

Indicators of Academic Success for Pharmacy Students in a Flipped Classroom Setting

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Background/Purpose

Historically, students relied on extensive classroom time for challenging subjects, but the pandemic prompted a shift towards remote learning emphasizing self-paced study. The flipped classroom (FC) model empowers students to engage with learning materials before in-person sessions, fostering active learning and collaboration. Given the decline in national pharmacy licensure exam pass rates, exploring innovative teaching methods becomes crucial to enhance student readiness and adaptability. This study aims to identify indicators of academic success in flipped classroom teaching through a literature review of randomized controlled trials comparing flipped classroom and traditional classroom learning.

Methods

A search for studies on FC learning was conducted using the PubMed database, employing MeSH terms and keywords relating to education, healthcare, academic performance, and FC. The search yielded 16 potential articles, logged into a literature matrix to organize and summarize critical features. Selection criteria prioritized studies providing quantitative data to ensure robust analysis and conclusions based on empirical evidence, enhancing the credibility and reliability of this review for valid recommendations.

Results

The primary indicators of academic success in the FC model were recorded videos, assessment questions, and e-resources. The results of our literature review showed eleven studies (68.75%) with statistically significant ($p < 0.05$) improvement in examination scores assessing the FC model to the traditional classroom (TC) model. Two (12.5%) demonstrated statistically insignificant improvements, one (6.25%) concluded mixed results, and two (12.5%) focused on other outcomes. Notably, there was greater long-term retention, student satisfaction, and group collaboration in the FC model. Students found this approach allowed for closer interactions with instructors and received more clinically relevant knowledge than TC.

Conclusions

This review highlights the advantages of flipped classrooms by emphasizing students' empowerment in taking responsibility for their learning. However, the indicators of academic success for flipped classroom programs required a smaller ratio of instructors: students in group discussions, additional time spent outside the classroom to watch videos, and actively participating in clinical discussions set by the classroom.