




SCIPOD

## INVESTIGATING THE BENEFITS OF THE 'FLIPPED CLASSROOM' IN TEACHER TRAINING

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# Investigating the Benefits of the ‘Flipped Classroom’ in Teacher Training

The ‘flipped classroom’ is an innovative educational approach that emphasises active learning, with the aim of increasing student engagement and academic performance. While educators in numerous disciplines have recently started experimenting with this approach, there is still a lack of solid research assessing its effectiveness in the field of teacher education. To fill this gap, Han Han and Fredrik Mørk Røkenes of the Norwegian University of Science and Technology have recently examined a multitude of studies focusing on flipped classroom approaches in teacher training environments.

The ‘flipped classroom’ method is a unique, student-centred approach designed to ‘flip’ the way in which teaching is traditionally carried out in classroom environments. In conventional learning environments, students are generally treated as passive learners, who are expected to first listen to their teachers, complete exercises at home, and then take tests to assess what they have learned.

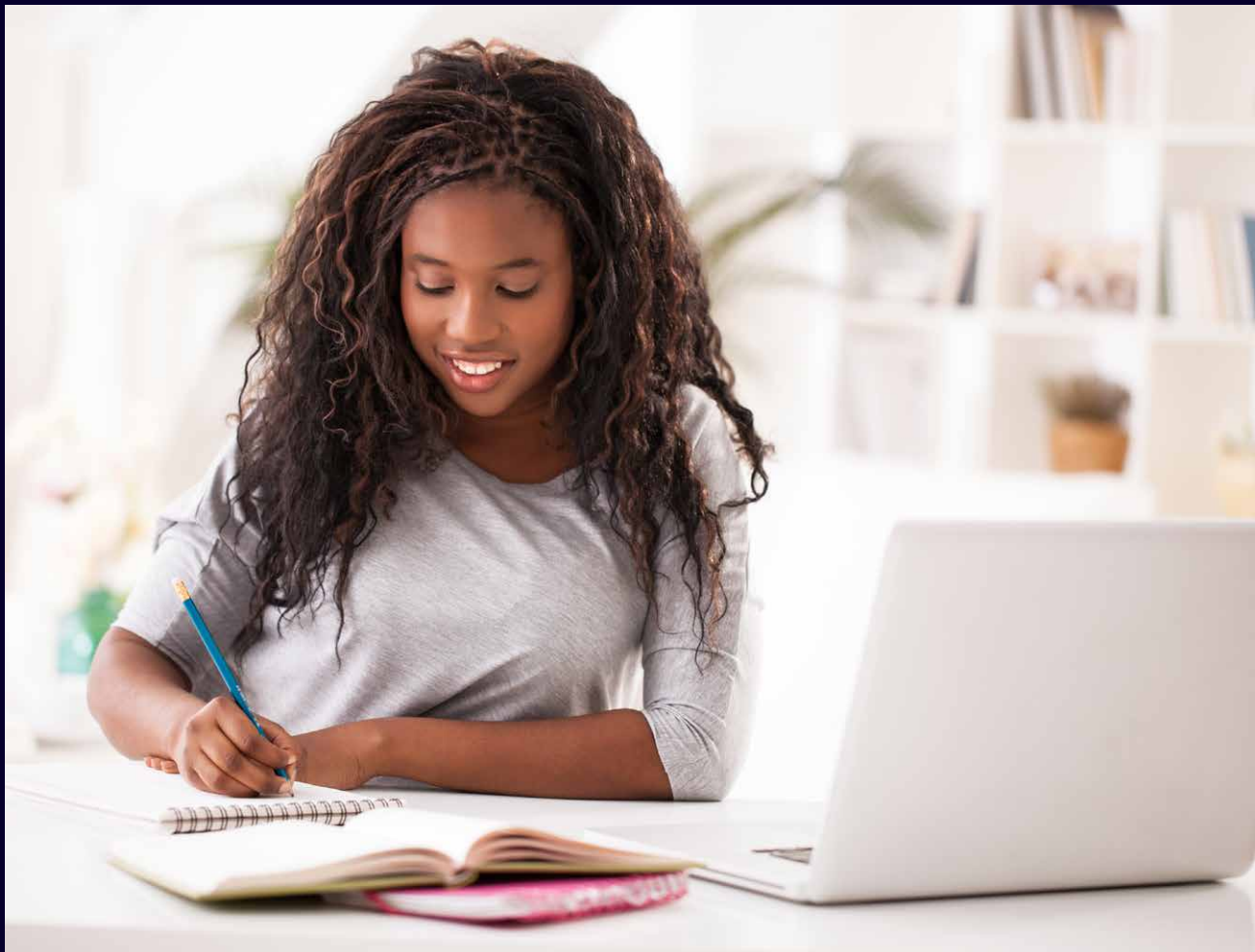
First introduced in the early 2000s, the flipped classroom approach inverts the structure of traditional education methods, asking students to first watch videos of lectures and read curricular material at home, and then take part in interactive exercises in class. This ‘flipped’ structure can result in more active and engaging learning experiences that encourage students to refine their knowledge in class, by collaborating with their peers and instructors.

