that English teachers and students had identical positive perceptions regarding the use of various types of media in the English learning process and both groups agreed that various types of media provided a more authentic and contextual English learning resource. Marzban conducted research related to the use of multimedia annotations in the process of learning to read comprehensively in English classes [5]. A comprehensive reading ability test was conducted to assess students' abilities and identify the impact of using multimedia annotations in learning to read comprehensively. It was found that the use of multimedia annotations significantly improved reading comprehension skills. This shows that there is a positive impact after the use of multimedia in the learning process.

Raja, Setiyadi and Riyantika in a correlation study involving high school students in orphanages found that there was a relationship between perceptions of the use of various types of online multimedia and comprehensive reading performance in English [6]. It was found that students' perceptions of reading materials in various online media affected students' comprehensive reading ability. Students with positive perceptions were able to score high in the comprehensive reading test, while students with negative perceptions obtained unsatisfactory scores in the comprehensive reading test.

B.  *Classroom Action Research (CAR)*

Qi (2007) suggests that classroom action research (CAR) is a research and teaching process that enables effective reflection and innovation processes to occur [7]. CAR is believed to be able to improve the ability of teachers to manage classes and teach effectively. Talandis Jr and Stout conducted a classroom action research on English speaking proficiency at the university level [8]. In the process, various actions are carried out such as providing reinforcement using the students' first language, giving pragmatic instructions, and strengthening in the form of regular exercises. All of these actions are intended to help students get a better learning experience better. The results of the study by Talandis Jr and Stout showed that there was an increase in speech ability after being given the treatment and action as mentioned above, for one year.

Hung, Chen and Samuelson applied peer assessment to elementary level students in an English class in their classroom action research [9]. It was found that the students who were assessed for their speaking ability found it helpful. They proved that peer assessment (PA) received a positive response from both the teacher's and student's point of view.

### C.  *Previous Research*

Tumskiy with his research entitled The Use of Learning Management Systems in the Teaching of English to High-Level Learners at Tertiary Level identifies the use of LMS in the context of learning English at the tertiary level. It was found that the integration between various media, teaching techniques, pedagogical theory and LMS successfully made the blended learning process run better [10]. Tumskiy's research is relevant to this research because it is in the context of the simultaneous use of various types of media and LMS. Tumskiy's research also identified the use of various types of media combined with LMS in learning English as a foreign language.

Further research by Riyantika, Kadaryanto and Nisa with the title University students' perception of online learning: A case study of Virtual Class learning management system in the University of Lampung. They conducted a survey related to the use of Virtual Class as a learning management system used by 272 students at Unila. They found that the majority of students, or more than 70% of all respondents who filled out the questionnaire stated that Virtual Class was very helpful in the online learning process. Moreover, responses from students indicate that the use of Unila's Virtual Class which is integrated with other digital media can accommodate most of the lecture process, especially in non-practical fields.

Research by Riyantika, Kadaryanto and Nisa is relevant to this research because it makes the Unila Virtual Class as the main variable. Research by Riyantika, Kadaryanto, and Nisa also involved students in the Unila FKIP environment as respondents. Therefore, the results of this study, which are the results of observations, tests, and surveys during the teaching and learning process, can complement the findings related to positive perceptions that have been found by Riyantika, Kadaryanto and Nisa.

## 3   Methodology

This type of research is classroom action research. Rust (2009) states that classroom action research (CAR) is able to accommodate the research process and teaching practice with the facilities and media available for practitioners such as teachers and lecturers.

Kothari (2004) states that action-based research or action research aims to find a solution to a problem directly. In the context of this research, the problem to be solved is the less optimal use of Virtual Class and various types of media in case-based and project-based lectures [11].

This research focuses on the data obtained from the observation rubric, student project results, and student responses to the questionnaire. There are four stages of action with a total of 15 meetings for one semester and three reflection processes in class involving students of the English Education Study Program, FKIP Unila.

