NURSING STUDENT'S SATISFACTION WITH THREE METHODS OF THREE JUMPS CBL, FLIPPED CLASSROOM AND TRADITIONAL TEACHING

Juniar ernawaty[a*]
[a] Faculty of nursing, Universitas Riau, Pekanbaru, Indonesia.

***Corresponding author:** Juniar.ernawaty@lecturer.unri.ac.id

Abstract

Modern learning processes in health education require updated teaching methods that can facilitate student involvement, activeness, and also involving technological innovation. CBL is a popular modern teaching method and is now widely adopted in nursing education. This study proposes the use of 3 jumps CBL instead of 7 jumps CBL. Flipped classroom (FC) method are also a modern teaching method that offer a flipped learning as an alternative teaching method. In this method, the traditional method will be reversed so that students are required to first explore information before class meeting. This method often accompanied by technology. The teaching method that is considered less updated and needs to be supplemented is the traditional method. This study aims to compare student satisfaction with these three teaching methods implemented. This study used a quasi-experimental design with a post-test only. Students were given three different topics in pediatric nursing courses using three different teaching methods. The population of this study was all students in class A 2023 who took the course of nursing care for healthy and acutely ill children in the second semester of 2025. The instrument used was an online questionnaire. There were 170 students that filled out the questionnaire to compare student satisfaction toward the 3 teaching methods applied. The data were analyzed using a statistical software. This study showed no difference in satisfaction among the three teaching methods implemented. This study recommends further study to investigate the method of teaching that can motivate and satisfy the nursing student. Deep investigation about its efficacy, strategy and obstacle along the use of technology is needed to stimulate a better learning environment.

Keyword: 3 jumps CBL; Flipped classroom; Traditional teaching; Student's satisfaction,

INTRODUCTION

Modern learning processes in health education require updated teaching methods that facilitate student engagement and active participation, incorporating technological innovations, and shifting from traditional lecture-based learning, where possible. In general, modern teaching processes must prioritize innovative strategies and provide enjoyable learning experiences and foster a strong sense of curiosity. In today's education world, there is a considerable attention paid to innovative teaching methods, which could be considered for adoption in health education, particularly in nursing. Nursing educators must find the best method of teaching to fulfil course learning objectives.

There are many modern teachings available in health education that can be applied in nursing education, such as *Case-Based Learning* (CBL), *Flipped Classroom* (FC), *Problem-Based Learning* (PBL) and *Project-Based Learning* (PjBL) ([1], [2], [3], [4], [5], [6]. These are various learning innovations that emerged from the high demands of healthcare services,

pushing the educational sector to continuously doing innovation. High qualified graduates that able to adapt the challenges of their workplaces is on demand.

Case-Based Learning (CBL) is a popular and modern teaching method widely adopted in nursing education. CBL is an active learning process in which students learn concepts by solving cases or problems under the supervision of a facilitator [1]. This teaching method helps students identify what they already know and then elaborate it through self-study and sharing to bridge the gap between prior knowledge and new knowledge. Other modern teaching methods, such as the flipped classroom (FC), are also starting to be adopted in health education, but not yet widely used in the nursing education, particularly in Indonesia. This method is more commonly used in developed countries.

The FC method is a well-known modern teaching method that utilizes technology and adopts active learning strategies. This method helps develop 21st-century skills by maximizing face-to-face time. In this method, traditional methods are reversed, requiring students to first gather information before class meetings, for example through power point presentations, videos, and discussion forums. This will impact in more time for discussion than in traditional classroom sessions [3]. The FC method develops a culture of self-study and critical thinking skill. This innovative teaching method is often accompanied by digital technology, where flipped learning offers an alternative learning method that can complement the weaknesses of traditional teaching method [7].

One teaching method that is considered less up-to-date and need an evaluation is the traditional method, also known as the face-to-face method or dictated method. This method has been existed for such a long time and is still frequently used today. This method involves delivering material in class, lecturers are the center of learning, where the lecturer is the primary resource in the learning process. Serrouukh and Serroukh stated that the traditional lecture method puts the lecturer as the person that responsible for the learning process, it is economically efficient because it can be used for larger group and provides budget efficiency. However, this teaching method is no longer considered capable of meeting the expectations of current nursing education and must be combined with various other modern teaching approaches [8], such as those used in this study, namely CBL and FC. This kind of blended teaching strategy is something that need to be formulated for stimulating and engaging learning environment both for students and lecturers in the future.

