



Teacher Educators' Perceptions of Flipped Classroom in Teacher Education: Insights from EFL Teacher Educators in Norway

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Abstract

The Flipped Classroom (FC) is a popular pedagogical instruction model in education with a steady increase in the number of studies in teacher education (TE). However, few studies focus on teacher educators' perspectives on how the FC is used for subject-disciplinary teaching and learning in TE. This article explores teacher educators' perceptions regarding using the FC with student teachers (STs) in the field of English as a foreign language (EFL) in Norwegian primary and lower secondary school teacher education. Through an online survey and in-depth interviews, teacher educators' experiences with the FC are examined, revealing both out-of-class and in-class activities adopted in EFL. Meanwhile, teacher educators' perceptions of the FC, with three pairs of advantages and challenges, were investigated. Lastly, implications and suggestions for teacher educators on enacting the FC are provided.

Keywords

Flipped Classroom, teacher education (TE), teacher educators' perceptions, English as a foreign language (EFL), information and communications technology (ICT)

Introduction

Increasingly, teaching and instructional design in teacher education emphasize student-active and learner-centered teaching methods, such as the Flipped Classroom (FC) (Bergmann & Sams, 2012; Helgevold & Moen, 2015; Hwang et al., 2019a). As a contemporary teaching approach and pedagogical instruction model, the FC—swapping instruction and homework (Bergmann & Sams, 2012)—has gained popularity in teacher education (TE) due to several advantages, including the promotion of active learning (Akçayir & Akçayir, 2018; O'Flaherty & Phillips, 2015), the facilitation of higher-order thinking (Hwang et al., 2019b; Yurniwati & Utomo, 2020) and the improvement of learning performance (Kurt, 2017; Jeong et al., 2018). Especially during the Covid-19 lockdown, many universities adopted online teaching to maintain teaching and learning, and the FC has drawn more researchers' attention in education (Campillo-Ferrer & Martínez2021; Khodaei et al., 2022; Tang et al., 2020; Yurniwati & Utomo, 2020).

Most studies on the FC in TE seem to focus more on the perceptions of FC from student teachers (STs) than from teacher educators (Han & Røkenes, 2020). Research in TE found that STs generally have positive opinions of the FC, and believe the FC can promote academic achievement, self-learning, flexibility, and innovation (González-Gómez et al., 2016; Kurt, 2017; Jeong et al., 2018; Ng, 2018). Studies also find that despite the generally favorable attitudes towards the FC, STs think it is challenging, in terms of time management and responsibility (Conner et al., 2014). Moreover, STs' perceptions of the FC are closely related to their learning experience with the FC, and impact learning outcomes (Conner et al., 2014).

However, teacher educators play a central role in “enacting new instructional approaches” (Revelle, 2019, p. 96). Furthermore, teacher educators act as important “role models” (Smith, 2011, p. 343) in preparing STs to integrate technology in future classrooms such as the FC (Røkenes & Krumsvik, 2016). In addition, studies show that teachers' and teacher educators' perceptions of information and communications technology (ICT) influence how they integrate, experiment, and implement novel teaching approaches with digital technologies (Galanouli et al., 2004). Also, teacher educators contribute significantly to the development of STs' subject-disciplinary knowledge and professional competencies, such as how to teach EFL with ICT (Smith, 2011). Yet a recent scoping review on the FC in TE found that only two out of 33 studies have examined teacher educators' perceptions of the FC (Han & Røkenes, 2020). This study explores teacher educators' perceptions of the FC in teacher education and offers insights from teacher educators' standpoints. The following research questions are examined:

RQ1: What experiences with the Flipped Classroom approach do teacher educators report?

RQ2: How do teacher educators perceive the Flipped Classroom in teacher education?