- Cycle 1

  a. Meeting 1: Observation and distribution of questionnaires related to needs analysis. Explanations related to case-based and problem-based through interactive video media and synchronous processes via Zoom.
  b. Meeting 2: Ask students to look for case examples related to the lecture theme in case-solving-based courses and project creation through a variety of media.
  c. Assigning students to make a short (synchronous) presentation containing a simple analysis of the examples that have been found.
  d. Meeting 3: Discuss and solve problems asynchronously through the Virtual Class discussion forum which is equipped with thematic videos related to the topic of discussion.
  e. Meeting 4: Involving students in interactive H5P-based activities based on problem solving in virtual classes, and interactive quizzes through Quizziz. Conduct a comparative analysis of the two types of interactive media.
  f. Meeting five: Reflection and providing feedback on the learning process for 4 meetings.

- Cycle 2

  a. Meeting 6: Using the media that has been agreed upon after the reflection process to start a new discussion based on case-based and project-based.
  b. Meeting 7: Asking students to start the process of designing creations by continuously optimizing the use of interactive media.
  c. Meeting 8: Implementation of project-based Mid-Semester Evaluation and case solving through Unila's LMS Virtual Class.
  d. Meeting 9: Using video conferencing applications other than Zoom and Google Meet, then asking students to provide feedback on the process that has been carried out for 9 meetings.

- Cycle 3

  a. Meeting 10: Determine the various types of media that will be used for the next phase, and continue to discuss projects that are being made by students through synchronous and asynchronous media.
  b. Meeting 11: The use of media combinations is in accordance with the agreement in the previous phase.
  c. Meeting 12: Conduct blended consultation sessions with students while still using Virtual Class as the main medium in learning.

- Cycle 4

  a. Meeting 13: Perform peer-feedback process on projects/cases being worked on/solved using Unila Virtual Class.

    b. Meeting 14: Integrating the YouTube, Instagram, Medium, Blogspot, PBI Study Program Websites and other social media platforms with Unila's Virtual Class for the collection and publication of written and video creations.

    c. Meeting 15: Final stage evaluation to get student responses and perceptions for one semester. Post-action questionnaire survey Performance assessment.

### A. *Population and Sample*

This research conducted at FKIP, University of Lampung. The participants involved are 80 students of the English Education Study Program who join to Pre-Intermediate Reading class in the even semester of 2022.

### B. *Research Instrument*

This study uses three types of instruments, namely: (1) an observation rubric to assess the efficacy of the integration of various media and features in the Unila Virtual Class LMS in case-based and project-based lecture processes (2) project-based performance assessment and case solving to assess participants' learning achievements after the class action process is carried out; (3) Open-ended questionnaire for the post-action evaluation. As for the performance assessment, the assessment is carried out using an assessment rubric managed by the rater or appraiser. The results of these three instruments will be triangulated and then described and concluded in qualitative and quantitative forms.

### C. *Data Analysis*

The data were analyzed and processed in the following steps.

- Questionnaire responses are grouped based on positive and negative responses. The items are open-ended.
- The results of the performance assessment are corrected, then assessed to see the achievements of the students.
- Notes in the observation rubric are then analyzed and then matched with responses to the questionnaire and test results.

## 4   Result and Discussion

The actions through 16 meetings in the English Education Department batch 2021 classes have resulted in several findings. The results are divided into four cycles with reflective sessions synchronously at each end of a cycle. The cycles were following the 16 meetings, based on a whole semester underwent by the students. The process of learning involves the integration of case-based and project-based within a full semester. All activities during this classroom action research involve Virtual Class Unila as the primary teaching and learning platform, along with Zoom, YouTube, and Medium which are integrated and used both in online, and also offline situations.