Previous research conducted by researchers was about the PBL teaching method. Ernawaty and Astried found that the use of PBL accompanied by the use of information communication technology (ICT) was effective in improving exam scores [9]. In addition, Ernawaty & Astried indicates that the satisfaction score for the PBL teaching method accompanied by ICT provides the highest score compared to the traditional lecture method [10].

Related research shows that the CBL method is more effective than the didactic method, also known as lectures, in improving and changing students' attitudes toward the application of microbiology material. CBL helps students better understand microbiology material [4]. Similar research in pharmacology also found that CBL was more effective in terms of test scores than traditional lecture methods [11]. Research in nursing education has found that a combination of cooperative learning and CBL methods significantly improves spiritual care

competency [12]. In terms of satisfaction, Arab & Saeedi and Shohani et al. found that the use of CBL in nursing was significantly more satisfying than traditional methods [13], [14] .

Research related to the Flipped Classroom (FC) was conducted by Lestari found that students showed positive attitudes toward the FC method and reported benefits such as positive psychological status (increased self-confidence and motivation), increased interaction with other students and lecturers, engagement in the learning process, soft skills training, and better learning management. Although demotivation and lack of technological support were also found in this study to be obstacles in implementing FC, the results generally indicate a positive attitude from students toward this teaching method [2]. In terms of student satisfaction, Rehan et al. found high student satisfaction in their nursing education research that use Flipped Classroom which is integrated with blended learning [15]. Similar research results were also found by Gonzalez-Sanz et al. when it was implemented in nursing courses [16].

In their review of various disciplines, Zainudin and Halili found that FC impacts achievement, motivation, engagement, and interaction. However, they also identified challenges such as poor video quality and untrained instructors that can hinder the FC method's effectiveness [17]. Mulyati and Sofia stated that formal training to improve tutors' skills in the learning methods used can determine the success of learning [18].

Many empirical studies have shown that the use of traditional learning methods alone is no longer considered effective in improving learning comprehension in various learning topics. Teaching methods should be combined with various modern forms of learning that can facilitate students to learn independently, improve their understanding of both cognitive and clinical skills, and if it is possible accompanied by the use of technology so that the delivery of material is not limited to only given during class meetings. Therefore, the research problem is formulated as "Is there any satisfaction differences with the CBL, FC and traditional method in pediatric nursing course?".

This research is important as evidence-based in selecting effective modern teaching methods to be implemented, according to conditions and circumstances, and at the same time providing a pleasant learning experience for the students.

RESEARCH METHOD

This study used a quasi-experimental design with a post-test only. Students were given three different topics in the nursing care for healthy and acutely ill children course, each delivered using three different teaching methods. Satisfaction evaluation was conducted at the end using an online survey. The population of this study was all students in Class A 2023 who were taking the nursing care for healthy and acutely ill children course in the even semester of the 2024/2025 academic year. This class consisted of three classes and formed as one experimental group without a control group with three different treatments. Inclusion criteria were: students who were taking the nursing care for healthy and acutely ill children course in the even semester of 2025, students were not currently sick or on leave from school and were willing to be research respondents. A total of 170 students completed the online student satisfaction questionnaire.

The measuring instrument used was a modification of satisfaction questionnaire with learning methods previously used by researchers (Ching, Deakin University as cited by Ernawaty and Novayelinda) [19] . This measuring instrument was validated using a content validity index by three experts of pediatric nursing lecturers. The Content Validity Index (CVI) of this questionnaire is 1. The 8 items are relevant. The CVI is considered valid if it is similar or more than 0,80 [20]. Ethical approval was obtained from the ethical review board for medicine and health research at the Universitas Riau with number 025/UN19.5.1.1.8/UEPKK/2025.