Since it started gaining popularity around 2012, many educators have implemented flipped classroom approaches in primary, secondary, and higher-education settings, evaluating their benefits in terms of learning outcomes. However,

studies reviewing the ways in which the approach has been applied in the field of teacher education are still scarce.

Han Han and Fredrik Mørk Røkenes at the Norwegian University of Science and Technology recently published a review to synthesise the findings from 33 studies specifically focusing on the implementation of flipped classroom approaches in teacher training. By including numerous studies across many different countries, the researchers aimed to reveal important insights and trends regarding the advantages and disadvantages of this new educational approach.

To carry out their review, Han and Røkenes used a five-stage theoretical framework introduced by Arksey and O’Malley in 2005. Following this framework, they first identified the research question they were interested in examining. Secondly, they found studies that investigated this research question and selected the ones they thought were most relevant. Finally, they charted the findings of these studies and reported the overall findings across the 33 papers.



The key objective of their paper was to better understand the general trends in the use of flipped classroom approaches for training teachers and educators. In addition, they wished to summarise the main findings of the studies they analysed and their key focus areas.

The 33 studies they reviewed were all published between 2014 and 2019. Although almost one-third of them were carried out in the United States, Han and Røkenes found that flipped classroom approaches for teacher education had also been introduced in several countries in Europe, the Middle East, and Asia over the past few years.

In these studies, the flipped classroom approach was primarily used to train teachers in educational methods, science, and languages. To evaluate the outcomes of the flipped classroom approach, researchers had typically used a combination of different methods, out of which surveys were the most employed.

The two measures that were most often assessed by the surveys were student perceptions and academic performance. However, a couple of studies also assessed the perceptions of the trainers, as well as the trainees' self-regulated learning, anxiety, self-efficacy, and other self-reported reflections on performance.

In their analyses, Han and Røkenes observed some interesting trends in the general perceptions and outcomes of flipped classroom approaches for teacher training. Overall, most participants who were surveyed across the different studies had positive attitudes towards the approach. Many trainee teachers reported that it made them motivated to learn and more confident in their abilities.

In addition, many trainees felt that the flipped classroom method made classes more enjoyable, while also promoting flexible and independent learning. In a few cases, students felt that the approach placed too much responsibility on them and required good time-management, as their studies at home could adversely impact the outcomes of the classes.



Nonetheless, most participants ultimately felt that flipped classroom approaches were more engaging and interactive, and expressed their willingness to attend more flipped classes in the future.

Flipped classroom approaches typically require lecturers or educators to record their classes in advance. Students are then asked to watch videos of the classes at home on their digital devices.

Many of the studies reviewed by Han and Røkenes examined how trainee teachers perceived these digital means of content delivery. Interestingly, while some felt that the digital content was convenient and engaging, as it allowed them to take breaks or listen to parts of the lectures again, others struggled to concentrate on the lessons or encountered technical problems.

Another trend uncovered by the researchers was that most participants had positive perceptions of the flipped learning environment, as they felt that it increased their self-efficacy, motivation, and confidence, while also promoting more enjoyable classroom experiences. In addition, trainees were pleased with the new role that instructors played in their learning – offering ongoing support and assistance, rather than simply lecturing them.

Finally, while some studies found that flipped classroom methods improved the academic performance of trainee teachers, others found no significant difference. However, even in cases where the approach did not improve students' academic performance, it seemed to have positive effects on their motivation, engagement, and self-efficacy.

The scoping review carried out by Han and Røkenes gathered interesting insight about the overall potential and limitations of using flipped classroom approaches to train new teachers. Their analyses also unveiled several trends in how past studies implemented and evaluated these approaches for teacher training.

In the future, the study conducted by these two researchers could pave the way for more in-depth systematic reviews assessing the overall value and limitations of flipped classroom methods for educating teachers. This could ultimately promote the advancement of this innovative approach, as well as its integration in more teacher training programmes worldwide.

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