Neerlandica Wratislaviensia XXXI
Wrocław 2021

https://doi.org/10.19195/0860-0716.31.8

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# An emergency flipped classroom intervention in an L2 Dutch course: An action research study

#### **Abstract**

The flipped classroom has been gaining increasing popularity over the last decade, especially in the university context. This pedagogical approach not only contributes to students' engagement and motivation, but also enables a more flexible management of instructional time in class, which makes it a promising option for emergency situations. In October 2020, a 'Women's Strike' took place in Poland, influencing the teaching schedule in numerous higher education institutions. Since these circumstances caused a problem with managing the course and making it possible for the students to catch up with the new material, an action research investigation was undertaken to explore the applicability of the flipped classroom in an emergency situation. Hence, this article describes the evaluation of a flipped classroom emergency intervention with one group of first-year students of Dutch Studies at Adam Mickiewicz University in Poznań.

Keywords: flipped classroom, inverted classroom, Dutch, Dutch as a foreign language, Dutch in the university context, foreign language teaching.

#### 1. Introduction

In essence, the flipped classroom (also: 'inverted classroom') is a pedagogical approach in which students first get acquainted with a new topic at home, and then explore it through practice in the classroom (Bergmann & Sams 2012; Mehring 2017). This way of teaching has gained popularity in a variety of disciplines, including foreign language (L2) teaching, over the last years. The concept of the flipped classroom is attributed to two chemistry high school teachers, Bergmann and Sams, who in 2007 started to prepare videos with voice-over for the students who missed class (Bergmann & Sams 5). The popularity of the flipped classroom approach has been increasing together with the development

of massive open online courses (MOOC), such as Khan Academy, Coursera or FutureLearn, which are based on this concept. In recent years, the flipped classroom has become an area of interest in L2 learning, especially English as a foreign language (Turan & Akdag-Cimen 2019). However, Zou et al. indicate that the new trends in the flipped classroom approach include its implementation in teaching other languages (23), such as Chinese (e.g., Wang et al. 2018).

According to many studies, the flipped classroom poses benefits but also some challenges. Its main benefits include optimizing the use of class time (Mehring 5; Wang et al. 512), providing a more dynamic class environment (Chen Hsieh et al. 2) and improving students' performance (Buitrago & Díaz 83; Wang et al. 512–513). Among the most frequently cited challenges, increased workload for teachers (Teng 119) and students (Zou et al. 21) should be mentioned. Furthermore, flipping the classroom may require teachers' training in the use of technology (Teng 119). Zou et al. also mention the contextual factors that the teacher has to take into account before flipping the classroom (21).

The beneficial characteristic features of the flipped classroom, especially its flexibility, make it a promising option as a didactic intervention in emergency situations. In order to evaluate the effectiveness of this pedagogical format in a Dutch as a foreign language context as an option for possible future emergencies, an action research study was conducted.

In the literature review, I provide the theoretical background of the flipped classroom approach, including its benefits and challenges. Next, I present the specific teaching context of the intervention, the methodology and the results of the study. Finally, I provide reflections on this action research investigation and future pedagogical directions.

## 2. Flipped classroom

#### 2.1. Definitions

According to Bergmann and Sams, the basic concept of the flipped classroom is "that which is traditionally done in class is now done at home, and that which is traditionally done as homework is now completed in class" (13). In this vision of the flipped classroom, the students are provided with a new content video-lecture that they watch one day before the class occurs. Bergmann and Sams underline that in comparison to the traditional model of teaching, the flipped classroom allows to completely restructure the use of the class time (15) (Table 1).

It should be pointed out that the concept of the flipped classroom illustrated in Table 1 is embedded in a chemistry class. In the context of L2 instruction, Bergmann and Sams notice that "teachers are recording grammar lessons and conversation starters so as to create time in class to use the language more practically" (48).

Traditional Classroom		Flipped Classroom		
Activity	Time	Activity	Time	
Warm-up activity	5 min.	Warm-up activity	5 min.	
Go over previous night's homework	20 min.	Q&A time on video	10 min.	
Lecture new content	30–45 min.	Guided and independent practice and/or lab activity	75 min.	
Guided and independent practice and/or lab activity	20–35 min.			