The three topics for children are pediatric nursing care for diarrhea, typhoid, and burns. These topics were delivered using 3 different teaching methods, namely modified three jumps CBL, FC, and the traditional method. For the three jumps CBL method, a week before the CBL scenario is given and the three learning stages are as follows: stage 1 is self-study, stage 2 is setting learning objectives, while stage 3 is sharing/exchange information. Meanwhile, in the FC method, a week before the class meeting, students will study independently learning through the LMS (learning management system) google classroom and supplied by videos, reading materials, learning objectives provided and several questions to be answered. During class meetings, the focus is no longer on teaching but more on questions, answers and discussions.

RESEARCH RESULTS

This study found that the mean satisfaction score for 3 jumps CBL was 29,60 that means average of scale in the level of 3,7 which being closer to a level point somewhat satisfied. This study also indicated that the mean satisfaction score for flipped classroom was 29,39 while traditional teaching was also 29,62 that imply the similar satisfaction average level whith that in 3 jumps CBL. Further detail can be seen in table 1.

This finding also showed that the satisfaction level in percentage was majority were at the low level of satisfaction. Majority of students revealed low satisfaction (56,5%) toward three jumps CBL. Similar to this, majority of students also indicated low satisfaction (54,1%) regarding flipped classroom implementation. It also showed that majority of students were low satisfaction toward traditional teaching (58,2%). Using non parametric friedmen test, the results of this study showed that there were no significant differences among satisfaction score of 3 jumps CBL, flipped classroom and traditional teaching method (p value 0,171). For further details, refer to tables 2 through 5.

Tabel 1. Mean distribution of the three-teaching method implemented

	3 jumps CBL	Flipped classroom	Traditional teaching
Mean	29,60	29,39	29,62
Median	32	31	32
Std Deviation	8,509	7,933	8,168
Variance	72,407	62,937	66,711
Minimum	8	8	8
Maximum	40	40	40

Source: Primary Data

Table 2. Description of satisfaction of three jumps CBL

	Frequency	Percent
Low satisfaction	96	56,5
High satisfaction	74	43,5

Table 3. Description of satisfaction of flipped classroom

	Frequency	Percent
Low satisfaction	92	54,1
High satisfaction	78	45,9

Table 4. Description of satisfaction of traditional teaching method

	Frequency	Percent
Low satisfaction	99	58,2
High satisfaction	71	41,8

Table 5. Comparison satisfaction among three teaching methods implemented (Friedman test)

Friedman test	
Sig	0,171

DISCUSSION

The results of this study revealed the similar satisfaction average level amongst three teaching methods of three jumps CBL, FC and traditional teaching method which being closer to a level point somewhat satisfied. This finding is not aligned with a study conducted by Shohani that found the level of student's satisfaction of CBL was high. Similar to this, Yang et al. also showed that majority of student were satisfied with blended learning, with CBL was the most preferred. In term of flipped classroom [14], Sáiz-Manzanares et al. reported in their study medium-high satisfaction while using FC in virtual labs, even though the students emphasize the need for intelligent assistants to use digital material [21]. This finding comes in line with that it was reflected by Ng and Budak et al. that majority of student were satisfied to the FC approach compared to traditional teaching method [22], [23]. Rehan et al. showed consistent finding that FL method satisfaction score reflects high satisfaction [15].

In researcher assumption, the reason to this closer to lower-level satisfaction finding is because both FC and CBL have similar character. These teaching methods are student-centered oriented, that seek student engagement throughout the learning process. In contrast to these methods, in traditional method, the work is given to the lecturer only, while CBL and flipped it is more to students oriented. Low level of satisfaction toward traditional teaching method maybe because either the difficulty of the topic given or the capability of the students itself that need to be evaluated. The successful of the teaching method is not merely because of the teaching method itself but also the skill of the teacher, sources and the capacity of the students.

