



## FLIPPED CLASSROOM: ACTIVE, EFFECTIVE AND REINFORCED LEARNING - ESPECIALLY FOR UNDERPERFORMING STUDENTS

Quvondiqova Dildora<sup>1</sup>

Norova Barchinoy<sup>2</sup>

Farmonov Muhammad<sup>3</sup>

*Jizzakh branch of the National University of Uzbekistan*

### KEYWORDS

Social interaction, flipped classroom, motivation, research gaps, academic achievement, self-directed learning skills

### ABSTRACT

Higher education is under pressure to move towards more flexible, effective, proactive and student-centred educational strategies that alleviate the limitations of traditional education delivery models. Recently, a flipped classroom model was proposed to support this transition. However, research on the use of flipped classrooms in higher education is still in its early stages and little is known about student perceptions of flipped classroom learning. This study investigated student perceptions of flipped classrooms in a final-year research methods course at university. A questionnaire was developed to measure a student's (n = 240) perceptions of the flipped classroom in general, videos as a learning tool, and her Moodle (a learning management system) as a support tool within the flipped classroom model. The results showed that the majority of students had positive attitudes towards the flipped classroom, the use of video and Moodle, and positive attitudes towards the flipped classroom were associated with increased motivation, engagement, increased learning and effective. It was shown that there is a high correlation with the recognition of learning. Compared to high performers, low performers exhibited much more positive attitudes toward using video as a learning tool, perceived increased learning, and perceived learning as more effective.

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<sup>1</sup> Teacher, Jizzakh branch of the National University of Uzbekistan

<sup>2</sup> Student, Jizzakh branch of the National University of Uzbekistan

<sup>3</sup> Student, Jizzakh branch of the National University of Uzbekistan

## Introduction

Education at the university level has been practiced in relatively similar ways throughout history and across cultures. A central pillar is the traditional lecture by a professor, or, as King (1993) puts it, a 'sage on the stage', who imparts knowledge to host students. Nevertheless, over the past three decades, university education and traditional lectures in particular have been strongly criticized. The main criticisms revealed the following: Lacking mechanisms to ensure intellectual engagement with the material, traditional lectures lead to passive student behavior, student attention quickly fades, and the pace of lectures meets the needs of all learners. not adequate for teaching higher order skills such as traditional lecture application and analysis (Cashin, 1985; Bonwell, 1996; Huxham, 2005; Young, Robinson Rosie, 2000), while others are in the form of extended lectures, which are not explicitly focused on technology. By Bonwell (1996). ). However, despite widespread criticism, traditional lectures are still the dominant teaching strategy in higher education.

Against this background, and largely due to advances in teaching technology, there is increasing pressure on higher education, resulting in the introduction of flexible, student-centered learning strategies that ease the constraints of education delivery models. increase. With the shift to student-centered learning, there is a surge of researchers and educators advocating for flipped classroom curricula in higher education. Support for the flipped classroom model is justified. Based on the underlying theory and empirical research conducted, the flipped classroom model addresses some of the challenges of traditional teaching methods, allowing active learning strategies and the use of classroom time to promote higher-level learning, such as application and application. It seems to pave the way for tackling Bloom classification. Analysis and Synthesis.

The inverted classroom model is based on the idea of reversing traditional classroom teaching in the sense that it replaces what students normally do outside the classroom with what is normally done inside the classroom. So, instead of listening to a lecture in class and then going home to work on a set of assigned problems, students can read the course literature at home, absorb the lecture content via video, and practice teacher-led problem-solving, analysis, and more. , participate in class discussions. Proponents of the flipped classroom model cite many advantages of reversing teaching and learning in higher education according to the flipped classroom model. This allows students to learn at their own pace, encourages students to actively work on the lecture material, and has a real classroom. Through effective, creative and active learning activities, teachers have more opportunities to interact with students to assess learning and give students control and ownership of their learning.

### Purpose of research

The purpose of this study was to investigate how students perceive flipped classroom instruction in a university research methods course. Three specific aspects:

(a) students' general experiences and attitudes towards learning through flipped classrooms, (b) students' experiences using video lectures as a learning medium, and (c) using learning management systems. The student experience (LMS) is used as part of the flipped classroom model. In addition, the study also considered differences in the experiences and attitudes of low- and high-performing students.

