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Case-Based Learning Method in Learning: Is it Effective to Improve Teaching Skills of Madrasa Teachers in Indonesia?

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Keywords

case-based learning, teaching skill, learning innovation, madrasa teacher professionalism

Abstract

This research aims to analyse whether the increasing use of case-based learning (CBL) by madrasa aliyah teachers in Indonesia improves their teaching skills in the field of education. This study employed a quasi-experimental technique and data from a CBL intervention programme to investigate how CBL is connected with teachers' hybrid teaching skill. The data was analysed using the difference-in-difference design. In general, the teaching skill of madrasa teachers is solely treated as a predictor of the practice of teaching Islamic religious education. Still, we discovered that the greater use of CBL in hybrid learning can favorably affect the teaching skill of madrasa teachers. CBL is positively associated with student involvement and teaching in learning among the madrasa teacher teaching skill subscales. However, according to our data analysis, students' favourable responses to Islamic religious education, and hybrid learning practices can moderate the link between CBL and the teaching skill of madrasa teachers. This study has significance for the CBL model's growth in strengthening the teaching skill of madrasa teachers in distance learning Islamic religious education.

Introduction

The skill of madrasa (school) teachers to teach students in learning as well as being social teachers (König et al., 2021; McGarr & McDonagh, 2021) is associated with a variety of teacher attributes and behaviours (Tambak et al., 2023; Karuniawati, Rahayu, & Ladamay, 2021). Several theories, in particular, show how madrasa teachers' teaching skills influence their learning innovation, especially related to equitable learning that reaches all levels of society (Guillén-Gámez et al., 2021; Snoek, 2021; Suprayogi, Valcke, & Godwin, 2017). For example, the theory of Guillén-Gámez et al. (2021) states that teachers who have superior competence have an effect on developing quality learning, including for the development of learning equity in students. Furthermore, madrasa teachers' pedagogical skills encourage learning innovation in both blended learning and distance learning (McGarr & McDonagh, 2021).

Most research on the relationship between teachers' teaching skills and learning practices, employs cross-sectional data (König et al., 2021; Tambak et al., 2023). This means that the data used in these studies may be used to compare respondents but cannot explain changes across time, severely limiting their empirical potential to determine causality. Furthermore, a theoretical

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examination of teachers' teaching skills reveals a reciprocal or cyclical relationship between classroom experience and teaching skills (Muna, Sunardi, & Widyastono, 2021). As a result, changes in instructional practice may affect teacher teaching skills. According to other research, teaching skill in madrasa learning entails a process of self-development with social competence and other soft-skill values (Efendi, 2021; 2020; Muna, Sunardi, & Widyastono, 2021).

So far, the learning practices conducted by madrasa teachers tend to be teacher-centered learning. Their instructional skills tend to be monotonous, using lecture methods and similar approaches (Efendi, 2021; Tambak et al., 2022). Madrasa teachers tend to teach without exploring their own abilities in order to produce excellent learning that is full of scholastic ability and creativity. On the other hand, it is also clear that most madrasa teachers, neither face-to-face nor, especially, distance learning, have developed according to the latest learning methods. However, a few teachers have (König et al., 2021). Madrasa teachers tend to retain old learning methods that were learned in lectures long ago. Madrasa teachers seem unwilling to accept modern learner-centered learning methods that ultimately affect the innovation and fairness of madrasa learning (McGarr & McDonagh, 2021; Tambak et al., 2022). The madrasa teachers teach only to carry out their daily tasks, and are not concerned with the quality of the methods and materials, the creativity of the students, the learning for all, while the madrasa institutions pay little attention (Muna, Sunardi, & Widyastono, 2021).

Thus, it is assumed that the problem of skill development of madrasa teachers in teaching can be overcome by adopting the case-based learning (CBL) method. According to Stanley (2021), using a CBL approach engages students in a discussion of specific scenarios that resemble, or are typical, real-world examples. The CBL method influences the development of teacher teaching skills and also improves students' learning abilities so as to produce quality learning. This method facilitates distance learning so that it can reach all students — both those who can attend school and those who do not have that opportunity (Ma & Zhou, 2022; Raza, Qazi, & Umer, 2020; Lavi & Marti, 2023).

