The implementation of flipped classroom on classroom management course

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Abstract. In Flipped classroom, the sequence of the learning process is inverted. The activity that is traditionally conducted in classroom is done at home; while the activity that is traditionally completed at home, is done in class. This qualitative research aimed at introducing how the implementation of flipped classroom into an English language class affected the learning experience of pre-service English teachers based on Self-Determination Theory framework. In this study, a flipped classroom was implemented on Classroom Management course. A total of 28 prospective English teachers learned the material from e-book and articles, watched videos, and read their friends' power point presentation online at home. In-class time was devoted to the presentation of the group in charge, question and answer session, discussion, role play, problem-solving, or project accomplishment. The participants of the study were given open-ended questions to gain insight into their responses of flipped classroom implementation. Through content analysis, finding showed that there were four themes emerged which were in line with Self-Determination Theory framework. Pre-service English teachers responded positively to the three basic psychological needs namely competence, autonomy and relatedness during the flipped classroom. The implication to English language teaching is also discussed in this study.

1. Introduction
Technology is important in education to improve the learning quality, satisfaction, and maintain student engagement [1] [2]. Technology will be more meaningful when teachers plan, design, and apply technology for teaching and learning process [3]. The teacher is not “sage on stage” [4], not the focus of instruction either. Teacher’s role has switched to “guide on the side” [5]. The teacher acts as a facilitator to guide, motivate, and give feedback to students’ active learning [6]. The teacher should design intentional learning experiences in order to engage students outside of the classroom, while the students should explore the material outside the classroom and have a self-directed manner, attempt to gain foundational information before the class, and in the classroom, actively apply the knowledge [2].

Student-centre learning should be applied to meet the need of 21st century learning by providing quality and rich learning experience for the students, such as group work, active learning, problem-based learning, project work, etc. [7]. Institutions of higher education are challenged to improve student learning [8] and leave traditional lecture. University students are expected to be active learners and critical thinkers [9]. They should have enough preparation and use the class time to explore, solve the problem, and assimilate the concept [10].
Flipped classroom which was designed by Aaron Sams and Jonathan Bergmann in 2007, is a learning method that can foster student-centred learning and autonomy, more flexible and effective [9] [4]. In addition, flipped classroom can help them spend their time to learn the theories outside the classroom, and personalize learning in the classroom [10]. In traditional learning, the theory is learned in the classroom, and the homework is done at home. However, in flipped classroom, the theory is learned at home through online activity or video, and then the discussion, inquiry, project work, role play, student’s presentation are conducted in the classroom. In the classroom activity, there is complex cognitive interchange between the teacher and the students [11]. Instead of passively note-taking and listening to long lectures in the classroom, students participate more actively in the in-class activity [12].

There are three basic cognitive needs among university students in education major, which can be fulfilled by the use of flipped classroom [13]. Those three belong to Self-Determination Theory (SDT) framework. The three basic psychological needs are competence, autonomy and relatedness [14] [15]. When the students have the feeling of ability to complete a task, volition to perform a task, and have support from a group, they will feel effective and motivated.

In this study, a flipped model was implemented in English as Foreign Language classroom on Classroom Management course. This course was taken by second year pre-service teachers in English Language Education Program in a state university of education. The purpose of this course is to prepare pre-service teachers to be able to manage the classroom well in the way that students derive maximum benefit from their learning. Pre-service teachers should be ready mentally and physically [16] and should possess the skills to create a safe and enjoyable learning that promote academic achievement [17]. A Very well-planned lesson can fail if the teacher poorly manages the class [18]. A teacher does not have to flip every lesson [11]. In this study, on Classroom Management course, the flipped classroom was implemented in the first half semester. In the first eight meetings, with Schoology (Learning Management System) as a learning tool, the students learned about seven topics, namely effective classroom management, the role of the teacher, students grouping, discipline, seating arrangement, classroom atmosphere, and feedback. The learning outcomes prioritize the mastery of those concepts. An understanding of classroom management theories is essential. After the mid test, the students would have simulation session, in which they play a role as teachers and teach their peers. It is expected that in simulation session, they can apply the theories that have been learned and can manage the classroom well. The simulation is conducted without flipping the learning.