Table 1. Comparison of class time use in traditional class and flipped classroom (Bergmann & Sams 15)

It should also be noted that in the Polish context a similar concept had been developed: 'anticipatory learning' (Pol. *nauczanie wyprzedzające*), that is, "active building of thematic and pre-established knowledge by students" (Dylak 60). This process of active building takes place before the lesson and it refers to the main topic of the following class. In Poland, anticipatory education has been applied in some primary and high schools through, for example, the e-learning platform *Dzwonek.pl* that allows students to use interactive teacher-made or coursebook materials in their free time. This concept meets some of the objectives for 'lifelong learning' promoted by Organisation for Economic Co-operation and Development and the European Union (*Raport o stanie edukacji* 113–117).

Bishop and Verleger, indicating that there is no consensus among the researchers about the definition of the flipped classroom, define it as "an educational technique that consists of two parts: interactive group learning activities inside the classroom, and direct computer-based individual instruction outside the classroom" (5). In this definition, the flipped classroom must be related to computer-based instruction. However, some studies underline that the flipped classroom does not require the use of technology, since asking the students to read a text at home might be also a form of this approach (e.g., Van Alten et al. 2).

Mehring combines these different ideas, providing a more generic (regarding the means of instruction), and at the same time more specific definition of the flipped classroom. According to Mehring, a flipped classroom is "the common instructional approach where teacher-created materials featuring instruction of new concepts are viewed outside of scheduled class time, in turn freeing teacher-student time for more collaborative efforts in class" (1–2). However, in the case of this definition, a question arises if the material needs to be created by the teacher himself or herself. According to Bergmann and Sams, teachers can also use ready-made didactic materials (106).

In this article, I opt for the definition proposed by Mehring, since it is the most complete and, at the same time, it emphasizes the major benefit of flipping the classroom – freeing up face-to-face class time. This was considered of special importance in the case of the present action research.

## 2.2. Benefits and challenges of flipping a class

In the flipped classroom, the students gain knowledge at home by means of material prepared by teacher, and practise skills during class time (Chen Hsieh et al. 1). The result of swapping the traditional teaching has many benefits for students, but may also be challenging.

As stated by Mehring, flipping the classroom frees up the face-to-face class time that can be used for more dynamic tasks. Hockly and Dudeney highlight that although in contemporary L2 teaching there is little focus on lecture, the concept of the flipped classroom can still contribute to the re-thinking and re-establishing of how the class time is used (170). In the case of L2 learning, many activities done traditionally in class, such as presenting a grammar topic to students, may be transferred outside class (Hockly & Dudeney 170). Freeing up the in-class time might be seen as a benefit, especially in the context of intensive language courses, but also as challenging for the teacher, since preparing the material for students requires devoting extra time, and sometimes necessitates the use of technological skills, e.g., for creating high-quality videos that will keep the learners attentive.

Finally, this student-centred approach offers higher levels of flexibility to students, as they can work with the learning material provided by the teacher, such as a video or a podcast, whenever and wherever they want to (Zou et al. 1). It also allows both the students and the teacher to focus on the practical aspects of using the language in class, e.g., practising orally a grammar construction. However, since the flipped classroom is a learner-centred approach, the responsibility shifts from the teacher to the students (Mehring 2; Zou et al. 2). This (to some extent) independent learning might be challenging for those with a low level of self-regulation. On the other hand, several studies conducted on the flipped classroom in language learning contexts demonstrate that this approach, among others, improves students' engagement (Chen Hsieh et al. 15; Zou 224) and enhances their motivation (Zainuddin & Halili 332; Zou 224).

## 3. Methodology

#### 3.1. Action research

The present investigation is set up within an action research paradigm. Action research in the L2 context has a practical orientation, and its main deliberation

is to find solutions to problems identified by teachers "in order to bring about changes and, even better, improvements in practice" (Burns 2). Typically, once a problem has been identified, such research involves the following sequence of stages: 1) planning the action, 2) acting, that is, putting the plan into action and collecting data (e.g., through tests, surveys or journals), 3) observing the results of the intervention through analysing and interpreting the data, and 4) reflecting on the intervention and, if needed, preparing a new plan for a revised intervention (Burns 2010; Kemmis & McTaggart 1998).

