

A Current Educational Approach in Nursing Education: Flipped Learning

Evrım SARITAŞ¹  Zehra GÖÇMEN BAYKARA² 

¹ Gazi University Faculty of Health Science, Nursing Department, Ankara, Turkey,
evrimeyikara@gmail.com (Sorumlu Yazar/Corresponding Author)

² Gazi University Faculty of Health Science, Nursing Department, Ankara, Turkey,
gocmen@gazi.edu.tr

Article Info

ABSTRACT

Article History

Received: 15.04.2022

Accepted: 26.07.2022

Published: 26.08.2023

Keywords:

Nursing,
Nursing Education,
Flipped Learning.

With the accelerating paradigm shifts since the twentieth century, the search for innovative education that provides student-centered and active learning experiences in nursing education has begun. The flipped learning approach has features that can meet the needs of today's nursing education and information age. The flipped learning approach combines activities that are performed with various multimedia supported online learning tools outside the classroom and the activities performed on face-to-face and/or online platforms in the classroom. Student-centred active learning methods are used to consolidate knowledge at the in-class stage, and the lesson becomes more efficient. The flipped learning approach, blends direct teaching with constructivist education and provides an individualized learning. In this way, different learning styles of students can be appealed, and the educational process can be managed more effectively. The main purpose of flipped learning is to make learning effective, to support problem-solving, reasoning, and critical thinking skills. The knowledge, skill and attitude behaviors that develop better with the flipped learning approach also have an impact on the individual and professional gains. The flipped learning approach makes significant contributions to the development of cognitive, affective, psychomotor, and other intellectual skills and provides students with unforgettable experiences. The aim of this review is to discuss the usability of flipped learning approach in nursing education.

Hemşirelik Eğitiminde Güncel Bir Eğitim Yaklaşımı: Ters Yüz Öğrenme

Makale Bilgileri

ÖZ

Makale Geçmişi

Geliş: 15.04.2022

Kabul: 26.07.2022

Yayın: 26.08.2023

Anahtar Kelimeler:

Hemşirelik,
Hemşirelik Eğitimi,
Ters Yüz Öğrenme.

Yirminci yüzyıldan itibaren hızlanan paradigma değişimleriyle birlikte hemşirelik eğitiminde öğrenci merkezli, aktif öğrenme deneyimleri kazandıran, yenilikçi eğitim arayışlarına başlanmıştır. Ters yüz öğrenme yaklaşımı, günümüz hemşirelik eğitiminin ve teknoloji çağının gereksinimlerini karşılayabilir özelliklere sahiptir. Ters yüz öğrenme yaklaşımı sınıf dışında çoğunlukla multimedya destekli çeşitli çevrim içi öğrenme araçlarıyla sürdürülen, sınıf içinde ise yüz yüze ve/veya çevrim içi platformlarda sürdürülen aktiviteleri birleştirmektedir. Sınıf içi aşamada bilginin pekiştirilmesi için öğrenci merkezli aktif öğrenme yöntemleri kullanılmakta, ders daha verimli hale gelmektedir. Ters yüz öğrenme yaklaşımı, doğrudan öğretimi yapılandırıcı eğitimle harmanlanmaktadır ve bireyselleştirilmiş bir öğrenme sağlamaktadır. Bu sayede öğrencilerin farklı öğrenme biçimlerine hitap edilebilmekte, eğitim öğretim süreci daha etkin yönetilebilmektedir. Ters yüz öğrenmede temel amaç öğrenmeyi etkili kılmak, problem çözme, akıl yürütme, eleştirel düşünme becerilerini desteklemektir. Öğrencilerde ters yüz öğrenme yaklaşımı ile daha iyi gelişen bilgi, beceri ve tutum davranışları, bireysel ve mesleki kazanımlarını da etkilemektedir. Ters yüz öğrenme yaklaşımı bilişsel, duyuşsal, psikomotor ve diğer entelektüel becerilerin gelişmesine önemli katkılar ve öğrencilere unutulmaz deneyimler kazandırmaktadır. Bu derlemenin amacı hemşirelik eğitiminde ters yüz öğrenme yaklaşımının kullanılabilirliğini tartışmaktır.