2. Method

For flipped classroom is a new learning model on Classroom Management Course, it is important to examine the implementation of flipped classroom; how the students do pre-class preparation and in-class learning, and their responses during the learning process. In this qualitative research, the particular aspects were focused on how the implementation of flipped classroom affected the learning experience of pre-service English teachers based on Self-Determination Theory framework. The open-ended questions provided the pre-service teachers’ responses of flipped classroom on Classroom Management course related to their need of competence, autonomy and relatedness.

This study was carried out to prospective English teachers in 2019-2020 academic year in an English Language Education Study Program of a state university of education in Bali, Indonesia. A total of 28 pre-service teachers enrolled in the study and responded to the open-ended questions at the eighth meeting. To determine common themes, the responses were coded and classified by two researchers from English language education department. The researchers worked independently, and the agreement of multiple classifiers became the validity of the common themes. This procedure was considered as triangulation. The research process is presented as follows.

2.1 Planning

1. Aim: Focused on how the implementation of flipped classroom affected the learning experience of pre-service English teachers based on Self-Determination Theory framework.
2. Sample and unit of analysis: 28 pre-service teachers without differentiation of data collected from women or men or collected from different times.

3. The choice of data collection method: Open-ended questionnaire

4. The choice of analysis method: Content analysis, in which data were presented in words and themes. The analysis was manifest analysis, described what the informant said, stayed very close to the text, used the word themselves, and described the visible and obvious data in the text.

5. Practical implication: All participants had been informed orally about the study before being included, they could withdraw anytime and they were guaranteed confidentiality.

2.2 Data Collection

Non-verbal interaction between informants and researchers shaped the data collected. Open-ended questions were answered by the participants.

2.3 Data Analysis

1. Decontextualisation

   The researchers familiarized themselves with the data before breaking down the data into smaller meaning units. Each unit was labelled with a code. The codes were generalized by deductive reasoning design. The coding list related to Self-Determination Theory framework was created before starting the analysis process.

2. Recontextualisation

   The meaning units were checked whether the contents had been covered in relation to the aim. The unmarked text was excluded, and the extended meaning units were condensed.

3. Categorisation

   Themes and categories were identified.

4. Compilation

   The researchers considered the data collected from a neutral perspective and considered their objectivity in manifest analysis. The researchers used participants’ word and remained aware of the need to refer back to the original text.

2.4 Presenting the Result

The data and the result of analysis are presented comprehensively.

3. Result and Discussion

3.1 The Implementation of Flipped Classroom

Classroom Management course was conducted in 16 meetings. The first meeting was for introduction and assigning the groups. Each group should do out-of-class collaboration about a certain topic and prepare power point. Each group would do group presentation in one of the next seven meetings. In those seven meetings, the students were taught by flipped classroom using Schoology Learning Management System. The pre-class learning activities were done outside the classroom before the schedule, and the in-class activities were done inside the classroom. In pre-class learning activities, the students learned the videos, learned power point and read certain links. Meanwhile, in In-class learning activities, students did peer presentation, discussion, had question and answer session, and did role play.

There were seven topics that had been discussed. The first one was Effective Classroom Management, which was about the strategies to make the classroom effective for both task oriented and people oriented. The second one was The Role of Teacher, in which a teacher at the same time could be a manager, guide, assessor, and the others. The third one was Students Grouping, which was about how to assign and what to teach in whole class, in pair, small group, and individual. The fourth one was Discipline, about the standard, rule, and procedure the teacher should make to keep the
students discipline. The fifth one was seating arrangement, which was about the position of the students and teacher in the classroom. The sixth one was classroom atmosphere, which was about classroom climate to promote enjoyable and meaningful learning. The seventh one was Feedback, which was about the reward and punishment in learning.

After having seven topics and theories, the students were expected to have competence in applying those theories in a simulation. Each student would play role as a teacher and the others as students. The teacher should teach and manage the class well. The flipped classroom activity should be able to prepare the students for their simulation.