Review of previous research

The flipped classroom and student teachers' perceptions

Most research on the FC in TE involves examining the participants' perspectives, including STs and teacher educators. While some studies have investigated STs' perceptions of FC, other studies find similar or contrasting findings. For example, González-Gómez et al. (2016) examined STs' perceptions of the FC through a post-task survey in Spain. The authors reported that most participating STs found the FC useful for both achieving learning objectives and improving engagement. STs in this study also perceived the FC as more learner-oriented than a traditional classroom setting. Ng (2018) interviewed eight STs through a focus group meeting in Hong Kong SAR, China, and found that all of them liked the FC. Yet, there were STs who perceived FC negatively. Conner et al. (2014) revealed STs' negative perceptions of the FC through focus group interviews in the United States. The participating STs felt that the learning activities used in the FC were a waste of time and did not contribute to learning.

Flipped classroom and teacher educators' perceptions

The number of studies focusing on teacher educators' perspectives is limited (Han & Røkenes, 2020). Moreover, in these studies, researchers' self-reflections are the main research approaches used by Ford (2015) and Tomas, Evans, Doyle, and Skamp (2019), presenting some methodological limitations. Ford (2015) shared her experiences with flipping a mathematics course for elementary school preservice teachers. She reported that her students “are actively engaged in learning” (p. 376) and felt she got to know her students “better than in...

traditional lecture classes” (p. 378). She concluded that her experiences had only strengthened her desire to continue implementing the FC. Similarly, Tomas et al. (2019) wrote a “narrative account” (p. 8) of the first and second authors’ own experiences of enacting a flipped classroom for preservice teachers in a science and sustainability education course.

As both researchers and implementers of the FC, the authors of these two studies provided firsthand data about their perceptions of the approach. However, it is equally valuable to yield common thoughts shared by more teacher educators to understand their perceptions and reduce the possible risk of bias. The current study aims to comprehensively understand teacher educators’ perceptions of the FC using a mixed-methods research design and multiple data collection methods.

Methodology

A mixed-methods sequential explanatory design was adopted to allow a broad and deep insight into the FC from teacher educators’ viewpoints. The research design consisted of two distinct phases: a quantitative phase followed by a qualitative phase (Creswell et al., 2003). Quantitative research can provide “baseline information” and allow researchers to explore a phenomenon in breadth by avoiding “elite bias” (Johnson et al., 2007, p. 115). On the other hand, qualitative research can offer a deep understanding of participants’ beliefs and allow researchers to construct a holistic picture for answering research questions (Creswell & Poth, 2018).

First, quantitative data were collected from the respondents to understand teacher educators’ experiences with and perceptions of the FC. Second, by building on the statistical results from the quantitative phase, qualitative data were collected and analyzed to help explain and refine the results by exploring teacher educators’ insights in depth (Creswell et al., 2003).

Data collection

Two instruments, an online survey and in-depth interviews, were adopted to collect data. A pilot survey was first conducted among three educators in higher education to assist in the planning and modification of the final version of the survey. Afterward, an online survey was developed (see Appendix A and Figure 1 in the supplementary materials), including 26-questions with five multiple-choice questions, 19 questions using a 5-point Likert scale, and two open-ended questions.

Interviews can collect detailed information regarding interviewees’ experiences and yield “rich and meaningful data” (Knox & Burkard, 2009, p. 566) on their beliefs. Thus, in-depth interviews with teacher educators were used to collect qualitative data regarding their perceptions of the FC. Based on a descriptive statistical analysis of the collected survey data, an interview protocol was developed and applied in a pilot interview. After the pilot interview, a finalized interview guide was advanced to explain further and interpret the survey results. The interview guide (see supplementary material Appendix B) consisted of six main questions with 15 follow-up questions covering teacher educators’ experiences of implementing the FC and their perceptions.

Participants and Sampling

Participants in the present study were EFL teacher educators in Norwegian primary and lower secondary school TE programs. We distributed the online survey by email—through a national professional list—to EFL teacher educators in 14 higher education institutions with

EFL teacher education programs in Norway. The prerequisite to participating in this survey was that participants had implemented the FC in their teaching. Given this precondition, we collected responses from 25 teacher educators (n=25, see demographic information in the supplementary material, Figure 2).

