Author:Chen, Z., KO, J.,Lei, J.   TITLE: Instructional quality disparities perceived with two classroom observation instruments, ICALT and TEACH: a mixed-method study on teacher effectiveness

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Title of your paper: Instructional quality disparities perceived with two classroom observation instruments, ICALT and TEACH: a mixed-method study on teacher effectiveness

Abstract (300 words)

Research accumulated has suggested that narrowing instructional quality gaps can improve educational equity and the well-being of children in social and economic backgrounds. Considering that the disparity of instructional quality may affect educational inequality across different regions in China, this study explored how teaching quality varied in 30 lessons primary English classrooms in an economically disadvantaged province in China. This study adopted a mixed-method strategy with quantitative classroom observation data to select four lessons contrastive in teaching quality for subsequent qualitative analysis to explore classroom processes in-depth. Using two internationally validated classroom observation instruments, ICALT and TEACH, added a further dimension to examine how characteristics of instruments might influence perceived instructional quality. Results revealed that while both high-inference instruments were theoretically comparable in distinguishing teaching quality, only ICALT predicted learner engagement. While quantitative instruments could not provide detailed accounts of classroom processes, qualitative accounts of the four lessons could uncover the deep relationships between teacher-student interactions and differences in instructional quality. These findings suggest that conceptually similar instruments may vary in predictive power and that systematic qualitative analysis is indispensable in complementing high-inference instruments to provide an objective teacher evaluation.

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Extended summary (1000 words, excluding reference list) Include introduction, theoretical background, methods, aims, preliminary findings/findings, results, theoretical and education significance, relevance to the QUINT ambition and the reference list.

Introduction

Decades of studies have shown strong links between school education effectiveness and educational equity (Sammons, 2007). It is concluded that teacher exerts a substantially more significant effect on children than school, and educational effectiveness varies more at the class level. In China, how education equity gaps can be eliminated remains a critical issue. Educational inequalities in China, especially underprivileged areas, have been explored from different perspectives, such as educational financing (e.g., Li et al., 2007; Tsang & Ding, 2005), gender (e.g., Hannum, 2005; Zeng et al., 2014), poverty (e.g., Heckman & Yi, 2012; Zhang, 2017; Yang et al., 2009), ethnicity (e.g., Hannum et al., 2008; Hannum et al., 2015), and urbanisation (e.g., Qian & Smyth, 2008; Yang et al., 2014).

Despite the significant role of classroom teaching practices in greater educational equity (Sammons, 2007), a research gap lies in a lack of understanding of how classroom teaching quality may vary across primary English classrooms in an underprivileged area in China. This study filled this research gap to explore whether the teaching quality observed differs in an under-advantaged province in China. Using two classroom observation instruments, ICALT (Van de Grift, 2007) and TEACH (World Bank, 2019), we explored the instructional quality gaps between lessons with contrastive teaching quality and how learning and teaching interactions differed in those classrooms. Using two instruments simultaneously added new insights to the relative influence of an observation instrument as a lens for study and a tool for teacher evaluation.

Objective and research questions

The overall objective of this study is to investigate the classroom teaching quality in an underprivileged province in China with the following research questions:

1) How were teaching practices rated using different classroom instruments (i.e., ICALT and TEACH) in the same lessons?
2) In what aspects did the ratings look similar based on the two observation instruments?
3) How did the rating show more variations based on the two observation instruments?
4) To what extent the above differences could be identified in an in-depth qualitative analysis of four purposively selected lessons?

Methodology

This study adopted a subsequent quantitative-qualitative research strategy to probe into the link and differences between two instructional quality assessment instruments, the TEACH and the ICALT. This research used the classroom observation strategy to explore teachers' teaching quality and teacher-student interactions.

This study involved 20 primary schools in an underprivileged province in China in contrastive districts (city/urban vs county/rural). Among these twenty schools, eleven schools were from the rural area, and nine were from the urban area. Thirty English teachers (one lesson per teacher) randomly selected from the sample schools participated in this study. Thirty lessons (one lesson per teacher)

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were recorded and observed by a well-trained rater with instruments to obtain quantitative data.
Then, four lessons were selected for in-depth qualitative analysis.

Instruments

Classroom observation instruments are often assumed to study similar teaching characteristics, so
they are expected to be comparable (Ko, 2010). ICALT (Van de Grift, 2007) and TEACH (World Bank,
2019) are two internationally validated classroom observation instruments on generic teaching
behaviours. Analysis of this study focuses on high-inference indicators of these two instruments.

Quantitative rating

A total of thirty English lessons were observed. Quantitative analysis was conducted with SPSS 20 to
compare the perceived instructional quality of the same classrooms in different aspects of classroom
observation instruments, TEACH and ICALT and determine which instrument could better predict
student engagement. As Z-scores averages were provided in the official manual of TEACH (World
Bank, 2019), selecting lessons for comparison based on those averages would provide objective
ground beyond the present study. Two 'weak' lessons (Lesson 1, z= -1.52; Lesson 2, z =-0.96) and two
'strong' lessons (Lesson 3, z=1.24; Lesson 4, z =2.62) were eventually selected for in-depth qualitative
analyses to explore variations in the evaluations of teaching quality with different instruments.

Qualitative coding

In-depth qualitative analyses were performed based on the teaching behaviour definitions in the
TEACH manual for better validity. TTLA was employed to code the teaching behaviours of the four
selected four lessons. Teaching activities and interactions between teachers and students of each
sample lesson illustrated teaching practices more specifically than quantitative ratings.

Findings

The quantitative results indicated that ICALT predicted student engagement better than TEACH.
However, the subscale Learner engagement is part of ICALT, so it is not surprising that the results
might favour ICALT more than TEACH. However, both ICALT and TEACH results showed that clear and
structured instructions improve student engagement. Adequate instructions could contribute to a
better and depth understanding of classroom activities and contents, resulting in higher student
involvement in classroom learning (Boston & Candela, 2018).

Moreover, among the ICALT domains, the average score of the Adjusting Instructions and Learner
Processing to Inter-Learner Differences was lower than other domains in ICALT, indicating that
teachers in the sample hardly presented student-centred instructions to address learner diversity. A
lower rating might be caused by the limited background information of the students available to the
raters. Among TEACH factors, teachers with better socioemotional skills, including autonomy,
perseverance, social and collaborative skills, could have engaged students better in classroom
learning.

Theoretical and practical significance

This study aimed to provide evidence for instrument comparison between two theoretically similar instruments, CLASS and TEACH and to uncover the process of effective classrooms identified in-depth lesson analysis in a disadvantaged province in China.

Our findings indicated that while TEACH may be a tool relative easier for practitioners, it is not as predictable as ICALT. Moreover, through in-depth qualitative analysis, practitioners can identify important teacher-student interactions that would improve teaching quality.

Relevance to the QUINT ambition

ICALT and TEACH are compared theoretically and practically in this study. TEACH was developed to provide quick training for practitioners in developing countries for teacher evaluation and professional teacher development. In contrast, ICALT was initially developed for high-stake inspections and subsequently for high-quality research in developed and developing countries (Maulana et al., 2021). A trade-off is raised between instrument complexity and ease of usage.

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