3.2. Students’ Experience during Flipped Classroom

This study focused on how the implementation of flipped classroom affected the learning experience of pre-service English teachers based on Self-Determination Theory framework. Literature indicates that students have positive perception on flipped classroom [19]. Based on the result of the open-ended questions, all the students in this study showed positive responses toward their flipped classroom experience in Classroom Management course. The themes were derived from thematic analysis by identifying any important or interesting pattern in the data [20]. There were four themes emerged in this study as follows.

3.3. Flipped Classroom Enhanced Students’ Competence

3.3.1. Students Understood the Course Content Prior to Class. Flipped classroom enhanced students’ perceive competence prior to class. Pre-learning activities such as watching videos, learning article, e-book, and link helped them understand the material.

“Those articles, videos, e-book, and links that were provided in Schoology helped students to understand about the material that would be discussed in the meeting, so we would be more prepared in the learning process”

The power point presentations made by students in group helped the other students gasp the points.

“If I felt tired to read the articles or e-book, I could open the power point which already had the important point from the article or the e-book”

The material was chosen carefully to keep students’ engagement and help them understand better by themselves.

“…many material with simple explanation, so that made me easier to understand what the material about”

3.3.2. Students Learned Actively. Flipped classroom created an atmosphere of learning. In-class activities were conducted through whole class discussion, small group discussion, demonstration and role play. The students might have additional information from lecturer and peers in active and fun ways.

“In-class activity that I like the most is discussion. It is because in the discussion, we can share what we have already learned and we can share our point of view on the topic so it will enrich our knowledge.”

“The activity in the class that I like so much is the small group discussion. In my opinion, we can share the problem with the material and learn together. I think this activity will make me know about the information not only from the teacher but also I can gain the information from my friends.”

“I like role play activities when we role as a student or teacher and do the example of classroom activities because it is really fun and make easier to understand the material”

3.3.3. Students were Prepared for Next Session. The flipped classroom was only implemented in seven meetings. The next session was simulation session, in which the students used the theories they
had and played a role as a teacher. The experience in flipped classroom prepared them for the simulation session.
“\textquotesingle\textquotesingle;This flipped learning can provide us an overview of what we should do in the simulation session next meetings.\textquotesingle\textquotesingle;”
“We got the basic things that we should do to be a teacher and how to conduct the good classroom management because we do a little demonstration in each topic of the course after the presentation. So we have an insight of what to do in the next simulation session.\textquotesingle\textquotesingle;”

3.3.4. 	extit{Students Obtained Immediate Feedback.} This theme indicated that many students believed that the role of the instructor in flipped classroom was very important to improve their learning through feedback.
“Lecturer usually gives the feedback at the end of the class or after presentation and it was very helpful for me to understand more about the material.”
“The discussion confirm whether my understanding about the material is correct or not”

3.4 	extit{Flipped Classroom Enhanced Students’ Autonomy}

3.4.1. 	extit{Students Came to Class Prepared.} Flipped classroom encouraged students to study intensively outside the class at their pace by reading the material, power point, articles, and e-book in Schoology, watching the videos, taking a note, and preparing questions.

“Before I entered the Classroom Management course in class, I prepared the material in the schoology app. Firstly, I read the material that would be learnt in the classroom. Then, if I got to be the presenter to the presentation, I learnt my material and prepared the presentation”
“I also prepared my phone to have 100% battery to be ready for online activities in flipped learning.”

3.4.2. 	extit{Students Learned in Different Learning Style.} Flipped classroom enabled students to learn in different learning style. Some students were auditory learners who enjoyed listening and watching videos. Some students learned best from discussion, demonstration, examples, and small group.
“I like watching videos. Because from watching videos I can understand the material. The videos explain the topic in interesting way, with picture, clear sound, and we can repeat it again if we cannot understand.”
“But sometimes, I had to learn from the link because sometimes I hardly understand the material through the video”
“I like discussion section because I am the type of student who easily understands the material from a discussion or conversation.”
“... I do like a demonstration about the material/topic that has been discuss in the class”
“I like small grouping activity because I feel enjoy and free to discuss about the material.”