**Method:** This study is based on a quantitative analysis of closed-door questionnaires investigating the perceptions and experiences of bachelor's students learning through flipped classroom teaching in a bachelor's thesis preparation course from a scientific methodology and communication perspective. This course was held in the fall of 2015.

participant The participants were bachelor's students ( $n = 240$ ) from Stockholm University, Sweden, who had taken the "Research Methods and Communication" course last fall 2015 semester. All students enrolled in her eight different undergraduate programs in the Faculty of Computer and Systems Science. There were 76 female and 164 male students, ranging in age from 20 to 43 years, with a mean age of 25.12 years ( $SD = 4.09$ ). Of the 240 students, only 23 of her had experience with a flipped classroom. There were 218 successful applicants. Table 1 provides an overview of student demographics and background questions. Low-performing and high-performing students were determined based on their average grades while in school. Here, high performers are defined by average grades A to B, and low performers are defined by average grades C to F.

#### Course structure

The courses emphasized in this course prepare students for their graduation thesis in terms of scientific methodology and communication. The learning goal is, on the one hand, to help students understand the basics of research strategies, data collection methods, and analytical methods, and on the other, to familiarize students with the application of qualitative and quantitative analysis. Method. In other words, the course aimed to provide students with conceptual knowledge (understanding of scientific methods) and procedural knowledge (application of analytical methods and scientific writing). See Figure 1 for the underlying educational structure.

The course was divided into 3 parts and had 3 different exam assignments. The first part provided a theoretical understanding of the basics of research strategies, data collection methods, and analysis methods. The educational structure of this part consisted of independent reading of the course literature. Students' reading of the course literature consists of three long video lectures (average 60 minutes each), a traditional campus lecture (in which the teacher presents and outlines the basics of research strategies), and an interactive lecture in which the teacher presents examples. Complemented by flipped classroom. It supports exam questions that students answer in real-time using a digital answering system (Socrative) via their smartphones, tablets and computers. A response system provided an overview of responses, enabled students

to assess their own knowledge, and enabled teachers to provide formative feedback and detailed explanations when needed. Additionally, digital support was provided via a learning management system (Moodle). The exam for this part consisted of a digital multiple-choice exam through a learning management system. The second part was a hands-on qualitative analysis project performed by students in pairs. The task of this project was to analyze qualitative interview data using qualitative analysis techniques and communicate the results in a report according to scientific standards for qualitative data presentation. During this project, students were supported by her five digital lectures (averaging 35 minutes each), her three flipped lectures on campus, and digital supervision through a learning management system. In three flipped lectures on campus, students worked on their projects and were supported by several teachers who answered questions and gave feedback. Teachers identified common misconceptions and needs of students and elaborated them to the entire class. Her second part of the test consists of a written report by the group. Her third part of the course, similar to the second, is a project focused on analyzing questionnaires using quantitative methods and communicating the results according to scientific standards of quantitative results presentation. It consisted of In this project, students were supported by 7 video lectures (averaging 30 minutes each), her 3 flipped lectures in class with teachers supporting hands-on work, and digital tutoring in a learning management system. The video covered the theoretical foundations of descriptive and inferential statistics and how to perform and interpret various statistical tests in SPSS. The third part of the test consists of a written report by the group. All video lectures available to students during the course were produced by teachers and researchers in a professional video studio at Stockholm University. Video lectures were specially tailored to the course.

#### Recall measures and procedures

A four-section 58-item questionnaire was developed to measure student perceptions of flipped classrooms in general, videos as a learning tool, and Moodle as a support system.

Section 1 (General Information) consists of 12 demographic and background information items

Section 2 (Flipped Classroom Scale) consisted of 21 items that measure students' experiences and learning attitudes through the flipped classroom.

Section 3 (Video Scale) consists of 16 items that measure the student's experience of using video lectures as a learning medium.

Section 4 (LMS scale) consists of 9 items that measure the student's perception of the usefulness of her Moodle in supporting learning in the flipped classroom teaching method.

Exploratory factor analysis with principal component extraction was performed to refine this tool. After factor analysis, 8 items that either did not load any factor or showed high mutual loading of multiple factors were removed. Therefore, the

instrument used for the final analysis consisted of 17 items on the inverted classroom scale, 13 items on the video scale, and 5 items on the LMS scale. Overall, Cronbach's alpha was 0.78 on the flipped classroom scale, 0.82 on the video scale, and 0.84 on the LMS scale. Students were asked to complete a questionnaire at the end of the course. Questionnaires were developed and administered via a web tool.