Citation: Sarıtaş, E. & Göçmen Baykara, Z. (2023). A current educational approach in nursing education: Flipped learning. *Genel Sağlık Bilimleri Dergisi*, 5(2), 237-244.



"This article is licensed under a [Creative Commons Attribution-NonCommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/) (CC BY-NC 4.0)"

INTRODUCTION

The traditional educational approaches are inadequate to meet the needs of the education of the modern information age (Bulut et al., 2021; Harris, 2018; Şahin & Başak, 2019). With the accelerated paradigm shifts since the twentieth century, the search has begun for innovative education that is student-centered, integrated with technology, evidence-based, flexible in terms of time and space, and provides active learning experiences. Another reason for the ongoing change in active learning is the interest of today's Z generation students in technology (Chicca & Shellenbarger, 2018).

Searching this question on the internet: What is the most effective educational approach or the most effective teaching and learning environment? There is, for sure, no single answer that can be given to this question. However, as a result of such a search, the idea that both face-to-face education and synchronous and asynchronous education opportunities on online platforms could be used together to gain effectiveness. The flipped learning approach, which can be used at all levels from primary to higher education, has the qualities that can find positive answers to this question (Birgili et al., 2021; Öz & Abaan, 2021).

The Flipped Learning Network (FLN) defines flipped learning as “a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter” (FLN, 2014). In the literature, it is often called “flipped learning, classroom, teaching”, “reversed teaching, instruction”, and “inverted learning, classroom, teaching” (Birgili et al., 2021; Cheng et al., 2019; Tan et al., 2017). While flipped learning is stated as an approach in some studies in the literature (Bergmann & Sams, 2014; FLN, 2014; Murphy et al., 2022; Yiğitoğlu & Erişen, 2020), it is also stated as a model (Aydm & Demirer, 2017), method (Öz & Abaan, 2021) or technique (Bishop & Verleger, 2013) in others. However, in the definition stated by Bergmann and Sams (2014), who are considered to be the pioneers of flipped learning, as well as in most of the current literature, flipped learning is stated as an educational approach (Bergmann & Sams, 2014; FLN, 2014; Yiğitoğlu & Erişen, 2020).

The Historical Development of the Flipped Learning Approach

It is difficult to determine exactly when and where the flipped learning approach first began. However, many educators in different disciplines and geographical regions have observed similar limitations in the educational approaches and methods they have been using. While looking for a more effective educational approach, they came across the approach called flipped learning today (Talbert, 2017).

Some researchers base the flipped learning approach on the peer instruction developed by Eric Mazur in the early 1990s. Although this method was developed for peer teaching, it is considered to be one of the first examples of flipped learning (Correa, 2015; Mazur, 1997; Talbert, 2017). Some studies carried out in the following periods have been important steps toward the current method of the flipped learning approach. For example, Baker in the 1995s realized that the time in the classroom was spent only with the educator conveying the information and the students taking notes. Therefore, he started sharing his presentations with the students. He asked the students to work on these presentations before coming to class, and the time in the classroom could be used for various learning activities. So, he named this method a classroom flip (Baker, 2016; Hayırsever & Orhan, 2018; Talbert, 2017). Lage et al. (2000) stated that students have different learning styles and educators were not able to design courses suitable for the learning style of each student. They

wanted to design a course that could appeal to different learning styles. They provided the students with the course materials in advance and asked them to work on them before the lesson. Thus, the time in the classroom could be enriched with different group activities. So, he entitled this method an inverted classroom.

A study similar to flipped learning was carried out by Bergmann and Sams. They found a computer program allowed the course presentations to be recorded in the form of video by vocalizing (Talbert, 2017). Later, these researchers looked for answers to some questions on their own. "How would it be if the lessons held in the classroom were recorded in advance and shared with the students?", "Do students need the teacher to be physically there for them?", "Will the assignments and other activities that students do at home be done in the classroom." (Bergmann & Sams, 2014). Therefore, Bergmann and Sams started sharing the videos of the course presentations by recording with the students who could not attend the classes. This approach, which was initially designed only for students who missed the classes, soon attracted attention worldwide. It has been called a "flipped classroom". The most important element in this approach has been the course videos prepared and shared by the educator in advance. Course materials were shared the day before the lesson. Students were expected to work on their course materials at home and complete their assignments in the classroom (Bergmann & Sams, 2014; Talbert, 2017). However, in the following stages, it has been understood that this approach was found not to appeal to different learning styles, inadequate in terms of effective learning, and not student-centered. Providing the students with active learning experiences rather than pre-sharing the course videos with them was considered to be much more important. Moreover, it has been determined that it should be in a way that provides student-centered and more effective learning when reversing the in-class and out-of-class activities (Bergmann & Sams, 2014).