Participants for the interviews were voluntarily recruited from those who participated in the survey. Ten teacher educators (n=10, see the demographic information in supplementary material, Figure 3), who worked in the field of TE for EFL in six different universities in Norway and had implemented the FC in their teaching, were invited to participate in in-depth interviews.

Among the ten participating teacher educators, their average teaching experience as a teacher educator was 10.4 years. Although all participating teacher educators worked in Norway, some originated from America and three countries in Europe. The participants' different cultural and educational backgrounds represented teacher educators' perspectives from different nations. The interviews were conducted in English and online using the virtual meeting platform Zoom and lasted for 30 to 60 minutes.

Data analysis

Descriptive statistics were used to analyze the survey responses to describe the most frequent answers and display the distribution of different replies. The statistical results provided simple summaries of these teacher educators' experiences and perceptions of the FC.

Thematic analysis, here understood as a "method for identifying, analysing and reporting patterns (themes) with data" (Braun & Clarke, 2006, p. 79), was used to analyze the interview data. A thematic analysis approach "can explore the context of teaching and learning at a level of depth" (Castleberry & Nolen, 2018, p. 808). We aimed to explore teacher educators' shared experiences and insight with the FC.

The transcription of the interviews resulted in approximately 45,000 words of qualitative data. Each of the transcribed interview texts was returned to the corresponding participant for member checking, to validate the trustworthiness of the present study's results. After participants' member checking, the interview data were imported and analyzed using NVivo 12, where the two research questions guided the analytic process.

Results

Teacher educators' experiences with the FC

While implementing the FC, teacher educators prepared various out-of-class activities for their STs, with video lectures being the most popular (96.2%), as shown in Figure 1. Similarly, as Figure 2 shows, teacher educators organized numerous in-class, group, and pair activities that were employed the most often (92.3%). Furthermore, as shown in Figure 3, the FC was implemented in diverse courses focused on different English skills and was enacted in pedagogical courses the most often (57.7%, illustrated as "Other" in Figure 3).