## 3.2. The teaching context

The action research was implemented at Adam Mickiewicz University in Poznań within the *Speaking and Writing* subcourse for first-year students of Dutch Studies. The subcourse, together with *Grammar* and *Textbook Course*, forms a language course called *Practical Learning of Dutch*. All students were divided into two randomly created groups and were at the beginner level, as they had no or very basic knowledge of Dutch. In the winter semester 2020/2021, one group attended classes provided by three Polish teachers and the other group by one Polish teacher and two native speakers of Dutch.

In the first semester, the topics handled in the class were as follows: 1. Who are you?; 2. Planning; 3. Eating out; 4. Supermarket; 5. Clothing; 6. Living; 7. Doctor. The students attended 90-minute classes¹ twice a week. *Speaking and Writing* classes aim to develop students' communicative oral and written competence. The textbook provides dialogues, texts, vocabulary, basic grammar rules and speaking and writing exercises. Usually, the traditional presentation-practice-production (*PPP*) model is followed, as the teacher first introduces the main topic with dialogue(-s), and the students analyse the new vocabulary and grammar. Thereafter begins the controlled and free practice in pairs and/or groups of three or four students (in channels on MS Teams). The teacher monitors group work by entering each channel for a few minutes and answers possible questions about grammar or vocabulary, listens to the students' speaking and gives feedback.

On 28th October the nationwide 'Women's Strike' took place under the slogan "I'm not going to work". Numerous university teachers and students took part in the demonstrations. The students who had classes on that day informed the teacher that they were not going to show up. The teacher then agreed with the students that he would prepare a video lecture explaining the new topic which was *planning*. To minimalize the delay, only the first half of the next online class was dedicated to the practice of the topic, which normally would be done in 90 minutes. As for *Speaking and Writing*, the missed class needed to be compensated fast and

<sup>&</sup>lt;sup>1</sup> Because of covid-19 pandemic in the academic year 2020/2021 all classes for students of Dutch Studies at Adam Mickiewicz University were held online on MS Teams.

efficiently for two reasons. Firstly, since all components of *Practical Learning of Dutch* are interrelated, skipping even one class would influence the overall course dynamics. Secondly, the course timetable is hectic since the students are supposed to reach the A2/A2+ level at the end of the first year. The material destined for each semester needs to be done in order to avoid a backlog snowball effect.

## 3.3. Research questions

The main aim of the action research was to investigate the potential of the flipped classroom as an option for dealing with emergency situations in teaching Dutch as a foreign language at beginner level. The following research questions were formulated:

- 1. How effective does the flipped classroom turn out to be in terms of the grammar and vocabulary test scores?
- 2. What is the participants' evaluation of the flipped classroom material and procedure?
  - 3. What specific benefits and downsides of the procedure do they list?

## 3.4. Participants

The group that underwent the intervention comprised 24 Dutch majors, 20 women and 4 men. They were all Polish and their mean age was 20.3. Ten of the students had pursued or were pursuing also other fields of study, e.g., English Studies, Biotechnology, Law, Film Studies, Management.

#### 3.5. Data elicitation tools

In order to collect data, two online tools were used: Kahoot! and Google Forms. Kahoot! consisted of ten questions, seven of which were about how a specific hour should be told, and three were vocabulary questions. The questions were displayed by the teacher on the screen during the online class. The students had to read the question and were provided with four possible answers, three of which were incorrect. Next, the participants had to click on one answer on their smartphones. The students had 20 seconds to read and answer every question.

The evaluation survey was conducted one week after the online class occurred. The survey was held online via Google Forms. It consisted of three parts. In the evaluation part of the survey, the students responded to five-point Likert-type items according to the following scale: 1 = totally disagree, 2 = disagree, 3 = hard to say, 4 = agree, 5 = completely agree. The first part of the survey was related to the video recording provided by the teacher, the second one to the students' experience with

the flipped classroom. In these two parts, not compulsory open questions were also asked. The last part aimed at the collection of data such as gender, age and other studies that the students were pursuing.