These previous studies revealed that teaching skill was more psychologically invested in the learning process but did not prove that CBL was strengthened in madrasa teacher blended learning. This study investigated the relationship between the teaching skill of madrasa teachers using data from a CBL programme intervention in Pekanbaru, Indonesia. In 2022, the Ministry of Religious Affairs provided CBL programme interventions to four public madrasa aliyah to engage madrasa teachers by transforming the learning to CBL. The treatment group of teachers were taught how to use CBL and were expected to use it in the classroom for one semester, while the control group of teachers were not encouraged to change their teaching approaches. This study evaluated the relationship between madrasa teachers' teaching skills and instructional practices using data from CBL programme interventions in blended teaching Islamic religious education to madrasa teachers.

Conceptual/Theoretical Framework

The Stanley (2021) hypothesis states that employing a CBL technique involves students in a discussion of specific scenarios that approximate, or typically represent, real-world instances, and they develop their knowledge and work together to analyse the case. The CBL approach promotes the growth of the teaching abilities of the teacher and enhances the learning capacities of the students to generate high-quality learning (Ma, & Zhou, 2022). Students are involved in a discussion of specific scenarios that approximate. or are typical, real-world examples while using

a CBL technique. Intense interaction between participants builds knowledge as they evaluate a case as a group using this learner-centered approach (Maia et al., 2023; Perez et al., 2022).

CBL provides an opportunity to analyse content by first introducing the core knowledge domain and encouraging students to look for other knowledge domains that may be relevant to the problem given in the case. A case is a definition of a problem scenario that is realistic and relevant to the material being studied (Ma & Zhou, 2022; Macpherson et al., 2020). CBL engages students in learning by using realistic narratives, these narratives provide opportunities for students to integrate multiple sources of information in authentic contexts (Norawati, & Puspitasari, 2022). The advantage of using cases in learning is that students can apply theory to real contexts, think critically about complex situations and choose what actions to take, develop self-knowledge and compare and evaluate self-perspectives with the perspectives of others (Ma & Zhou, 2022). CBL helps students 'transfer knowledge' of the material studied by students.

Meanwhile, the concept of basic skills of teaching refers to the ability that are specific (most specific instructional behaviours). These skills must be possessed by teachers and lecturers, in order to carry out teaching tasks effectively, efficiently and in a professional manner (Muna, Sunardi & Widyastono, 2021). Thus, the basic skills of teaching are related to some skills that are by nature fundamental and must be mastered by the teaching staff in carrying out the teaching task. In teaching there are two main abilities that must be mastered by teaching staff, namely, mastery of the teaching materials to be taught and of the methodology to teach it (Irmawati, Asri & Aziz, 2021).

Basic teaching skills absolutely must be possessed and mastered by teaching staff, because the basic skills of teaching lead to deeper understanding of teaching. Teaching is not just a process of conveying material but of involving broader aspects such as fostering attitudes, emotions, character, habits and values (Muna, Sunardi & Widyastono, 2021). There are eight basic teaching skills that must be mastered by a teacher. The eight basic teaching skills are: questioning, reinforcement, stimulus variation, explaining, opening and closing, small group discussion guiding, classroom management, and small group and individual teaching (Karuniawati, Rahayu & Ladamay, 2021).

Research Objectives/Questions

This research aimed at analysing whether the increasing use of CBL by madrasa aliyah teachers in Indonesia improved their teaching skills in the field of education. The research questions were: How was the relationship of theCBL programme with the teaching skill of madrasa teachers in instruction? How was CBL programme related to other student factors? How was CBL associated with the perception of teacher class preparation and student class participation?