According to Barranquero-Herbosa et al., flipped classroom is more time consuming for the students compared to traditional approach that means excessive pre class work and the need for technology approach [24]. Several empirical studies showed low satisfaction toward traditional teaching method compare to CBL and flipped classroom [13], [23], [25]

The results of this study also showed no significant satisfaction differences amongst 3 jumps CBL, flipped classroom and traditional teaching method. This study is not aligned with a systematic review study by Varma et al. that indicate CBL method significantly improves student satisfaction compare to traditional teaching [26]. Shohani et al. also found that CBL can increase student satisfaction and self-confidence [27]. Similar to this, Arab and Saeedi indicated that there is a significant increase in satisfaction with the CBL to traditional method [13]. In terms of the FC method, this finding was not in the same line with Kaliyape rumal et al. that found there was a significant increase in satisfaction with the FC method compared to the traditional method and suggests a combination of both [28]. Barranquero-Herbosa et al. showed consistent finding in their systematic review that FC can enhance satisfaction of the students compare to traditional teaching [24]. Sáiz-Manzanares et al. also reported significant differences in satisfaction score in the level medium-high satisfaction while using FC in virtual labs [21].

Sultana et al. in their review found that CBL can bring benefit to enhance critical thinking, strengthen learning outcomes, improve problem-solving skills, bridge connections to the real-world practice, and facilitate collaborative and active learning. CBL can improve the transition to clinical practice and enhance clinical reasoning skills [29].

One thing that can increase the effectiveness of CBL in health education is the use of real-world case studies from various institutions. Preparation for the process can influence success. CBL can be unsuccessful if preparation is inadequate due to time and resource constraints [29]. CBL is a pedagogical learning method that utilizes challenging, real-world scenarios. CBL can address the weaknesses of traditional method, which, while efficient and easy to use, lacks comprehensive knowledge and doesn't connect to real-world situations. Case studies in CBL typically depict patient problems, thus enhancing students' abilities and skills in handling nursing cases. CBL provides students with opportunities for practical learning [29]. Compared to traditional methods which are characterized by passive learning, passive presence in class, and often superficial in terms of mastery of the learning material [28].

The benefits of implementing the CBL method include providing a more realistic understanding of the material and improving skills in both assessment and diagnosis. Furthermore, the CBL method can enhance independent learning, student engagement and stimulating deep learning [29]. Shohani et al. found in his research that the CBL method is closer to real practice with better understanding than that traditional method [27]. Similar to this type of teaching method, FC employs an active learning approach where students are actively engaging to the learning process. The difference is this type of teaching not a case-based but could commonly supported by technology [3]. Lestari emphasizes that to be successful conducting this type of teaching method, adequate of technological support such as internet access and good quality of videos become important. Since FC require students to learning independently prior to the class meeting, therefore teaching instruction is also a critical aspect in this method [2]. In addition to this, untrained or unqualified instructor can influence the successful of FC implementation in preparing the videos, aspect such as animation, cartoon and music can be used to attract student attention [17]. Therefore, the difference between CBL and FC is the case-based given, and videos or learning materials, instruction that usually given and the use of online platform.

CONCLUTIONS

This study indicated that there were no significant differences in student satisfaction toward three methods of three jumps CBL, FC and traditional teaching. This study recommends further study to investigate the method of teaching that can motivate and satisfy the nursing student. Deep investigation about its efficacy, strategy and obstacle along the use of technology is needed to stimulate a better learning environment. The results of this study also can be the basis for the importance of active learning methods such as CBL and flipped classroom and the formulation of effective and appropriate blended learning to be applied in different nursing course or topic.

REFERENCE

[1] S. Das, A. Das, P. Rai, and N. Kumar, "Case-based learning: Modern teaching tool meant for present curriculum: A behavioral analysis from faculties' perspective," *J Educ Health Promot*, vol. 10, pp. 1–7, 2021, doi: 10.4103/jehp.jehp_1265_20.

[2] I. Lestari, "Flipped classroom in indonesian higher education: A mixed-method study on students' ettitudes and experiences," *Studies in English Language and Education*, vol. 8, no. 1, pp. 243–257, 2020, doi: 10.24815/siele.v8i1.17636.

[3] B. Aydin and V. Demirer, "Are flipped classrooms less stressful and more successful? An experimental study on college students," *International Journal of Educational Technology in Higher Education*, vol. 19, no. 55, pp. 1–17, 2022, doi: 10.1186/s41239-022-00360-8.