#### 3.6. Procedure

The structure of this intervention consisted of three stages: *before class*, *during class* and *after class*, illustrated in Table 2.

	Inquiry	Means
Before class	Transfer of knowledge	Video lecture
During class	Practice activities	45-minutes online class (Kahoot!, listening activity and speaking activities)
After class	Reflection	Survey

Table 2. The structure of the L2 Dutch flipped classroom (following Christensen 227)

#### Before class:

The students were provided with a 23-minute video lecture recorded by the teacher and uploaded on the university e-learning platform Moodle. It was available for seven days and had no views limits. The students were also provided with a forum so that they could ask questions or interact with others. No posts were published. The main objective of the recording was to transfer the knowledge about the textbook topic *planning*, which was: telling the time (incl. parts of the day, days and months) and introducing simple inversion in Dutch after phrases such as *om 4 uur* ("at 4 o'clock"), *op donderdag* ("on Thursday") or *in 2013*. In the video, the teacher made use of the textbook and of an online clock to show examples of telling the time.

#### During class:

During class, the usual presentation was skipped. In order to check the students' knowledge, they played a Kahoot! related to the video. The remaining time of the online class was dedicated to one listening exercise in which the teacher read a timetable of a train going from Poland to Norway with five changes and the students had to fill the missing departure and arrival times of the train to the respective city. Next, the students practised the topic in pairs through three speaking exercises. The main objective of the first exercise was to practise simple inversion. The students were provided with five questions, such as "What do you

do at 5 o'clock?" and answered them by starting with the adverbs of time. The second exercise was an information-gap activity in which the students arranged a meeting according to a timetable with activities and one free slot during the week. The third exercise stimulated practice of large numbers and getting familiar with some general facts (mostly geographical data) about the Netherlands. Each student was provided with five facts and five questions that he/she had to create and ask the other students (e.g. Student A: The highest mountain in the Netherlands is \_\_\_\_\_; How many meters \_\_\_\_\_?; Student B: The highest mountain in the Netherlands is 322 meters high).

#### After class:

After the class, the students still could use the forum on the e-learning university platform. No posts were published. As homework, the students had to write a paragraph of at least 120 words about their ideal day using the vocabulary related to the topic *planning*. The texts were published individually by each student on the university file hosting platform OneDrive. One week after the flipped classroom intervention, the students filled in an evaluation survey via Google Forms.

## 4. Results

The results of the test conducted in class through Kahoot! were as follows: the mean score value was 6.91 (out of max. 10), with the standard deviation value of 1.95. The students' scores ranged between 10%, one correct answer, and 100%, all ten answers were correct, with a mean of 69%. Nineteen out of 24 participants scored 60%, six correct answers, or more.

Figure 1 shows that only two of the students (out of the total of 23 who filled in the survey) had been familiar with the concept of the flipped classroom and had experienced it before.

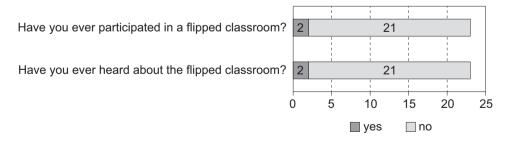


Fig. 1. The students' experience of the flipped classroom (N = 23)

Table 3 presents the data on the stude	nts' opinions about the video lecture
used before the lesson.	

Item	Mean	SD	Mode
The quality of the video was sufficient	4.74	0.53	5
The length of the video was sufficient	4.52	0.65	5
The material was clear to me	4.74	0.44	5

Table 3. Descriptive statistics on the students' evaluation of the pre-class material (N = 23)

As indicated by the high mean scores, the students agreed that both the quality and the length of the video were sufficient, and the material presented in the recording was clear.

The students' feelings about the flipped classroom are illustrated in Table 4.