A "flipped learning" approach, allows students to work on the course content not only one day in advance but in a more flexible timeframe and be active in and out of the classroom. Thus, this new approach which provides opportunities for individual and group learning, uses active teaching methods, and appeals to different learning styles has been adopted (Bergmann & Sams, 2014). Therefore, after some time, this approach has been considered a pedagogical approach (Hayırsever & Orhan, 2018).

The change and development that the flipped learning approach has undergone in the historical process is an accumulative progressive process. This educational approach is widely used today in many different disciplines (Aydın & Demirer, 2017; Birgili et al., 2021; Murphy et al., 2022; Öz & Abaan, 2021).

Stages of the Flipped Learning Approach

The flipped learning approach takes place in two stages that are the continuation of each other. The education starts with the out-of-class stage and later continues with the in-class stage (Yığıtoğlu & Erişen, 2020).

The out-of-class stage is the process in which students access information by using various technologies and multimedia tools before coming to the class. In this stage, the educator prepares the course content by using multimedia-supported tools such as PowerPoint presentations, articles, screenshots, video conference recordings, educational games, reading passages, podcasts, or vodcasts. At the same time, interactive elements can also be added to these tools. Then the educator shares the prepared course content with the students through learning management systems or online platforms. Students can work on these shared contents in a flexible time frame and wherever they want until they come to class. At the same time, students can study repeatedly according to

their learning speed. Ensuring the active participation of the students in the process is important at this stage where the student and the educator are not sided by side. For this purpose, it is very effective to conduct quizzes, organize discussions on the subject on forum pages, direct attention to interesting images and news with links, share educational games, and follow up on their status of watching the teaching videos. Thus, it is possible to provide instant feedback to students and keep their learning progress recorded (Yiğitoğlu & Erişen, 2020).

So the theoretical teaching will be completed to a large extent outside the classroom, and then the stage called in-class is started. The in-class stage can be carried out face-to-face at school as well as simultaneously on online platforms (Marshall & Kostka, 2020). At this stage, the educator does not perform teaching of the theoretical subject in detail again. Instead, the learning problems that students have faced at the out-of-class stage are discussed. Since the educator can see which students have given incorrect answers in the interactive course materials, more discussions can be held about these parts that are not sufficiently understood at the in-class stage. Afterward, student-centered, active learning methods such as small group work, case studies, and simulation practice are very effective for consolidating knowledge. Thus, a longer period of time can be devoted to teaching methods and techniques that support the development of high-level learning skills. In this process, the student is at the center of the learning process, and the educator is a guiding mentor (Öz & Abaan, 2021; Yiğitoğlu & Erişen, 2020).

When the flipped learning approach is evaluated in terms of cognitive learning level in Bloom's Taxonomy, it is aimed to have learning objectives gained at the "remember" and "understand" levels before coming to the class. Learning steps such as "apply", "analyze", "evaluate" and "create", which are located at the higher level of taxonomy and where the guidance of the educator is needed more, are moved to the group learning environment that will be required in the classroom (Bergmann & Sams, 2014; Yiğitoğlu & Erişen, 2020). (Figure 1).