[4] A. Ganguly, S. Das, A. Ghosh, and N. Sarkar, "Case-Based Learning and its application as a teaching tool for medical graduates in competency-based medical education in clinical microbiology," *Asian Pac. J. Health Sci*, vol. 9, no. 1, pp. 230–231, 2022, doi: 10.21276/apjhs.2022.9.1.53.

[5] C. Dewi and S. Rahayu, "Implementation of case-based learning in science education: A systematic review," *Journal of Turkish Science Education*, vol. 20, no. 4, pp. 729–749, 2023, doi: 10.36681/tused.2023.041.

[6] M. Taiebine, W. Al Hassani, and C. Nejjari, "The experience of project-based learning among first-year health sciences students in Morocco," *Cureus*, vol. 16, no. 10, 2024, doi: 10.7759/cureus.72649.

[7] I. Paramita, E. Setyono, N. Yuliantini, and N. Suciani, "The effectiveness of flipped classroom in improving students' learning uutcomes," *Jurnal Sosial dan Humaniora*, vol. 13, no. 2, pp. 193–203, 2023, doi: 10.31940/soshum.v13i2.193-203.

[8] S. Serroukh, "Traditional teaching method Vs modern teaching method traditional teaching method Vs modern teaching method the traditional way of teaching and learning," *Serroukh, I*, pp. 1–8, 2022, Accessed: Oct. 25, 2025. [Online]. Available: https://www.researchgate.net/publication/362162911_Traditional_teaching_method_Vs_Modern_teaching_method_Traditional_teaching_method_Vs_Modern_teaching_method_The_traditional_way_of_teaching_and_learning

[9] J. Ernawaty and Astried, "An evaluation of problem-based Learning supported by Information and communication technology: A pilot study," *Health Science Journal*, vol. 13, no. 4, 2019, Accessed: Oct. 25, 2025. [Online]. Available: https://www.itmedicalteam.pl/abstract/an-evaluation-of-problembased-learning-supported-by-information-and-communication-technology-a-pilot-study-106116.html

[10] J. Ernawaty and Astried, "Learning Satisfaction toward PBL (Problem-Based Learning) and the use of ICT (Information communication technologies)," *Journal of health Medicine and nursing*, vol. 17, pp. 73–78, 2015, Accessed: Oct. 25, 2025. [Online]. Available: https://iiste.org/Journals/index.php/JHMN/article/view/25379/26002

[11] S. Kenchaiah and P. Krishna, "Comparative study of case based learning with traditional teaching method in pharmacology for second year MBBS students," *Int J Basic Clin Pharmacol*, vol. 5, no. 4, pp. 1210–1214, 2016, doi: 10.18203/2319-2003.ijbcp20162221.

[12] P. Aisyah, I. Dewi, S. Utomo, and N. Hashim, "Cooperative learning and case-based learning to improve spiritual care competency in nursing students," vol. 7, no. 2, 2022, doi: 10.24990/injec.v7i2.516.

[13] F. Arab and M. Saeedi, "The effect of the case-based learning approach on the level of satisfactions and learning of nursing students in Iran: A randomized controlled trial," *Heliyon*, vol. 10, 2024, doi: 10.1016/j.heliyon.2024.e35149.

[14] M. Shohani, M. Bastami, L. Gheshlaghi, A. Nasrollahi, and JANGAN DIPAKAI, "The effectiveness of CBL in teaching specialized courses to undergraduate nursing students," 2022.

[15] M. Rehan, L. Mui, R. Khan, N. Dawood, S. Khan, and N. Lakhani, "Undergraduate nursing students' satisfaction with blended learning using the flipped classroom approach in the infection prevention and control course," *Journal of health, wellness, and community Research*, vol. 3, no. 12, 2025, doi: 10.61919/9f4sc619.

[16] J. González-Sanz, A. Barajas, A. Sánchez, R. Contreras, M. Bellido, and E. Martínez, "Nursing students' perceptions of flipped classroom and continuous assessment in the nursing-management classroom," *Enfermeria*, vol. 11, no. 2, pp. 1–15, 2022, doi: 10.22235/ech.v11i2.2833.