Item	Mean	SD	Mode
The video fulfilled my expectations	4.78	0.41	5
I felt I was well prepared for the next class	4.30	0.60	4
I enjoyed this type of class	4.09	0.90	4
I would like to have more such classes in the future	3.57	1.10	3, 4, 5

Table 4. Descriptive statistics on the students' evaluation of the intervention (N = 23)

The data in Table 4 point to the students' reported satisfaction with the procedure and the enjoyment that it stimulated. A greater variety of responses was revealed for the students' willingness to have more flipped classes in the future. This may be related to some of the problems that were expressed in the answers to the open-ended questions.

The students pointed out two main disadvantages. One of them was the lack of possibility to ask questions on an ongoing basis, which is exemplified by this quotation: "(...) I have no problem reworking the material based on the videos you have prepared, although I prefer normal classes, for example, because of the possibility of asking questions" (ST16).

The other frequently mentioned disadvantage was the lack of verbal contact with other participants, as illustrated by the following quote: "No possibility of answering questions on an ongoing basis or conversation with others" (ST12).

Furthermore, three out of the 23 participants pointed out that they liked this one-time flipped classroom but would prefer to keep it as an "emergency solution": "This is a good solution for emergencies, but I certainly wouldn't want every class to be in such a form" (ST5).

On the other hand, some advantages of the flipped classroom were given as well. For example, the participants underlined that what they appreciated the most was the possibility to stop the recording and watch it over: "I did like the possibility to watch the class over and analyse the material again, the material was presented clearly and concisely and supported by examples from everyday life" (ST11).

Another benefit from the perspective of the participants was the flexibility regarding working on the content: "I could easily catch up the missed class at a time that was convenient for me, it was not imposed on me" (ST17) or "We could watch the video whenever we wanted to, without having to adjust" (ST19).

Finally, some remarks on the pre-class material were given by the participants. The students underlined especially the use of examples in the recording: "(...) the material was presented clearly and concisely, supported by examples from everyday life" (ST11) and "I enjoyed the exercise with the online clock. The teacher randomly showed times and said them out loud in Dutch" (ST14).

## 5. Discussion and conclusions

In relation to the first research question, the test results indicated that the flipped classroom was effective in terms of grammar and vocabulary scores. However, this verification in the form of Kahoot! also confirmed that the flipped classroom needs students' engagement since it shifts the responsibility from the teacher to students (Hung, "Design-Based Research: Redesign..." 181-182). A demanding workload and a lack of proper preparation are often quoted as factors inhibiting learners' engagement (Zou et al. 21). Proper preparation is therefore essential, especially in the event of elementary foreign language students with a low level of self-regulation (Zou et al. 20). Emergency flipped classrooms, which leave little preparation time, thus seem to be most suitable for more mature and autonomous learners, who need less guidance from the teacher. Based on this one-time intervention it is impossible to come to a far-reaching conclusion in this respect. However, the present participants, despite being beginner learners of Dutch, coped well with the flipped classroom as they were experienced, mature and multilingual college-age learners, with extensive experience with language learning and supposedly high levels of self-regulation skills. This corroborates the findings reported in previous research that the success of flipping the classroom depends on many factors, including the students' characteristic such as gender, previous experiences, culture, socioeconomic aspects (Zappe & Litzinger 55) or individual traits (Chuang et al. 2).

The second research question concerned the students' opinions about the flipped classroom material and procedure. The results of the survey showed that

the participants were overall positive about this intervention, especially about the pre-class material that fulfilled their expectations. Despite the generally positive reception, the most varied (and the least positive) attitudes were revealed in relation to the students' willingness to have more flipped classrooms in the future. As admitted by the participants in the survey, only two out of 23 had had any experience with the flipped classroom approach before. Possibly, their limited prior experience with this method might have caused a feeling of insecurity, which is an issue discussed in the literature (e.g., Zappe & Litzinger 55).