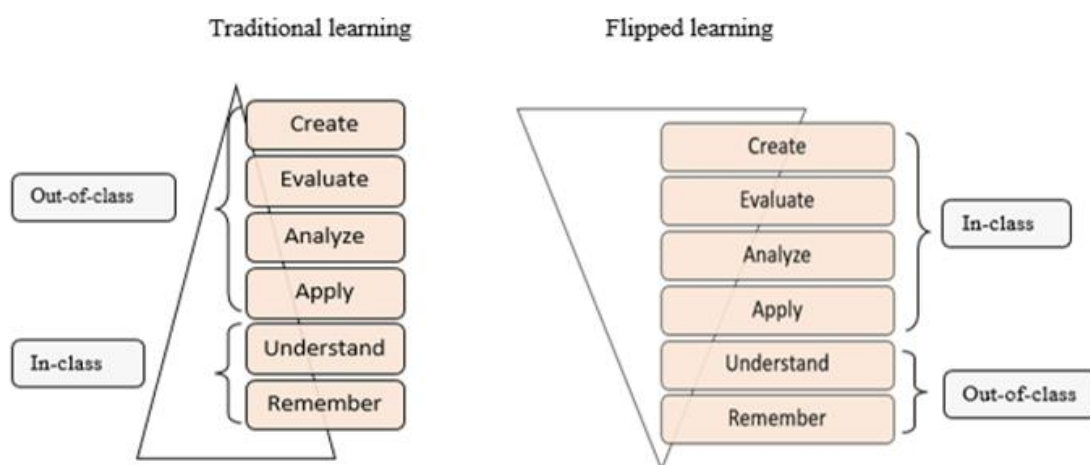


Figure 1. Comparison of Traditional and Flipped Learning Approaches According to Bloom's Taxonomy (Bergmann & Sams, 2014; Yiğitoğlu & Erişen, 2020).

The flipped learning approach combines activities that are performed with various multimedia supported by online learning tools outside the classroom, and the activities performed on face-to-face and/or online platforms in the classroom. In this way, different learning styles of students can be appealed and the educational process can be managed more effectively (Marshall & Kostka, 2020; Ünsal, 2018).

Limitations of Flipped Learning

In addition to the positive aspects of the flipped learning approach, there are also some limitations and negative aspects of it. For example, there may be educators and students who do not understand and accept this current educational approach, which may be considered new yet. Adoption of the traditional educator-centered systems may lead to resistance to this approach (Post et al., 2015; Talbert, 2012). To prepare active teaching methods and techniques in the flipped learning approach, the educator needs to make detailed preparations that may require creativity (Ratta, 2015; Ünsal, 2018). Students may perceive their requirement to prepare for the lesson outside of the class as an extra workload and stressor. At the same time, infrastructure problems with online platforms may occur, and it is challenging to have technical support available at any requested time (Öz & Abaan, 2021; Ünsal, 2018). Factors such as the poor image and sound quality of interactive course materials, the inadequacy to use the technology, etc., can also make learning difficult (Birgili et al., 2021). A program which is not suitable for the learning objectives and the characteristics of the student group can also reduce the achievement and motivation of the student.

Despite the possible limitations exemplified above, the flipped learning approach makes significant contributions to the quality of nursing education and student success. In recent years, there is an increase in the number of studies conducted on the flipped learning approach. These studies are becoming more common in the field of nursing recently. The findings of studies show that the flipped learning approach has the qualities to meet the needs of today's nursing education (Birgili et al., 2021; Murphy et al., 2022; Öz & Abaan, 2021; Yacout & Shosha 2016).

Importance of Flipped Learning Approach in Nursing Education

Nursing education is a holistic discipline that aims to provide knowledge, attitudes, and skills in cognitive, affective, and psychomotor learning areas (Aydınlı & Biçer, 2019; Bulut et al., 2021). Nursing education should have qualities according to the requirements of the information age. It needs to be structured in a student-centered way that can provide lifelong learning skills (World Health Organization, 2016). However, in the literature, some nurse educators have been stated to prefer generally traditional teaching methods (Harris, 2018; Şahin & Başak, 2019).

Benner et al. (2010) stated that nursing education should be radically transformed to enable nursing students to participate actively in the learning process and facilitate making of connections between what they learn in the classroom and what they practice in the clinical setting. Therefore, there is a common call for nursing schools for more interactive use of the classes and to use the flipped learning approach in their education curriculum (Birgili et al., 2021; Murphy et al., 2022). The flipped learning approach has the qualities of providing a nursing education suitable for today's information age. There are many studies in the literature supporting this educational method. For example, Rodrigues and Zealand (2016) stated that the flipped learning approach is an interactive educational approach that motivates students to the course and provides individual and group learning opportunities. In another study conducted by Peisachovich et al. (2016), students stated that the flipped learning approach can contribute greatly to the adoption of the nursing role and the development of professional autonomy. In the study conducted by Öz and Abaan (2021), nursing students stated that they learned more effectively in the flipped learning approach, with an interesting and entertaining education approach with distance and face-to-face education opportunities. Also, in a study conducted by Murphy et al. (2022), students stated that flipped learning brings out the best and they see this approach as magical.