3.4.3. 	extit{Students Can Learn at Their Pace.} Students take control for their learning. They know when to proceed, and when to repeat to meet the standard.
“I can also read the material whenever and wherever I want it and it is really fun for me.
“I like watching video because I understand better when I watch the material through a video. The videos had interesting pictures or animation, colorful, so I am interested in watching the videos. They make me easily understand the material without reading and I can repeat if the video was too fast.”

3.5 	extit{Flipped Classroom Enhanced Students’ Collaboration}

3.5.1 	extit{Students Engaged in Classroom Activities.} Presentation and demonstration of in-class activity increased students’ engagement in learning and inspired other students to do something for their future.
“I really like the class activity when we learn about the teaching strategy and we practice the ‘20 Classroom Management Strategies and Techniques’. At that time, students have their own strategies to make an effective classroom management. By having different strategies, we can explore our knowledge and creativity to implement the strategy in our class. It is really fun because I can know about my friend’s idea which can be my inspiration to make something similar in my class in the future.”

3.5.2. Students’ Intensive Interaction is Enhanced. Flipped classroom could establish students’ intensive interaction whether in the class or outside the class times. Students’ perceived that interaction and communication in the flipped classroom was really important. Before asking or discussing difficult topic with peer or lecturer, students worked on their own. Interaction with peer on certain topic, having positive and supportive social network, promoted students’ well-being on social aspect.

“It just makes me easier to comprehend the material if we do cooperation by sharing the information that we understand the most and share thoughts about it.”

“… especially about material that I didn’t really understand, I will ask the friends who get the material in presentation and they explain me about that.”

“The first thing that I can do is try to understand the material by my own, but if it does not work, I will make a question about it, so in the next meeting I can ask my friend or even my lecturer about the topic that I do not really understand”

“The same case will happen if my friends don’t understand material and I will explain them.”

3.6 Constraint and Effort in Flipped Classroom

3.6.1 The Problem Emerged in Learning. The problem encountered by students in flipped classroom management course that could affect their competence and autonomy was mostly about internet connection. Other minor problems were about tired eye, learning style, and communication problem.

“The problem that I had with online activities in flipped learning was bad internet connection. Sometimes I could not access Schoology because my connection was not good and I had to wait for a moment until it could be accessible, e-book material could not be downloaded.

“I don’t really enjoy reading an e-book because my eyes get more tired quickly when I read on a computer or cellphone.”

“I am the kind of person who can learn by watching and listening so I feel better if I can learn in flipped learning by videos. I do not understand presentation.”

“Sometimes when I am confused about the instructions and the material, I cannot ask the teacher freely because it perhaps annoys the teacher for the instructions or the material already clear.”

3.6.2 How the Problem was Solved. The students had tried to solve the problems by considering autonomy and collaboration aspects to make the flipped classroom run effectively and fulfil their need of competence.

“Using a good internet provider should be the best solution to this problem or maybe I just have to go to the lobby in the campus and use WIFI to access online activities in Schoology so that I will get a good speed of internet in order to access it without any obstacle.”

“I borrow my friend’s cellphone, or watch that learning videos with my friends”

“I go to my friend’s house for finding Wi-Fi or ask my friends tethering hotspot.”

“To avoid tired eyes, I do not read an e-book for a long time, and try to learn and understand them bit by bit”

“When I get confused, I read the material repeatedly and try to find some videos that are relevant to the material”
4. Discussion
In this study, flipped classroom helps students comprehend the concept before the class, motivate them to explore more in classroom activities, learn from the feedback, and prepare them to be ready for simulation session. Flipped classroom give satisfaction on students’ psychology need in terms of competence, autonomy, and relatedness [21] as what proposed by Self-Determination Theory. These findings were consistent with the result of previous studies of flipped classroom. In short period of time, flipped classroom can generate the learning gain [22], improve their understanding in course material [23] with interactive lecture [24], and give a good foundation for the next learning activity [25][26].