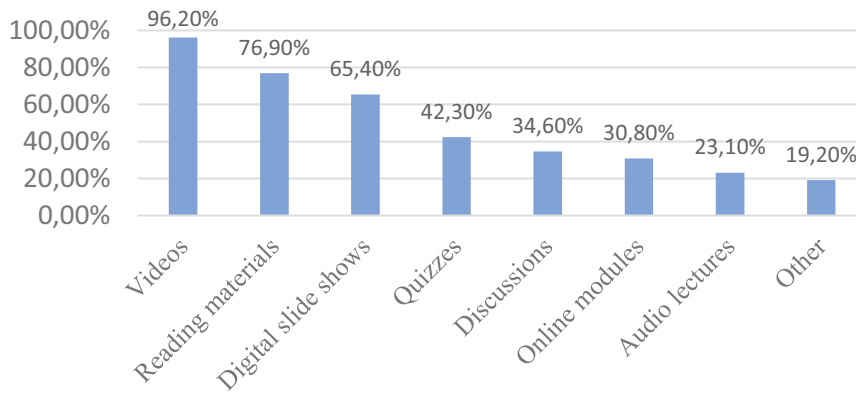


Figure 1 Out-of-Class Activities Prepared by EFL Teacher Educators

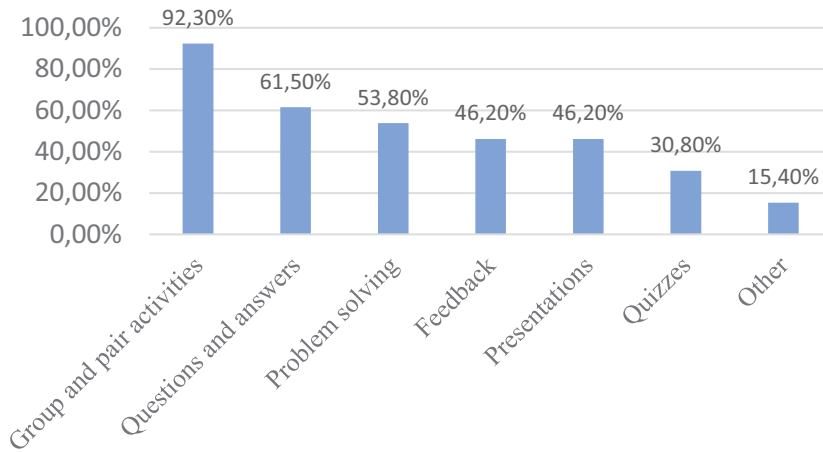


Figure 2 In-Class Activities Organized by EFL Teacher Educators

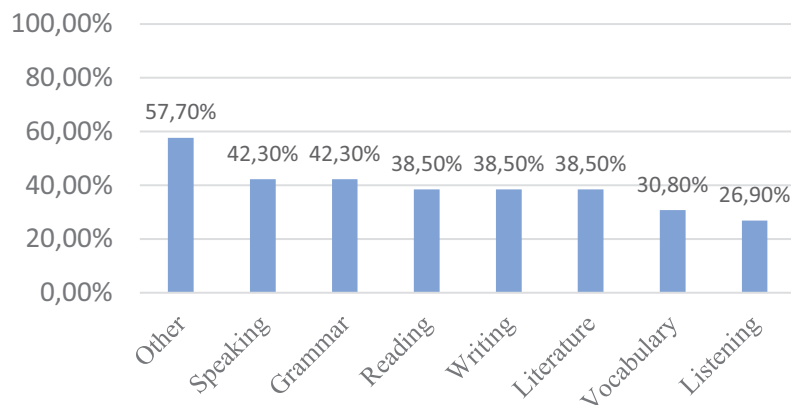


Figure 3 Courses with the FC Focusing on Different English Skills

Teacher educators' personal experiences with the FC were examined through eight 5-point Likert scale questions. 80% of the teacher educators agreed that preparing out-of-class activities for the FC was time-consuming, and 60% agreed that the FC required a higher working load. Meanwhile, higher technology competence seemed challenging for some teacher educators (32%). On the other hand, 80% could tell whether STs had partaken in out-of-class activities. More teacher educators reported that their STs were motivated to study out-of-class materials. In addition, none of the participants found it challenging to manage in-class activities. The Covid-19 lockdown triggered 20% of the participants to implement the FC. Nonetheless, 92% became interested in the FC due to the characteristics of the approach instead of the lockdown.

Besides the survey findings, the interviews provided an in-depth understanding of the teacher educators' experiences with the FC. Based on the thematic analysis, we constructed three themes with underlying sub-themes from the interview data, including *teacher educators' experiences*, *the FC's advantages*, and *the FC's challenges* (Figures 4-6).

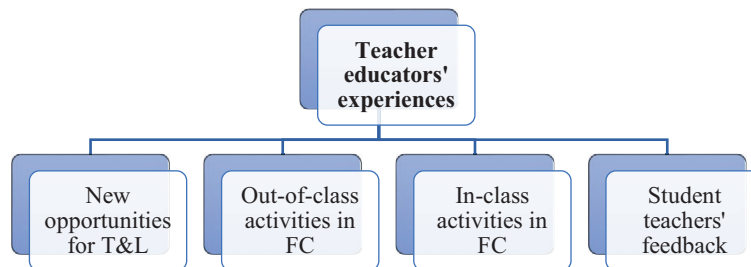


Figure 4 Themes Generated from Teacher Educators' Experiences with the FC

New opportunities for teaching and learning

Almost all teacher educators report that they cherish in-class time and try to find ways to free up class time for more active work, in-depth discussions, and problem-solving activities. Therefore, the FC is chosen as a solution, because this approach can move teacher educators' physical or digital lecturing time out-of-class:

We need time... to have nuanced discussions about them. (Participant₄)

Lockdown due to the global COVID-19 pandemic played a vital role as a trigger for some teacher educators to flip their classrooms:

I didn't start with what I would call flipped classrooms until March of last year [2020] when everything became digitized because of the lockdown. (Participant₁)

Out-of-Class Activities in the FC

Many teacher educators state that they provide a variety of out-of-class activities for STs to review, read, or prepare for in-class activities. These out-of-class activities included, but were not limited to, video and audio lectures, PowerPoints, reading materials, and online modules:

[...] like having Google Forms or having surveys or Padlets. That's a little bit more different than just seeing a video. (Participant₇)

While preparing out-of-class activities, several teacher educators experienced a change from being stressed to becoming more relaxed or recognized that preparatory work is not as hard as they expected:

When I initially started using this model for some of the lectures, I spent a lot of time preparing. [...] over the years, I became much more relaxed about this. (Participant₂)

I actually was surprised that it was not that much work. (Participant₅)

In-Class Activities in the FC

Some of the teacher educators describe that they provided various in-class activities when implementing the FC physically or digitally, typically group or pair activities and discussions:

My goal was variety, so I didn't want to see the same old thing every week. Every week we had the students work on different activities according to the theme of that particular week's class. (Participant₈)

Furthermore, these in-class activities emphasize collaborative and active learning:

They have to work and talk together then. Also, this is the course of English, so they have to speak English, they have to be active users of the language. (Participant₃)

Student Teachers' Feedback

"Like," "positive," "good," and "overwhelming(ly)" are terms frequently used when teacher educators talk about STs' feedback with being taught in an FC:

They have been extremely positive. We got a lot of good feedback from our students. (Participant₆)

However, teacher educators also notice STs' negative feedback, which is mainly concerned with technology and pressure:

Basically, the feedback we've gotten with complaints has to do with technical things. (Participant₃)

Teacher educators' perceptions of the FC in TE

Teacher educators perceived both potential advantages and latent disadvantages of the FC. All (100%) of the participants agreed that the FC could use class time efficiently. 92% agreed that the FC could improve interactions between teacher educators and STs. While improving interaction among STs, the number decreased a bit, and 84% agreed this affect occurred because of the FC. Furthermore, 88% agreed that the FC could improve STs' learning performance, 88% agreed that the FC could enhance STs' engagement in learning, and 64% agreed that the FC could improve the level of STs' motivation for learning. Compared with the abovementioned potential advantages of the FC, 96% of the participants agreed that viewing FC lecture materials in advance is essential to participate in the class activity successfully. However, this might be a latent pitfall of the FC, because if some STs did not view lecture materials in advance, it was likely that they could not successfully participate in the class activities.

In addition, 88% of the participants agreed that the FC was an appropriate teaching model for their teaching, and all (100%) would continue implementing this approach in future teaching. Meanwhile, 88% agreed that the FC is an appropriate teaching approach for physical and digital teaching, and 88% agreed that the FC was appropriate during the Covid-19 lockdown.

The interviewees were practitioners of the FC and observed both the advantages and challenges of it. They expressed numerous benefits with enacting the FC, which were categorized into the three facets illustrated in Figure 5. At the same time, they also voiced several disadvantages when implementing the FC, which were classified into the three patterns shown in Figure 6.

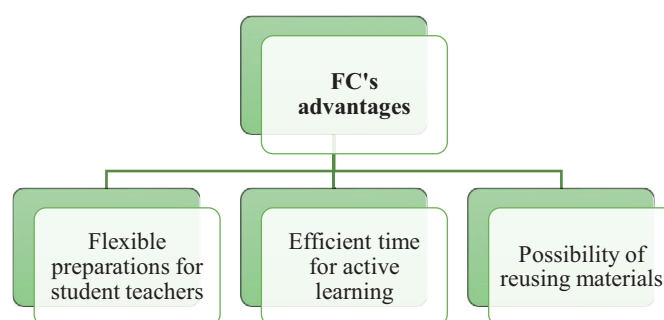


Figure 5 Themes Generated from Teacher Educators' Perceptions of the FC's Advantages