A.  *Cycle One*

In the first quarter, the focus of the study was to engage students in solving problems within different types of case-based reading materials. This phase was dominated by individual tasks. During this phase, students showed surprising ideas and unique perspectives in delivering their ideas. For instance, in a synchronous discussion forum under the short story entitled Lamb of the Slaughter by Roald Dahl, there were some students stating their assumptions regarding the antagonist's mental state and the possible complicated problems faced by the protagonist of the story.

Another example that proves students' adept critical thinking is their further reaction to the short story (Lamb of the Slaughter) which was submitted as the first problem-solving assignment. Most of the students, not less than 40 out of 90, were able to point out some specific details such as the antagonist's unusual behavior after she killed the protagonist, the protagonist's past that triggered the antagonist to murder him, and also some supporting characters who were suspicious. All of the students are also able to express their personal opinion about the story. At least half of the class assumes that the story is quite thrilling, and a little bit disturbing.

At the reflective session, the students agreed that the reading materials were intriguing yet confusing. Moreover, there was no issue with the learning management system.

B.  *Cycle Two*

The second quarter, which was from meeting number 5 to meeting number 8, was still dominated by case-based materials with some hint of writing production in some assignments. Similar to the previous four meetings, during this phase, the activities were all individual tasks and assignments. In this part of the semester, the students were asked to do character analysis, analyze some 'based on true story' literature works, and finally produce an imaginary Harry Potter-esque scenario.

Quite significant development can be seen in students' way of delivering ideas. Their opinions got slightly more comprehensible, and most of them can critically highlight some important features of a character such as personality types, similar traits to real-life figures or other fictional characters, and their personal perspective which involved likes and dislikes of different fictional characters. Moreover, when the students were asked to analyze some 'based on true story' literature works, they managed to notice that such novels are not a hundred percent true stories. Such realization proves that the students pay close attention to small details within reading material.

One of the most intriguing processes of this classroom action research occurred in meeting number 8 when the students started discussing their possible diary-like content as an imaginary wizard in Hogwarts. The assignment required the students to read Fantastic Beast and Where to Find Them by J.K. Rowling, and then they had to produce a brief note of several imaginary beasts from the point of view of a wizard. This task combines both problems solving, and also production since the students need to analyze, and do role play to produce a comprehensive writing product. The productions of the students showed their impressive capability in comprehending reading material, and using it to enhance their writing product. There were 7 students who achieved the score of 85 to 90 out of 100 while most of the students achieved the range of 65 to 80.

The students found role-play activities interesting. They also felt satisfied that they could edit the document they have submitted in the LMS.

## C.  *Cycle Three*

Meeting 9 to meeting 12 provides more project-based tasks along with synchronous discussion and presentation. During this phase, the students were getting more familiar with the use of Virtual Class and its features. It can be seen from their consistent submissions and also active participation in every activity.

Some instances of students' production such as movie reviews and fan theories about some movies in the 9th meeting showed the consistent capability of the students to think critically, and creatively. An intriguing discussion occurred in meeting 10 when the students shared their opinions regarding some implicit messages, easter eggs, and also unexplained details within the movies they watched. They could create interesting yet mind-blowing perspectives, as well as discover some untold answers to some mysteries within the movies.

Meeting 10 was conducted in hybrid way; half of the students attended online synchronous meeting while another half attended offline session in the classroom. It was started with extensive reading of a chapter of Sherlock Holmes. That was the first time the students encounter a classic popular thriller fiction. Some of them explicitly mentioned that the reading material was more challenging and more difficult to comprehend, while some others saw it as an exciting experience. They were given chance to discuss in a chat room before a synchronous video conference was initiated and the asynchronous discussion in the chat room ran really lively. The discussion sessions indicate students' growth in their critical thinking and analysis. At least half of the students in every class were actively sharing their thoughts and ideas [5].