The videos and links have big impact to students’ learning. Videos are felt more helpful than reading [22]. The materials were selected carefully. Selection of topics, time optimization of content, and carefully planned classroom discussion are crucial to successful implementation [23]. The preparation and the immediate feedback concerning misconception or gaps in students’ knowledge [8] made the students find their learning style [27]. With different learning style, students participated in the classroom [24] and were actively challenged to apply the knowledge in classroom session [28].

Flipped classroom as a new teaching method promotes more students’ involvement than traditional method [23]. In a flipped classroom, students can participate and engage more successfully in their class and can attain better learning [12], and promotes collaborative learning with their peer before and during the scheduled class [27].

5. Conclusion
The implementation of flipped classroom on Classroom Management course affected students’ experience. There were four themes emerged related to pre-service teachers’ learning experience based on Self-Determination Theory framework. Flipped Classroom enhanced students’ competence, autonomy, and collaboration, and the constraint and effort in using it. In the learning experience using flipped classroom, the students fulfilled their basic psychology needs. The problems appeared during the proses, but they knew how to deal with them. As this study only identified the students’ experiences during the implementation of flipped classroom, a further study is recommended to examine students’ learning effectiveness and learning outcome. This study also encourages other teachers and lectures to implement flipped classroom in their teaching practice since it can enhance students’ need of competence, autonomy and relatedness.

References
[1] E. Wahyuni, S. Muttaqin, “Teaching English with an Internet-Based of Google Docs to Improve Student’s Critical Thinking,” Soc Sci, no. 134, pp. 808–12, 2018.
[2] R. Brewer, S. Movahedazarhouligh, “Successful stories and conflicts: A literature review on the effectiveness of flipped learning in higher education,” J Comput Assist Learn, no. 344, pp. 409–16, 2018.
[3] A. Basal, “The implementation of a flipped classroom in foreign language teaching.” Turkish Online J Distance Educ, no. 164, pp. 28–37, 2015.
[4] J. Nouri, “The flipped classroom: for active, effective and increased learning – especially for low achievers,” Int J Educ Technol High Educ, no. 131, 2016, Available from: http://dx.doi.org/10.1186/s41239-016-0032-z
[5] A. King, “From Sage Guideon the Stage to on the Side,” Coll Teach, no. 411, pp. 33–5, 1993, Available from: http://www.jstor.org/stable/27558571%5Cnhttp://www.jstor.org/page/info/about/policies/terms.jsp%5Cnhttp://www.jstor.org/stable/pdfplus/27558571.pdf?acceptTC=true%5Cnpapers2: //publication/uuid/40384BD9-71E8-4DCC-90BD-F70C93A931C8
[6] Z. Zainuddin, S. H. Halili, “Flipped classroom research and trends from different fields of study,” Int Rev Res Open Distance Learn, no. 173, pp. 313–40, 2016.
[7] R. Plešec Gasparič, “Jonathan Bergmann and Aaron Sams Flipped Learning: Gateway to Student Engagement,” C-E-P-S Journal, vol. 7, pp. 173–6, 2017.

[8] J. O’Flaherty, C. Phillips, “The use of flipped classrooms in higher education: A scoping review,” Internet High Educ, no. 25, pp. 85–95, 2015, Available from: http://dx.doi.org/10.1016/j.iheduc.2015.02.002

[9] L. Tomas, N. Evans (Snowy), T. Doyle and K. Skamp, “Are first year students ready for a flipped classroom? A case for a flipped learning continuum,” Int J Educ Technol High Educ, no. 161, 2019

[10] K. Wang, C. Zhu, “MOOC-based flipped learning in higher education: students’ participation, experience and learning performance,” Int J Educ Technol High Educ, no. 161. 2019

[11] J. Bergmann and S. Aaron, “The Flipped Classroom,” CSE, no. 173, 2014. Available from: http://bit.ly/teachersmatter.

[12] J. S. Jeong, F. Cañada-Cañada, and D. González-Gómez, “The study of flipped-classroom for pre-service science teachers,” Educ Sci, no. 84, pp. 1–11, 2018.