Flexible Preparations for Student Teachers

One of the advantages that teacher educators note is that STs have the freedom to manage their out-of-class time:

They can re-watch the parts they want, ... listen to my example again. ... It's easier for them to have the clarity. (Participant₉)

Efficient Time for Active Learning

Another advantage is that STs seem to participate in more high-quality activities with more motivation and engagement during the in-class time, based on the fact that STs come to the classroom prepared:

A clear benefit of the flipped classroom, my opinion is that it opens up possibilities to include more meaningful activities, student-centered activities. (Participant₂)

I think my students are more engaged now. (Participant₅)

Teacher educators advocate that the FC promotes more interaction between teacher educators and STs. Moreover, they express that they can better understand their STs' difficulties and misunderstandings and provide formative assessments:

It's also easier for me as an instructor to see where is it that they are in their learning, what do they need help with and to help them along the road, than when the spotlight is on me. (Participant₂)

Possibility of Reusing Materials

Teacher educators bring up other advantages of the FC, such as the possibility of reusing teaching and learning materials:

For me, the time is more worth using because I can see that I can possibly use it again when it's done well. (Participant₇)

In parallel with the perceived advantages, teacher educators have also perceived some drawbacks of this approach. Figure 6 illustrates three negative aspects of the FC based on teacher educators' perceptions.

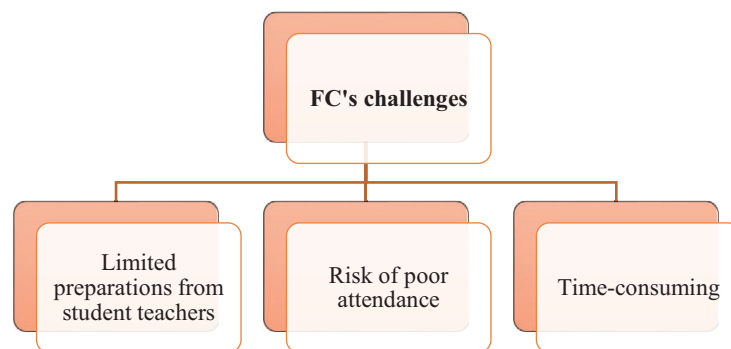


Figure 6 Themes Generated from Teacher Educators' Perceptions of the FC's Challenges

Limited Preparations from Student Teachers

One of the characteristics of the FC is that students need to work on the out-of-class activities that their teachers prepare for them and then come to class prepared. The process and completion of in-class activities depend on the students' preparation. Thus, one of the challenges that teacher educators mention is whether or not STs were prepared and how much knowledge they developed before coming to class:

It makes it very difficult for the teacher when students just boycott the setup. (Participant₃)

In addition, adequate and proper preparation demand STs' endeavors:

I just think that it takes more effort than traditional teaching. (Participant₁)

Risk of Poor Attendance

Teacher educators argue for the potential impact that the FC can have on STs' in-class attendance when they have prepared or not:

Because they have the lectures, they feel 'then I don't have to show up to class.' Some of them have misunderstood certain things completely. (Participant₄)

That might be a challenge as well if you feel that you would be totally embarrassing to come if you haven't watched the video and do the preparation tasks, so maybe you can lose some students when you flip the class. (Participant₆)

Time-Consuming

Teacher educators mention facing challenges with preparing activities for the FC. When trying out the FC for the first time, the majority point out that the preparation is both time and energy-consuming:

The biggest drawback is just that getting started takes time and creating the repertoire, creating the videos, creating the tasks beforehand, explaining to the students what a flipped classroom is and why, and getting some of them on board. (Participant₁)

While one of the advantages of the FC was the possibility of reusing materials, this likelihood is also perceived as a drawback that could hinder teacher educators from updating and re-developing their materials:

Maybe as a teacher, you get attempted to just reuse material from last year, when you actually shouldn't. You trick yourself into not being as a good teacher as you could be. (Participant₉)

Discussion

Combining Figures 5 and 6, an overall model of teacher educators' perceptions of the FC can be developed (see the supplementary material, Figure 4).