In the flipped learning approach, students come to the class after already having learned the theoretical part of the subject to a large extent. Therefore, course hours in the classroom can be allocated to basic nursing practices learned by doing and experiencing activities such as case discussion, group work, simulation, lab work, and clinical practice. Students are at the center of education in this classroom, where they most need the educator's guidance and receiving feedback. Thus, the time spent by students with the educator and their peers both increases quantitatively and moves in the direction of more effective learning. In other words, not only do in-class and out-of-class activities change positions but it is focused on increasing effective learning. The teaching methods to be carried out with the group at the in-class stage make it easier to think about the subject from different angles and establish a cause-and-effect relationship. Therefore, this approach contributes to nursing students carrying out practice, seeing more, using knowledge, and experiencing meaningful learning (Öz & Abaan, 2021; Peisachovich et al., 2016).

Each person's learning style and learning speed are different from others. To enrich the learning process, methods that appeal to different learning styles and speeds should be used together. The flipped learning approach allows the use of many learning methods and techniques (Bergmann & Sams, 2014) because flipped learning is based on constructivist, blended, and active learning approaches or models (Yiğitoğlu & Erişen, 2020). For example, at the out-of-class stage, the student reads a clinical case or other written course materials shared by the educator, watches audio and visual recordings such as podcasts and vodcasts, plays educational games with interactive materials, participates in discussions on forums, and prepares the assignments given in by the educator. Moreover, students can work on the course materials repeatedly at any time and place. In the in-class stage, in addition to all these, they participate in individual and group learning activities, take an active role in interactive teaching techniques (such as concept map, word hunt, what would you do, creating a slogan), and use critical thinking.

Education is individualized since the lesson is not uniformly taught to the whole class. Students with different learning styles can be appealed to. The fact that students take responsibility for learning in and out of the classroom and maintain it in a motivated manner improves the permanence of learning (Talbert, 2012).

There are many studies in the nursing literature that the flipped learning approach contributes to the development of students' skills such as knowledge, attitudes, self-learning, critical thinking, and problem-solving (Tan et al., 2017). It provides flexibility to the students to access the shared course materials at any time and place and the freedom to watch the recorded courses at their own learning pace and as much as they want (Murphy et al., 2022; Öz & Abaan, 2021; Post et al., 2015). Also, it ensures group cooperation and interaction, improves the use of technology, better understanding, and keeps in mind the information (Yacout & Shosha, 2016). Furthermore, it contributes to the development of skills related to patient safety (Kim et al., 2019; Maxwell & Wright 2016), personalized learning, and the use of class time more effectively (Murphy et al., 2022). Finally, it makes learning easier, and increase self-confidence, motivation, and fun (Rodrigues & Zealand, 2016); it improves self-efficacy, and reduces test anxiety (Aksoy & Gurdoğan, 2022).

Flipped learning is an important educational approach in terms of increasing the quality of nursing education and student achievement. Given the learning styles of today's Z generation nursing students and the current technology, it is considered that it is time to switch nursing education to the flipped learning approach.

CONCLUSION AND SUGGESTIONS

With the advancement of educational technology, it becomes clear that learning is no longer limited to traditional classrooms and textbooks. The flipped learning approach is based on the understanding that time in the learning area (in the classroom) with the group should be spent more efficiently. This approach, in which students take an active role and responsibility for learning both in and out of the classroom, and where information and communication technologies are used, has started to make a big impact in nursing education.

It is important that educational institutions, educators, and students adapt to the flipped learning approach and be ready to use these technologies. In particular, it may be challenging for nursing schools that adopted the traditional education approach to shift to the flipped learning approach and to be willing to change their existing programs. However, it should not be overlooked that the flipped learning approach is a key that can equip future nurses for the complex health care system. But, it can provide students with unique and unforgettable experiences.

LIMITATIONS

This study was limited to the some articles accessible by the authors. More comprehensive search criteria might yield different discussion and conclusions regarding the flipped learning approach. It could be beneficial for future studies to include different types of work.

Financial Support

No financial support.

Conflict of Interest

No conflict of interest.