**Conclusion:** There has never been a louder call for stage sages to play supporting roles to reform traditional higher education education and pave the way for student-centered active learning strategies. In this context, the flipped classroom was proposed to meet these demands. Several studies have shown that flipped classrooms can increase student participation and promote a more active approach to learning in higher education. The results of this study corroborate those of these studies and demonstrate additional benefits associated with the flipped classroom model. We found that the students who participated in the study sample generally rated the flipped classroom highly. A correlation analysis further demonstrated significant strong correlations between students' appreciation of the flipped classroom experience on the one hand, and attitudes towards video as a learning tool, increased motivation, increased learning, more effective learning and more active learning on the other hand.

Interestingly, independent sample t-tests showed significant differences between low and high achievers in that the low achievers tended to have more positive attitudes towards the use of video as a learning tool. Low achievers also to higher extent perceived increased and more effective learning through flipped classroom. A more detailed analysis of the students' experiences of using video showed that the most valued aspects of video use was being able to pause and rewind the video lectures. With this in mind, the flipped classroom model offers lower-performing students, who may find traditional lectures challenging and fast-paced, the opportunity to do more and think and think. It is not unreasonable to conclude that you are empowered by giving yourself the opportunity to (Young et al., 2009) Learn at your own pace. For all students in general, the results indicate that the reasons for students' perceptions of increased and more effective learning are associated with: 1) the affordances of video lectures (the ability to reflect and learn in own pace); 2) more meaningful practice-oriented and teacher supervised classroom activities; and 3) more supported learning processes due to teacher and peer scaffolding in class and out of class through the use of Moodle.

Thus, as final remarks, considering the ineffectiveness of traditional lectures in retaining students' attention and promoting active learning (Windschitl, 1999; Young et al., 2009) in higher education, the results of this study indicate that the flipped classroom model seem to offer promising ways to engage students in more effective, supportive, motivating and active learning, especially for low achievers and students that may struggle with traditional lectures. However, the results should be viewed in light of the limitations of this study. One such limitation is the non existence of a control group which limits the external validity of the results. Another limitation is connected to the fact that the majority of the

student's surveyed have not experienced flipped classroom before, thus the results may partly reflect the influence of a new approach of learning and teaching and not necessary the influence of the flipped classroom approach. Also note that all results related to learning and improved learning outcomes are based on students' self-reported perceptions and are not independent measures. Future research on the impact of the flipped classroom approach will address these limitations and, in particular, beyond mere student perceptions, to what extent actual student performance may or may not be affected by the flipped classroom approach. should be investigated.

### References

1. Beekes, W. (2006). The "millionaire" method for encouraging participation. *Active Learning in Higher Education*, 7(1), 25–36.
2. Betihavas, V., Bridgman, H., Kornhaber, R., & Cross, M. (2015). The evidence for 'flipping out': A systematic review of the flipped classroom in nursing education. *Nurse Education Today*, 6, 15–21.
3. Bishop, J. L., & Verleger, M. A. (2013). The flipped classroom: a survey of the research. In *ASEE National Conference Proceedings*, Atlanta, GA.
4. Rakhmatullayevna, A. D. (2021). The role and translation of metaphors in poetry. *INTERNATIONAL JOURNAL OF DISCOURSE ON INNOVATION, INTEGRATION AND EDUCATION*, 2(2), 332-335.
5. Rakhmatullayevna, A. D. (2022). TEACHING WAYS OF IDIOMS IN CLASS. *PEDAGOG*, 1(3), 370-373.
6. Raxmatullayevna, A. D. (2022). KOMMUNIKATIV KOMPETESIYANI SHAKLLANTIRUVCHI TARJIMA USULLARI.
7. Rakhmatullayevna, A. D. (2022). INGLIZ TILI DARSLARIDA TARJIMA ASOSLARINI O'RGATUVCHI TEXNIKALAR, MASHQLAR VA INTERAKTIV O'YINLAR. *Finland International Scientific Journal of Education, Social Science & Humanities*, 10(12), 126-131.
8. Raxmatullayevna, A. D. (2023). TARJIMA METODLARI CHET TILI DARSLARINING AJRALMAS QISMI SIFATIDA. *JOURNAL OF INNOVATIONS IN SCIENTIFIC AND EDUCATIONAL RESEARCH*, 2(15), 345-352.
9. Rakhmatullayevna, A. D. (2022). TALABALARDA TARJIMA METODLARI ORQALI TARJIMONLIK BILIM VA KO'NIKMALARINI SHAKLLANTIRISH. *Scientific Impulse*, 1(4), 757-759.
10. Raxmatullayevna, A. D. (2023). INGLIZ TILI DARSLARIDA TARJIMA METODLARINING QO'LLANILISHI. *Ustozlar uchun*, 17(1), 151-163.
11. Raxmatullayevna, A. D. (2023). CHET TILINI O'QITISHDA TARJIMA METODLARI VA ULARNING TASNIFI. *Ustozlar uchun*, 17(1), 142-150.
12. Rakhmatullayevna, A. D. (2022). USING INFORMATION TECHNOLOGIES IN TEACHING TRANSLATION. *International Journal of Contemporary Scientific and Technical Research*, 633-635.