The third research question regarded the benefits and downsides of the procedure listed by participants. The students underlined the advantage of having the possibility to watch the video material many times, which is also found in the literature (e.g., Chen Hsieh et al. 2; McGivney-Burelle & Xue 484). Furthermore, the students mentioned the more flexible learning environment which is frequently brought up in the research on the flipped classroom (e.g., Adnan 16; Hung, "Flipping the classroom for English..." 92). As for the downsides, the survey responses revealed that the students would rather ask questions immediately when they realize that they do not understand an issue. Teacher-student, as well as peer-to-peer interaction, is crucial in the flipped classroom (Mehring 5). The participants in this intervention did not make use of the possibility to interact with the teacher or peers by posting on the e-learning platform in the pre-class phase, which can be explained in two ways. Firstly, interaction requires engagement, which is not possible to achieve in the case of one-time intervention. Secondly, because of the pandemic, the students had only experienced distance learning at the university and had not gotten to know other students in person.

The flipped classroom poses a challenge to the teacher, who has to find out the students' needs and preferences, as well as devoting extra time for preparation (Willis 286). Moreover, students' work needs to be monitored through the whole process (Zou et al. 21). However, it seems that the benefits of flipping the classroom in emergencies are worth overcoming these challenges. Despite students' varied responses about their willingness to have more flipped classrooms, the overall evaluation was positive enough to consider the flipped classroom as a promising option for emergency interventions in the future.

It should be acknowledged that the study had certain limitations, one of them being that it was a one-time intervention with one group of students. Although the data are not generalizable, which is typical of action research, they point to the potential of the flipped classroom. According to the survey results, the students' perceptions of this intervention were overall positive. However, the flipped classroom format needs to be repeated with the same group and other groups at the beginner level to make it possible to compare the results and to contribute to the development of the emergency L2 Dutch flipped classroom in the university context.

## 6. Future directions

The reflection on this action research study led to some future pedagogical directions regarding the procedure. Firstly, the recordings should be shorter or should be cut into pieces of 10–15 minutes. This would keep the students attentive and the content would be more effectively processed (Zou et al. 20). Secondly, the recording should be accompanied by interactive tasks and games. This would allow the students to ensure that they are familiar with the new material, at the same time diversifying the learning process and making it more attractive. Hung suggests that gamified flipped classroom might help students to overcome the fear of speaking a foreign language in class (Hung, "Gamifying the flipped classroom..." 304). Additionally, a post-intervention self-assessment activity, conducted in an attractive and stress-free format, could be added. Further developing the students' self-regulation skills, it would also allow the students to get instant feedback on their learning process related to the new material.

To encourage students to interact with the teacher as well as with other students, detailed information about the stages of the flipped classroom should be provided. Diverse, interactive platforms for exchanging ideas as part of the pre-class activities would also be recommended, e.g., a group on Facebook (see Adnan 2017) or Padlet – an online Post-it board that can be shared by the teacher with all students. The integration of technology media may contribute to their greater interaction both in and outside class (Zainuddin & Halili 330).

## Bibliography

- Adnan, Müge. "Perceptions of Senior-Year ELT Students for Flipped Classroom: A Materials Development Course". Computer Assisted Language Learning, vol. 30, no. 3–4, 2017, pp. 204–222.
- Bergmann, Jonathan, and Aaron Sams. Flip Your Classroom: Reach Every Student in Every Class Every Day. International Society for Technology in Education, 2012.
- Bishop, Jacob, and Matthew Verleger. "The Flipped Classroom: A Survey of the Research". 2013 ASEE Annual Conference & Exposition Proceedings. 2013, pp. 1–18, DOI. 10.18260/1-2-22585
- Buitrago, Carolina R., and Juliana Díaz. "Flipping Your Writing Lessons: Optimizing Time in Your EFL Writing Classroom". *Innovations in Flipping the Language Classroom*, edited by Jeff Mehring and Adrian Leis. Springer, 2017, pp. 69–91.
- Burns, Anne. Doing Action Research in English Language Teaching: A Guide for Practitioners. Routledge, 2010.
- Chen Hsieh, Jun Scott, et al. "Using the Flipped Classroom to Enhance EFL Learning". *Computer Assisted Language Learning*, vol. 30, no. 1–2, 2016, pp. 1–21.
- Christensen, Erik. "A flipped classroom course structure". *The Flipped College Classroom: Conceptualized and Re-conceptualized*, edited by Lucy Santos Green et al. Springer International Publishing, 2018, pp. 227–228.