Author Contributions

Design: E.S., Z.G.B., Literature search: E.S., Writing: E.S., Z.G.B.

REFERENCES

- Aksoy, B., & Gurdogan, E.P. (2022). Examining effects of the flipped classroom approach on motivation, learning strategies, urinary system knowledge, and urinary catheterization skills of first-year nursing students. *Japan Journal of Nursing Science*, e12469. <https://doi.org/10.1111/jjns.12469>
- Aydın, B., & Demirel, V. (2017). Ters yüz sınıf modeli çerçevesinde gerçekleştirilmiş çalışmalara bir bakış: İçerik analizi. *Eğitim Teknolojisi Kuram ve Uygulama*, 7(1), 57-82. <https://doi.org/10.17943/etku.288488>
- Aydın, A., & Biçer, S. (2019). Hemşirelik eğitiminde güncel yaklaşımlar. *Sağlık Bilimleri Dergisi*, 28(1), 38-42.
- Baker, J.W. (2016). *The origins of "the classroom flip"*. In J. Overmyer and N. Yestness (Eds.), Proceedings of the 1st annual higher education flipped learning conference. Colorado. Greeley (pp. 15-24).
- Benner, P., Sutphen, M., Leonard, V., & Day, L. (2010). Educating nurses: A call for radical transformation. Jossey-Bass.
- Bergmann, J., & Sams, A. (2014). *Flipped learning: Gateway to student engagement*. (1st edition). Washington: International Society for Technology in Education (pp. ix-34).
- Birgili, B., Seggie, F.N., & Oğuz, E. (2021). The trends and outcomes of flipped learning research between 2012 and 2018: A descriptive content analysis. *Journal of Computers in Education*, 8(3), 365-394. <https://doi.org/10.1007/s40692-021-00183-y>
- Bishop, J.L., & Verleger, M.A. (2013). *The flipped classroom: A survey of the research*. American Society for Engineering Education, 120th ASEE Annual Conference & Exposition. Atlanta.
- Bulut, H., Güler, S., Kalkan, N., Yücel, B.O., Irmak, B., & Emre, N.H. (2021). Views of Nursing Students' Regarding the Interactive Case Discussions Before Clinical Practice. *Ordu University Journal of Nursing Studies*, 4(3), 382-392. <https://doi.org/10.38108/ouhcd.930878>
- Cheng, L., Ritzhaupt, A.D., & Antonenko, P. (2019). Effects of the flipped classroom instructional strategy on students' learning outcomes: A meta-analysis. *Educational Technology Research and Development*, 67(4), 793-824. <https://doi.org/10.1007/s11423-018-9633-7>