Similar to the previous meeting, another hybrid session was conducted in the 11th meeting. This time, the students were given various popular English novels as they had their first small group discussion to create a project of summarizing one of the chapters within a novel their group had chosen. The summary was later presented in front of the class and the other groups were given chance to ask questions or stated their opinions. During this session, the online participants were given e-book versions of the novels and they did not find any significant hindrance in following the lesson, and participating in the discussion [12]. That was another proof that the use of learning management system along with multiple digital media is positively possible in the context of EFL learning as it has been stated in the previous studies.

The end of this third phase was focused on previewing the materials the students would have until the rest of the semester, and the next semester reading class. They were asked to read a chapter of a popular science-history book and listen to a speech related to the book comprehensively. During this session, the students were implicitly exposed to multiple disciplines of science and knowledge.

## D.  *Cycle Four*

This phase was focused on reviewing materials, giving some recalling assessments such as writing reviews on short movies and also reading for making an alternative ending

of a story. In this cycle, the students were involved in another set of group works when they had to review short movies and also decide on an ending of a story. They were given individual roles within the team so that they can still be assessed individually during the working process as well as in groups when it comes to the final result. Finally the students were given chance to give comments and suggestions to their classmates, allowing them to have peer evaluation. Therefore, it is proven that peer feedback can be applied in higher education as it has been tried out in earlier grade of education by Hung, Chen and Samuelson [13].

At the end of this cycle, the students were asked to write reflective writing in which they had to mention materials they find difficult and dislike. This process was intended to obtain an affective perspective from the students' side and support the researcher's observation during the process of learning. They were also asked to state their impression regarding the use of Virtual Class and how it helped them in both online and blended learning situations.

The overall process of the teaching and learning during this classroom action research has proven the findings of Kavlu (2015), Friska (2018) and Ngadiso, Sarosa, Asrori, Drajati and Handayani (2021) who stated some similar perspectives about positive impacts of project-based and case-based learning [10, 14, 15]. It has been proven that both approaches have helped students to learn more independently, and think more critically in the context of EFL reading.

More than that, the use of multiple genres of materials such as fiction and non-fiction reading which had been currated by the researcher has supported the finding of Mardiana (2020) and Gilakjani about the importance of varied interactive materials [15, 16].

Students' Perspective on Virtual Class, Its Features, and the Materials during the process of teaching and learning, observation and non-structured interviews were conducted to obtain perspectives of the students regarding the medi, and also given materials. It was found that all of the students agreed that the use of Virtual Class along with other media has been really helpful, not only in online learning situations but also in blended learning context.

Half of the population stated that they enjoyed having video lessons in Virtual Class, and also experienced no difficulties in participating in asynchronous discussion forum. The ease of submitting assignment documents was also the feature that was highlighted by the students. This finding is in line with Assapari who described the advantages and versatility of LMS [1].

When talking about learning materials, 90% of the student population did not really enjoy reading the Sherlock Holmes chapter, while more than 60% found the Wizard Role-Play writing task as interesting though some of the students did not really read or watch Harry Potter, making them struggle to find more reference. However, the fact that they perform well indicated that they did some research by watching or reading extensive materials apart from the provided reference.

## 5   Conclusion

The implementation of LMS in this digital era is inevitable as blended learning, and hybrid learning flourish rapidly. Therefore, this study has found that Virtual Class Unila

is a versatile learning management system that is able to provide optimum learning experiences both in a synchronous and asynchronous way. The implementation of Virtual Class Unila should be encouraged in the future, specifically in English as foreign language classes by incorporating more gamification techniques to promote more competitive atmosphere. In the future, experimental research on other skills of multiple languages could be done to obtain more decisive findings in the field of language teaching and learning.