- Chuang, Hsueh-Hua, et al. "Which Students Benefit Most from a Flipped Classroom Approach to Language Learning?" *British Journal of Educational Technology*, vol. 49, no. 1, 2016, pp. 56–68.
- Dylak, Stanisław. "Anticipatory education as a promising educational model for the *smartphone* era". Educational and socio-cultural competences of contemporary teachers, edited by Jacek Pyżalski. TheQ studio, 2015, pp. 56–80.
- Hockly, Nicky, and Gavin Dudeney. "Current and Future Digital Trends in ELT". *RELC Journal*, vol. 49, no. 2, 2018, pp. 164–178.
- Hung, Hsiu-Ting. "Design-Based Research: Redesign of an English Language Course Using a Flipped Classroom Approach". *TESOL Quarterly*, vol. 51, no. 1, 2017, pp. 180–192.
- ---. "Flipping the Classroom for English Language Learners to Foster Active Learning". *Computer Assisted Language Learning*, vol. 28, no. 1, 2014, pp. 81–96.
- ---. "Gamifying the Flipped Classroom Using Game-Based Learning Materials". *ELT Journal*, vol. 72, no. 3, 2018, pp. 296–308.
- Kemmis, Stephen, and Robin McTaggart. *The action research planner*. Deakin University Press, 1988.
- McGivney-Burelle, Jean, and Fei Xue. "Flipping Calculus". *PRIMUS*, vol. 23, no. 5, 2013, pp. 477–486.
- Mehring, Jeffrey. "The Flipped Classroom". *Innovations in Flipping the Language Classroom*, edited by Jeff Mehring and Adrian Leis. Springer, 2017, pp. 1–9.
- Raport o stanie edukacji 2012. Instytut Badań Edukacyjnych, 2013, pp. 1–220, http://biblioteka-krk.ibe.edu.-pl-/opac\_css/doc\_num.php?explnum\_id=414. Accessed 15 June 2021.
- Teng, Mark Feng. "Flip Your Classroom to Improve EFL Students' Speaking Skills". *Innovations in Flipping the Language Classroom*, edited by Jeff Mehring and Adrian Leis. Springer, 2017, pp. 113–122.
- Turan, Zeynep, and Birgul Akdag-Cimen. "Flipped Classroom in English Language Teaching: A Systematic Review". *Computer Assisted Language Learning*, vol. 33, no. 5–6, 2019, pp. 590–606.
- Van Alten, David C.D., et al. "Effects of Flipping the Classroom on Learning Outcomes and Satisfaction: A Meta Analysis". *Educational Research Review*, vol. 28, 2019, pp. 1–18.
- Wang, Jun, et al. "Enhancing Beginner Learners' Oral Proficiency in a Flipped Chinese Foreign Language Classroom". *Computer Assisted Language Learning*, vol. 31, no. 5–6, 2018, pp. 490–521.
- Willis, Linda-Dianne. "Implications for Pedagogy: Flipping the Classroom to Engage Pre-Service Teachers". *The Flipped Classroom: Practice and Practices in Higher Education*, edited by Carlos Reidsema et al. Springer, 2017, pp. 273–287.
- Zainuddin, Zamzami, and Siti Hajar Halili. "Flipped Classroom Research and Trends from Different Fields of Study". *The International Review of Research in Open and Distributed Learning*, vol. 17, no. 3, 2016, pp. 313–340.
- Zappe, Sarah E., and Thomas A. Litzinger. "Considerations When Evaluating the Classroom Flip Instructional Technique". *The Flipped College Classroom: Conceptualized and Re-conceptualized*, edited by Lucy Santos Green et al. Springer, 2016, pp. 51–62.
- Zou, Di. "Gamified Flipped EFL Classroom for Primary Education: Student and Teacher Perceptions". *Journal of Computers in Education*, vol. 7, no. 2, 2020, pp. 213–228.
- Zou, Di, et al. "A Systematic Review of Research on Flipped Language Classrooms: Theoretical Foundations, Learning Activities, Tools, Research Topics and Findings". *Computer Assisted Language Learning*, 2020, pp. 1–27, doi: 10.1080/09588221.2020.1839502.