13. Zubaydullaevna, T. N., Zoirovna, Y. S., Ugli, N. B. U., & Kizi, A. M. E. (2023, January). CONSIDERATION OF PSYCHOLOGICAL WAYS IN QUICK MEMORIZATION PROCESS ENGLISH LANGUAGE. In International Scientific and Current Research Conferences (pp. 29-35).

14. Murotmusayev, K., & Nizomov, B. (2022). Internet tarmog'ida yolg'izlik va psixik jarayonlar. Zamonaviy innovatsion tadqiqotlarning dolzarb muammolari va rivojlanish tendensiyalari: yechimlar va istiqbollar, 1(1), 457-460.

15. Nosirovich, A. N. & Umarovich, N. B. (2022). CYBERSPACE IN THE REAL WORLD. Journal of Academic Research and Trends in Educational Sciences, 1(10), 410-414.

16. Sharafitdinov Abdulla, Yuldasheva Sojida Zoyirovna. (2022). ZAMONAVIY AXBOROTLASHTIRISH JARAYONLARINING SHAXS INDIVIDUAL XUSUSIYATLARIGA TA'SIRI. International Journal of Contemporary Scientific and Technical Research, 1(2), 432-436.

17. Shoir, Khaydarova, and Mamaradjabov Yokubjon Umidovich. "THE EVENT OF EUPHEMISM AND ITS FUNCTIONS IN SPEECH." Journal of Academic Research and Trends in Educational Sciences 1.12 (2022): 401-405.

18. Zoirovna, Yuldasheva Sojida, and Nizomov Bekhruz Umarovich. "PSYCHOLOGY OF TRUST AND SECURITY." Journal of Academic Research and Trends in Educational Sciences 1.12 (2022): 153-161.

19. Kurolovich, Sindorov Lutfillo, and Mamaradjabov Yokubjon Umedovich. "PSYCHOLOGICAL TECHNIQUES FOR RAPID MEMORY OF THE ENGLISH LANGUAGE." Journal of Academic Research and Trends in Educational Sciences 1.12 (2022): 170-176.

20. Абдурасулов, Фарход Пардаевич, Бехруз Умар Угли Низомов, and Дилбар Йулдашевна Маликова. "ПСИХОЛОГИЧЕСКИЕ ФАКТОРЫ В ИЗУЧЕНИИ И ПРЕПОДАВАНИИ ЯЗЫКОВ." Central Asian Research Journal for Interdisciplinary Studies (CARJIS) Special Issue (2021): 211-215.

21. Burkhanovna, K. D., Alisherovich, M. R., & Ugli, N. B. U. (2021). Communication as the main source of personality development. ACADEMICIA: An International Multidisciplinary Research Journal, 11(5), 75-80.

22. Хасанова Г. Б. и др. ВЛИЯНИЕ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА НА ЭКОНОМИКУ //International Journal of Contemporary Scientific and Technical Research. – 2022. – С. 259-263.

23. Alimov, N. (2023). CULTURE OF WESTERN AND ORIENTAL COUNTRIES. Современные тенденции инновационного развития науки и образования в глобальном мире.