[13] A. S. Ha, J. O’Reilly, J. Y. Y Ng, and J. H Zhang, 2019, “Evaluating the flipped classroom approach in Asian higher education: Perspectives from students and teachers,” Cogent Educ, no. 61, pp. 1–12, 2019. Available from: https://doi.org/10.1080/2331186X.2019.1638147

[14] J. Bosco Bharathy, “Importance of Computer Assisted Teaching & Learning Methods for Chemistry,” Sci J Educ, no. 34, p. 1, 2015.

[15] F. Martela and T. J. J. Rickki, “Autonomy, competence, relatedness, and beneficence: A multicultural comparison of the four pathways to meaningful work,” Front Psychol, no. 9, pp. 1–14, 2018.

[16] R. Sueb, “Pre-service Teachers’ Classroom Management in Secondary School: Managing for Success in Teaching and Learning,” Proceedia - Soc Behav Sci, no. 90, pp. 670–6, 2013, Available from: http://dx.doi.org/10.1016/j.sbspro.2013.07.139

[17] E. Shamina and N. S. Mumthas, “Classroom Management: Implications for Teacher Preparation Programmes,” IOSR J Humanit Soc Sci, no. 231, pp. 41–4, 2018.

[18] P. Korkut, “Classroom Management in Pre-service Teachers’ Teaching Practice Demo Lessons: A Comparison to Actual Lessons by In-service English Teachers,” J Educ Train Stud, no. 54, p. 1, 2017.

[19] A. A. Almodaires, G. M Alayyar, T. O. Almsaud, and F. M. Almutairi, “The Effectiveness of Flipped Learning: A Quasi-Experimental Study of the Perceptions of Kuwaiti Pre-Service Teachers,” Int. Educ. Studies, no. 121, pp. 10–23, 2019.

[20] M. Maguire and B. Delahunt, “Doing a Thematic Analysis: A Practical, Step-by-Step Guide for Learning and Teaching Scholars,” All Irel J Teachng Learn High Educ, no. 83, 3351–14, 2017.

[21] L. Legault, “Self-Determination Theory In: Zeigler-Hill V, Shackelford T, editors,” Encyclopedia of Personality and Individual Differences Springe: Cham, 2017.

[22] E. Setren, K. Greenberg, O. Moore, and M. Yankovich, “Effects of the Flipped Classroom: Evidence from a Randomized Initiat Sch Eff Inequal Initiat Discuss Pap #201907, pp. 1–35, 2019.

[23] R. Durai and M. Mohanraj, “Flipped classroom as an effective educational tool in teaching surgery for undergraduate students,” Saudi Surg J, no. 7, pp. 47–50, 2019, Available from: http://www.saudisurgi.org/temp/SaudiSurgJ6231-3545225_095052.pdf

[24] N. S. Goedhart, N. Blignaut-van Westrhenen, C. Moser, and M. B. M. Zweelhorst, “The flipped classroom: supporting a diverse group of students in their learning,” Learn Environ Res, no. 222, pp. 297–310, 2019. Available from: https://doi.org/10.1007/s10984-019-09281-2

[25] X. Hu, H. Zhang, Y. Song, C. Wu, Q. Yang, and Z. Shi, et al, “Implementation of flipped classroom combined with problem-based learning: an approach to promote learning about hyperthyroidism in the endocrinology internship,” BMC Med Educ, no. 191, pp. 1–8, 2019.
[26] E. Han, K. C. Klein, “Pre-class learning methods for flipped classrooms,” Am J Pharm Educ, no. 831, pp. 40–9, 2019.

[27] P. A. Zaka, W. H. Fox, and P. D. Docherty, “Student perspectives of independent and collaborative learning in a flipped foundational engineering course,” Australas J Educ Technol, no. 355, pp. 79–94, 2018.

[28] R. A. M. Bouwmeester, R. A. M. de Kleijn, I. E. T. van den Berg, O. T. J. ten Cate, H. V. M. van Rijen, H. E Westerveld, “Flipping the medical classroom: Effect on workload, interactivity, motivation and retention of knowledge,” Comput Educ, no. 139, pp. 118–28, 2019. Available from: https://doi.org/10.1016/j.compedu.2019.05.002