[17] Z. Zainudin and S. Halili, "Flipped classroom research and trends from different fields of study," *International Review of Research in Open and Distributed Learning*, vol. 17, no. 3, pp. 313–340, 2016, doi: 10.19173/irrodl.v17i3.2274.

[18] 1 Mulyati and N. Sofia, "Motivasi, peran tutor dan kejenuhan pada mahasiswa keperawatan stikes kuningan dengan penerapan kurikulum berbasis kompetensi," *INJEC*, vol. 1, no. 1, pp. 1–6, 2016, doi: 10.24990/injec.v1i1.105.

[19] J. Ernawaty and R. Novayelinda, "Student-centered pedagogies: Perbedaan problem-based learning (PBL) murni, PBL modifikasi dan metode tradisional pada pembelajaran keperawatan anak," Pekanbaru, 2010.

[20] N. Hakim, M. Pairan, and M. Zakaria, "Step-by-step guide to calculating content validity index (CVI) for single constructs using excel," *International journal of research and innovation in social science*, vol. 9, no. 3, pp. 1717–1726, 2025, doi: 10.47772/IJRISS.

[21] M. Sáiz-Manzanares, C. Carrillo, M. Llamazares, S. Arribas, and D. Gómez, "Nursing students' perceived satisfaction with flipped learning experiences: A mixed-methods study," *Sustainability*, vol. 14, no. 16074, pp. 2–6, 2022, doi: 10.3390/su142316074.

[22] E. Ng, "Investigating the impact of the flipped classroom on nursing student's performance and satisfaction," *Teaching and learning in nursing*, vol. 19, no. 2, pp. 376–381, 2024, doi: 10.1016/j.teln.2024.01.001.

[23] V. Budak, H. Kılıç, and S. Cevheroğlu, "The impact of a flipped learning on nursing students' patient safety competencies and satisfaction with the education method: A randomized controlled trial," *Nurs Health Sci*, vol. 27, pp. 1–10, 2025, doi: 10.1111/nhs.70068.

[24] M. Barranquero-Herbosa, R. Abajas-Bustillo, and C. Ortego-Maté, "Effectiveness of flipped classroom in nursing education: A systematic review of systematic and integrative reviews," *Int J Nurs Stud*, vol. 135, pp. 1–10, 2022, doi: 10.1016/j.ijnurstu.2022.104327.

[25] Y. Yang, H. Chen, and H. Sun, "Nursing undergraduate students' experiences and perceptions of blended learning in pediatric nursing: A mixed methods study," *Sage open Nurs*, 2024, doi: 10.1177/23779608241274214.

[26] B. Varma *et al.*, "Effectiveness of case-based learning in comparison to alternate learning methods on learning competencies and student satisfaction among healthcare professional students: a systematic review," *J Educ Health Promot*, vol. 14, no. 76, 2025, doi: 10.4103/jehp.jehp_510_24.

[27] M. Shohani, M. Bastami, L. Gheshlaghi, and A. Nasrollahi, "Nursing student's satisfaction with two methods of CBL and lecture-based learning," *BMC Med Educ*, vol. 23, no. 48, pp. 1–5, 2023, doi: 10.1186/s12909-023-04028-3.

[28] R. Kaliyaperumal, S. Jeyapaul, K. Mohammed, A. Madani, and D. Mohammed, "The learning effects of flipped classroom on nursing student's vital signs knowledge, skill, and satisfaction: Post-test only control group study," *Edelweiss Applied Science and Technology*, vol. 8, no. 5, pp. 624–632, 2024, doi: 10.55214/25768484.v8i5.1727.

[29] T. Sultana, R. Gite, D. Tawde, C. Jena, K. Khatoon, and M. Kapoor, "Advancing healthcare education: A comprehensive review of case-based learning," *Indian Journal of Continuing Nursing Education*, vol. 25, no. 1, pp. 36–41, 2024, doi: 10.4103/ijcn.ijcn_148_23.