- Chicca, J., & Shellenbarger, T. (2018). Connecting with generation Z: Approaches in nursing education. *Teaching and Learning in Nursing, 13*, 180-184. <https://doi.org/10.1016/j.teln.2018.03.008>
- Correa, M. (2015). Flipping the foreign language classroom and critical pedagogies a (new) old trend. *Higher Education for the Future, 2*(2), 114-125. <https://doi.org/10.1177/23476311155584122>
- Flipped Learning Network. (2014). *What is flipped learning. The four pillars of F-L-I-P™*. Accessed date: 31.08.2021. https://flippedlearning.org/wp-content/uploads/2016/07/FLIP_handout_FNL_Web.pdf
- Harris, C. (2018). Reasonable adjustments for everyone: Exploring a paradigm change for nurse educators. *Nurse Education in Practice, 33*, 178-180. <https://doi.org/10.1016/j.nepr.2018.08.009>
- Hayırsever, F., & Orhan, A. (2018). Ters yüz edilmiş öğrenme modelinin kuramsal analizi. *Mersin Üniversitesi Eğitim Fakültesi Dergisi, 14*(2), 572-596. <https://doi.org/10.17860/mersinefd.431745>
- Kim, Y.M., Yoon, Y.S., Hong, H.C., & Min, A. (2019). Effects of a patient safety course using a flipped classroom approach among undergraduate nursing students: A quasi-experimental study. *Nurse Education Today, 79*, 180-187. <https://doi.org/10.1016/j.nedt.2019.05.033>
- Lage, M.J., Platt, G.J., & Treglia, M. (2000). Inverting the classroom: A gateway to creating an inclusive learning environment. *Journal of Economic Education, 31*(1), 30-43. <https://doi.org/10.1080/00220480009596759>
- Marshall, H.W., & Kostka, I. (2020). Fostering teaching presence through the synchronous online flipped learning approach. *The Electronic Journal for English as a Second Language, 24*(2), 1-14. <http://tesl-ej.org/pdf/ej94/int.pdf>
- Maxwell, K.L., & Wright, V.H. (2016). Evaluating the effectiveness of two teaching strategies to improve nursing students' knowledge, skills, and attitudes about quality improvement and patient safety. *Nursing Education Perspectives, 37*(5), 291-292. <https://doi.org/10.1097/01.nep.0000000000000043>
- Mazur, E. (1997). *Peer instruction: A user's manual*. (1st edition). Upper Saddle River, NJ: Prentice Hall.
- Murphy, N., Strong, C., & Jones, G. (2022). Flipped learning: A shift in graduate nursing education. *Journal of the American Association of Nurse Practitioners, 34*(1), 135-141. <https://doi.org/10.1097/jxx.0000000000000581>
- Öz, G.Ö., & Abaan, S. (2021). Use of a flipped classroom "Leadership in Nursing" course on nursing students' achievement and experiences: A quasi-experimental study. *Journal of Professional Nursing, 37*(3), 562-571. <https://doi.org/10.1016/j.profnurs.2021.02.001>
- Peisachovich, E.H., Murtha, S., Phillips, A., & Messinger, G. (2016). Flipping the classroom: A pedagogical approach to applying clinical judgment by engaging, interacting, and collaborating with nursing students. *International Journal of Higher Education, 5*(4), 114-121. <https://doi.org/10.5430/ijhe.v5n4p114>
- Post, J.L., Deal, B., & Hermanns, M. (2015). Implementation of a flipped classroom: Nursing students' perspectives. *Journal of Nursing Education and Practice, 5*(6), 25-30. <https://doi.org/10.5430/jnep.v5n6p25>
- Ratta, C.B.D. (2015). Flipping the classroom with team-based learning in undergraduate nursing education. *Nurse Educator, 40*(2), 71-74. <https://doi.org/10.1097/nne.0000000000000112>
- Rodrigues, A., & Zealand, N.W. (2016). *Use of the flipped classroom model in the clinical learning curriculum for third year nursing students*. In H. Hamerton and C. Fraser (Eds.), *Te tipuranga – Growing capability: Proceedings of the 2015 National Tertiary Learning and Teaching Conference*. Tauranga, New Zealand: Bay of Plenty Polytechnic (pp. 83-88).
- Şahin, G., & Başak, T. (2019). Hemşirelik eğitiminde oyun temelli öğrenme. *Gümüşhane Üniversitesi Sağlık Bilimleri Dergisi, 8*(3), 308-314.
- Talbert R. (2012). Inverted classroom. *Colleagues, 9*(1), 1-2.
- Talbert, R. (2017). *Flipped learning: A guide for higher education faculty*. (1st edition). Virginia: Stylus Publishing, LLC (pp. 28-39).
- Tan, C., Yue, W.G., & Fu, Y. (2017). Effectiveness of flipped classrooms in nursing education: Systematic review and meta-analysis. *Chinese Nursing Research, 4*(4), 192-200. <https://doi.org/10.1016/j.cnre.2017.10.006>
- Ünsal, H. (2018). Ters yüz öğrenme ve bazı uygulama modelleri. *Gazi Eğitim Bilimleri Dergisi, 4*(2), 39-50.
- World Health Organization (2016). *Nurse educator core competencies*. Geneva. Accessed date: 02.09.2021. https://www.who.int/hrh/nursing_midwifery/nurse_educator050416.pdf
- Yacout, D.A.E.S.A., & Shosha, A.A.E.F.A. (2016). Nursing students' perceptions towards flipped classroom educational strategy. *Journal of American Science, 12*(2), 62-75. 10.7537/marsjas12021607
- Yiğitoğlu, O., & Erişen, Y. (2020). *Ters yüz öğrenme yaklaşımı*. In A.S. Saracaloğlu, B. Akkoyunlu and İ. Gökdaş (Eds). *Öğretimde yaklaşımlar ve eğitime yansımaları*. (1st edition). Pegem Akademi (pp. 433-451).