From teacher educators' perspectives, the advantages and challenges of the FC are two sides of the same coin, or tensions of three strings. The educators' three positive (Figure 5) and three negative (Figure 6) perceptions of the FC have a one-to-one correspondence. They can be paired as follows. STs have the freedom to choose when, where, and how to work on the out-of-class activities. However, there is a possibility that they come to class unprepared. Adequate or proper preparations can help STs learn actively in class, while some STs may choose not to show up to class, either because they are not prepared, or they think that they are well-prepared, and they do not need to come to class. Although it is time-consuming and may increase teacher educators' workload when preparing video lectures, reusing these materials is possible. Thus, it may save teacher educators' time in the long run.

Interpretations and Implications

Based on reports from the participants, this study revealed teacher educators' experiences with the FC, and outlined their thoughts about both the advantages and challenges. Participants were between 30 and 60 years old and were of both genders (see Figures 2 and 3 in the supplementary materials). Therefore, the research results of this study were representative of teacher educators of different ages and genders in EFL TE in Norway. As shown in Figure 4, the FC provided new opportunities for teaching and learning in TE, and more teacher educators enacted this approach with the advancement of educational tools (Ng, 2015). Teacher educators prepared various resources in advance, and STs viewed or studied these resources during their out-of-class time. In this manner of moving teacher educators' lecturing out of class, in-class time was freed up. Thus, when teacher educators and STs meet in the classroom—whether physical or digital—they could make the most of the in-class time for various activities that can promote both active learning and collaborative learning and “foster deeper understanding” (Ng, 2015, p. 150). Among different types of in-class activities, group and pair activities are used the most, which echo the findings of Bishop and Verleger (2013). Even though the link between the FC and active learning was “rarely explicitly addressed or operationalized” (Li et al., 2021, p. 17) in published studies,

teacher educators—as practitioners of the FC—noticed and declared the link in interviews. Teacher educators prepare diverse in-class activities requiring high-order thinking, which could promote active learning, focusing on developing STs' competency instead of the transmission of information. The benefits brought by active learning are well documented and include increasing students' learning performance (Bonwell & Eison, 1991) and students' engagement (Wolff et al., 2015). Similarly, when STs are engaged in pair or group discussions in the classroom, the FC can enhance their learning (Van der Linden et al., 2000) and critical thinking (Gokhale, 1995) by working together, which promotes collaborative learning (Korucu-Kış, 2021). Therefore, STs' feedback to the FC was positive, though they might have encountered problems concerning technology or pressure.

Meanwhile, this study also revealed that teacher educators perceived both advantages and challenges of the FC, by implementing this approach, as shown in Figures 5 and 6. Ng (2015) summarized “Merits and Issues of Flipping the Classroom” (p. 160) from previous research. Some findings from the present study echoed her research, such as the fact that the FC could maximize class time “on collaborative work with peers” (Ng, 2015, p. 161), and the preparation work “could be time consuming” (Ng, 2015, p. 161). On the other hand, some findings from this study supplemented Ng's research. For instance, the present study revealed one challenge brought by the FC was that it might hinder teacher educators from updating and re-developing their materials. From teacher educators' perspectives, the advantages and challenges of the FC are the tensions of three strings. Teacher educators' positive and negative perceptions of the FC correspond to each other, as explained at the start of this discussion and is elaborated on here. The FC creates flexible environments (Pearson & the Flipped Learning Network, 2013, cited in Hamdan et al., 2013). These allow STs to choose when, where, and how to work on the out-of-class activities. Still, some students may be liable to misapply this flexibility and come to class unprepared. Through preparations, STs can obtain prior knowledge that can help them learn actively in classroom. At the same time, some may decide not to go to the classroom because they do not prepare, or they think they have already had lectures from their teacher educators.

