

Unveiling Teacher Profiles based on Teaching Behavior in Team Teaching

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Rationale

Recently, collaboration between teachers has gained importance as a means to enhance teaching practices in schools (Jang et al., 2022). This trend has sparked increasing interest in team teaching (Walsh, 2020). Team teaching is an innovative approach where two or more teachers work together and share responsibility for the planning, delivery and evaluation of a course or courses (Author et al., 2014; Meirsschaut & Ruys, 2017). While effective teaching behavior has consistently shown a significant impact on student academic outcomes (Muijs et al., 2014), there remains a limited understanding of its manifestation within the specific context of team teaching (Forbes & Billet, 2012). This study aims to address this research gap by conducting a large-scale cross-sectional survey study on the self-reported effective teaching behaviors of teachers in the context of team teaching.

Theoretical framework

Over the past five decades, effectiveness research has consistently demonstrated the pivotal role of effective teaching behavior influencing students' academic outcomes (Kyriakides & Creemers, 2008; Muijs et al., 2014; Seidel & Shavelson, 2007). Effective teaching behavior is, following van de Grift (2007), teachers' behavior that has been shown to have an impact on student outcomes. Given the complex and multifaceted nature of effective teaching behavior (Kyriakides et al., 2009; Muijs et al., 2014), a range of specific behaviors has been identified as contributing to its effectiveness (Schneider & Preckel, 2017). In the current study, the ICALT framework by van de Grift (2007) was used as theoretical framework of teachers' effective teaching behavior. This framework comprises nine dimensions of effective teaching behavior that have been demonstrated to influence student academic outcomes (Maulana et al., 2021). These dimensions are: (1) creating a safe and stimulating learning climate, (2) organizing an efficient classroom management, (3) giving a clear and structured instruction, (4) providing an intensive and interactive lesson, (5) teaching learning strategies, (6) adapting lesson to educational needs, (7) setting minimum goals, (8) providing sufficient learning and instruction time, and (9) monitoring students' learning process (van de Grift, 2007).

Research Design

This study employed a large-scale cross-sectional survey to investigate teachers' self-reported effective teaching behavior during team teaching. The sample included 525 teachers with team teaching experience from 86 Flemish schools (across pre-primary, primary, secondary, and adult education) (see Table 1). The participants were recruited through a convenience sampling procedure. To assess effective teaching behavior, the Self-reported Effective teaching behavior during Team teaching (SET) questionnaire (9 items, $\alpha=.901$) was used (Author et al., submitted), based on the ICALT framework (van de Grift, 2007). Additionally, the Collaboration and Shared Responsibility in Team Teaching (CSTT) scale (Author et al., submitted) was used to measure collaboration (10 items, $\alpha=0.949$) and shared responsibility (5 items, $\alpha=0.879$) during team teaching. To identify distinct teacher profiles based on self-reported effective teaching behavior,

cluster analytic approaches were conducted (RQ1). Hierarchical cluster analyses were performed, using Ward's method and the squared Euclidean distance metric (Gore, 2000). Subsequently, k-means cluster analyses were conducted to verify the robustness of the cluster groups (Gore, 2000). Welch's two-sample t-tests were conducted to examine significant differences between the clusters in terms of the dimensions of effective teaching behavior. Furthermore, chi-square tests and one-way analysis of variance were employed to compare the profiles on various teacher characteristics (RQ2). Additionally, mean scores for collaboration and shared responsibility were compared among the profiles using one-way analysis of variance (RQ3).

Results

This study employed a large-scale cross-sectional survey to investigate teachers' self-reported effective teaching behavior during team teaching. The sample included 525 teachers with team teaching experience from 86 Flemish schools (across pre-primary, primary, secondary, and adult education) (see Table 1). The participants were recruited through a convenience sampling procedure. To assess effective teaching behavior, the Self-reported Effective teaching behavior during Team teaching (SET) questionnaire (9 items, $\alpha=.901$) was used (Author et al., submitted), based on the ICALT framework (van de Grift, 2007). Additionally, the Collaboration and Shared Responsibility in Team Teaching (CSTT) scale (Author et al., submitted) was used to measure collaboration (10 items, $\alpha=0.949$) and shared responsibility (5 items, $\alpha=0.879$) during team teaching. To identify distinct teacher profiles based on self-reported effective teaching behavior, cluster analytic approaches were conducted (RQ1). Hierarchical cluster analyses were performed, using Ward's method and the squared Euclidean distance metric (Gore, 2000). Subsequently, k-means cluster analyses were conducted to verify the robustness of the cluster groups (Gore, 2000). Welch's two sample t-tests were conducted to examine significant differences between the clusters in terms of the dimensions of effective teaching behavior. Furthermore, chi-square tests and one-way analysis of variance were employed to compare the profiles on various teacher characteristics (RQ2). Additionally, mean scores for collaboration and shared responsibility were compared among the profiles using one-way analysis of variance (RQ3).

during teaching. No significant difference was found in teaching experience ($F(1, 523) = 0.159, p = 0.690$), but there was a significant difference in team teaching experience ($F(1, 518.553) = 14.920, p < 0.001$), with teachers in profile 2 having more team teaching experience. Additionally, teachers in profile 2 used team teaching significantly more ($F(1, 510.267) = 28.654, p < 0.001$), compared to teachers in profile 1.

RQ3 Teachers in profile 2, characterized by high self-reported effective teaching behavior, reported significantly higher levels of collaboration compared to teachers in profile 1 ($F(1, 349.701) = 83.760, p < 0.001$). This indicates that teachers in profile 2 achieved better collaboration with their colleagues in team teaching. Additionally, teachers in profile 2 reported significantly higher scores for shared responsibility compared to teachers in profile 1 ($F(1, 468.661) = 35.713, p < 0.001$). This means that teachers in profile 2 experienced a greater sense of shared responsibility with their team-teaching colleague(s) for their students, in contrast to teachers in profile 1.

Conclusion

The present study identified two teacher profiles: one with average levels of effective teaching behavior and the other with high levels. The profiles differed significantly in terms of various teacher characteristics, including the number of team teaching colleagues, use of team teaching, team teaching experience, and team teaching percentage. The study reveals the importance of multiple team teaching colleagues; the more team teaching colleagues, the higher the self-reported effective teaching behavior. This should be considered when promoting team teaching in schools. Furthermore, teachers who use team teaching during teaching were more often categorized as teachers with high effective teaching behavior, compared with teachers who do not use team teaching during teaching but only in the preparation and/or the evaluation of a course. Therefore, the crux of team teaching lies in teaching together; being in front of the class together. Furthermore, teachers with a higher self-reported effective teaching behavior had more team teaching experience. This finding is consistent with previous research on effective teaching behavior in the context of solo teaching. The results of the current study showed that teachers with a higher self-reported effective teaching behavior used team teaching significantly more often.