# References

1. F. Riyantika, K. Nisa, and B. Kadaryanto, "University students' perception of online learning: A case study of Virtual Class learning management system in the University of Lampung," *Int. J. Educ. Stud. Soc. Sci.*, vol. 1, no. 3, pp. 149–155, 2021, doi: https://doi.org/10.53402/ijesss.v1i3.34.
2. M. M. Assapari, "the Challenges of Teaching Efl for Adult Learners: Online Learning During the Covid-19 Pandemic," *J. Ilm. Spectr.*, vol. 7, no. 1, pp. 011–028, 2021, doi: https://doi.org/10.47255/spectral.v7i1.64.
3. B. M. Amine, C. Benachaiba, and B. Guemide, "Using Multimedia to Motivate Students in EFL Classrooms: A Case Study of English Master ' s Students at," *Malaysian J. Distance Educ.*, vol. 14, no. June, pp. 63–81, 2012.
4. A. Basil, *Extending the Functionality of LMS for English Language Teaching*, 9th ed., no. September. Conference: ICT for Language Learning, 2017.
5. A. Marzban, "Investigating the role of multimedia annotations in efl reading comprehension," *Procedia - Soc. Behav. Sci.*, vol. 28, pp. 72–77, 2011, doi: https://doi.org/10.1016/j.sbspro.2011.11.015.
6. P. Raja, A. B. Setiyadi, and F. Riyantika, "the Correlation Between Perceptions on the Use of Online Digital Interactive Media and Reading Comprehension Ability," *Int. J. English Lang. Lit. Stud.*, vol. 10, no. 4, pp. 292–319, 2021, doi: https://doi.org/10.18488/journal.23.2021.104.292.319.
7. Q. I. Fang, "Classroom Research and Action Research: Principles and Practice in EFL Classroom," *US-China Foreign Lang.*, vol. 5, no. 1, pp. 38–43, 2007.
8. G. Talandis and M. Stout, "Getting EFL students to speak: An action research approach," *ELT J.*, vol. 69, no. 1, pp. 11–25, 2015, doi: https://doi.org/10.1093/elt/ccu037.
9. V. M. Bradley, "Learning Management System (LMS) Use with Online Instruction," *Int. J. Technol. Educ.*, vol. 4, no. 1, p. 68, 2020, doi: https://doi.org/10.46328/ijte.36.
10. A. KAVLU, "The Effect of Project–Based Learning on Undergraduate EFL Students' Reading Comprehension Ability," *J. Educ. Black Sea Reg.*, vol. 1, no. 1, pp. 39–44, 2016, doi: https://doi.org/10.31578/jebs.v1i1.8.
11. C. R. Kothari, *Research Methodology: Methods and Technique, 2nd*. New Delhi: New Age International (P) Ltd, Publishers.
12. S. Tumskiy, "the Use of Learning Management Systems in the Teaching of English To High-Level Learners At Tertiary Level," in *INTED2019 Proceedings*, 2019, vol. 1, pp. 3530–3535. doi: https://doi.org/10.21125/inted.2019.0915.
13. S. A. Raza, W. Qazi, and B. Umer, "Examining the impact of case-based learning on student engagement, learning motivation and learning performance among university students," *J. Appl. Res. High. Educ.*, vol. 12, no. 3, pp. 517–533, 2020, doi: https://doi.org/10.1108/JARHE-05-2019-0105.

14. Y. Friska, "IMPROVING STUDENTS' READING COMPREHENSION OF NARRATIVE TEXT THROUGH PROJECT BASED LEARNING Yuliana Friska Universitas Pamulang," *Univ. Pamulang*, vol. 3, no. 1, pp. 47–58, 2018.

15. N. Ngadiso, T. Sarosa, M. Asrori, N. A. Drajati, and A. Handayani, "Project-based Learning (PBL) in EFL learning: Lesson from Indonesia," *AL-ISHLAH J. Pendidik.*, vol. 13, no. 2, pp. 1114–1122, 2021, doi: https://doi.org/10.35445/alishlah.v13i2.558.

16. W. Mardiana, "Utilizing Digital Media in Efl Classroom: Pre-Service Teachers Teaching Practice Experience," *J. English Teaching, Appl. Linguist. Lit.*, vol. 3, no. 1, p. 33, 2020, doi: https://doi.org/10.20527/jetall.v3i1.7814.