On the other hand, although preparing video lectures may be time-consuming and energy-consuming for teacher educators, they may reuse these materials. Thus, it may save teacher educators' time in the long run, which resounded with Hew et al.'s (2021) research that reusing resources “may make the flipped classroom less expensive in the long term” (p. 144). Overall, the tensions of the three strings can move towards either the advantages' or the challenges' directions. Teacher educators should do their utmost to make each tension advance to the direction of advantage. Through how teacher educators perceive the FC, some teaching behaviors can be predicted or suggested for teacher educators. For example, teacher educators must explain to STs how the FC works at the beginning of implementation. Some STs may have been accustomed to learning in a traditional lecture-based way. Therefore, teacher educators need to highlight the importance of STs' preparation before they come to class and spotlight the potential influence on in-class activities and learning outcomes by preparation. Meanwhile, teacher educators need to encourage STs to engage in in-class activities and underscore that only viewing video lectures out of class but without showing up to class is not ideal. In addition, teacher educators can reuse materials from previous FC teaching. However, teacher educators also need to improve and update materials by developing pedagogical knowledge and skills.

Suggestions for Teacher Educators

As Appendix B shows, one of the follow-up questions in the interview guide was asking the participants to provide suggestions for other teacher educators concerning the FC.

First, they suggested that the FC is worth trying for them to “spice up” (Participant₇) their teaching. It is also advisable to try FC “with small steps” (Participant₂); for example, implementing the FC in one lecture first instead of a whole course. Second, the success of the FC depends on both teacher educators’ and STs’ “commitment” (Participant₂), so teacher educators should discuss in advance with STs how the FC works and make “clear expectations” (Participant₃) of STs. Furthermore, teacher educators need to stress the importance of completing out-of-class activities before coming to class and participating actively in in-class activities. Last, when preparing out-of-class activities, such as a video or audio lecture, it is wise to “disregard this feeling of perfectionism” (Participant₁), because a live lecture “wouldn’t be perfect” (Participant₅) either. The participants also advised to limit the time-length of a video lecture, which should be within 20 minutes; 10-15 minutes is preferable. This is due to “the attention span” (Participant₂) and “feasibility of uploading files” (Participant₉). They suggested breaking down long lectures into digestible parts. In addition, “a sense of direction” (Participant₅), such as “guiding questions” (Participant₄), is helpful for STs while viewing a video lecture, and it is also advisable to ask STs to “pause and think and reflect” (Participant₆). Furthermore, the participants proposed a hint of reusing video lectures to avoid mentioning a date or a timeline.

Conclusions, Limitations, and Future Research

This study aimed to explore teacher educators’ perceptions of the FC. The findings were based on the statistical analysis of the data from survey responses and the thematic analysis of the data from in-depth interviews with EFL teacher educators in Norway. This study addressed the first research question regarding teacher educators’ experiences with the FC by outlining four aspects. Meanwhile, the present study answered the second research question regarding teacher educators’ perceptions of the FC by drawing on three advantages and challenges. At last, this study provided practical suggestions for teacher educators on implementing the FC. The present study contributes to our understanding of the FC in teacher education by providing viewpoints from teacher educators’ perspectives.

Since the participants in the present study were working in the field of TE for EFL in Norway, even though they came from several different countries, their perspectives might be constricted by the Norwegian context. Thus, it would be more insightful to hear teacher educators’ voices working in different countries. In addition, as a case study, the present study examined teacher educators’ perceptions of the FC in EFL teacher education. Research on perceptions of the FC from teacher educators of different subject disciplines could broaden the knowledge of the FC in TE. Furthermore, this study explored teacher educators’ perceptions of the FC through teacher educators who had implemented the FC. It would also be meaningful to discover teacher educators’ insights from those who dislike or refuse to try out the FC.

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