Methods

Research Methodology

This study employed a quasi-experimental technique to investigate the association between CBL and the teaching skill of madrasa teachers, collecting survey data from teachers and students in two periods before and after the usage of CBL in the classroom for one semester. We primarily employed one empirical method — the difference-in-difference design (Angrist & Pischke, 2008). This method is frequently employed in policy assessment studies to examine the causal influence of policies on the variables of interest (Angrist & Pischke, 2008; Khaldi, 2017). Because teacher and student data can only be connected at the school level, and the study only included 14 madrasas, analysing the relationship between student and madrasa teacher factors

was impossible. As a result, we first examined teacher data to analyse how CBL was related to teachers' teaching skill and its subscales. Following that, we reviewed student data to analyse how students reacted to CBL. This allowed us to analyse whether the association between CBL and teaching skill was attributable to CBL-induced changes in pupils.

Sample and Sampling Method

In this study, out of 14 madrasa aliyas in Pekanbaru, Indonesia, seven were randomly allocated to the treatment group and seven to the control group. The main objective of this programme included teaching madrasa aliyah students one of the four major areas of Islamic religious education by various madrasa teachers. These requirements were met by 139 teachers participating in the CBL programme. The pre-treatment survey was completed by 78% (56 of 72) teachers in the treatment group, and the post-treatment survey was completed by 67% (48 of 72 teachers). In the control group, 55% (37 of 67) of teachers responded to the pre-treatment questionnaire, whereas 49% (33 of 67) responded to the post-treatment questionnaire.

The analysis in this study was based on skewed data, which indicated that some teachers and students completed only the pre-treatment or the post-treatment survey. For example, 57 (48.7%) of the 117 teachers in the sample completed both the pre-treatment and post-treatment surveys, whereas 36 (30.8%) completed only the pre-treatment survey and 24 (20.5%) completed only the post-treatment survey. As a result, in the final sample analysis of the teacher survey data, the number of observations in the pre-treatment period was 93 (53.4%), and the number of comments in the post-treatment period was 81 (46.6%). In terms of student survey data, 1107 (87.3%) of a total sample of 1268 students completed both the pre-and post-treatment questionnaires, while 109 (8.6%) completed only the pre-treatment survey and 52 (4.1%) completed only the post-treatment survey.

Treatment and control madrasas were not randomly selected, which could have skewed the results and limited the extent to which causal conclusions can be drawn. Therefore, our sample had two groups of madrasas (experimental madrasas and control madrasas) that were as close to each other as possible in terms of gender organisation and geographic location. The risk of selection bias was ruled out due to the similarity of the teaching and learning environment of the control school to that of the treatment group.

Instruments

Various ways of assessing teacher teaching skill have been developed throughout the years (Zee & Koomen, 2016). In its shortened form, Tambak's Madrasa Teacher Teaching Skill Test (TMTT) was used in this study (Tambak et al., 2022). TMTT is made up of a stable factor structure that is broad enough to encompass a wide variety of relevant teacher abilities for instruction. The TMTT questionnaire used in this study had 54 questions separated into three subscales of madrasa teacher teaching skills, with madrasa teacher teaching skill as the average of 10 subscales. Each of the 54 questions assessed madrasa teachers' competence to manage to learn and was graded on a 4-point Likert scale, ranging from "not at all" to "a lot." The subscales of madrasa teacher pedagogic competency included: (a) teaching skill of madrasa teachers in learning, (b) teaching skills of madrasa teachers in learning management (c) and teaching skills of madrasa teachers in engagement. Cronbach's Alpha (Somers et al., 2013) was utilised to analyse the instrument's internal consistency, which resulted in 0.93 for the complete device.

We utilised a dummy variable created from the teacher's self-reported use on a four-point Likert scale to quantify CBL frequency: 1) never or hardly never; 2) occasionally; 3) Frequently;

4) in all or almost all lessons. The variable was categorised as 0, if the teacher reported using CBL "never or almost never" or "occasionally," and 1 if the teacher reported using CBL "frequently" or "in all or virtually all lessons." The student survey's measure of CBL frequency was desiged similarly to the madrasa teacher survey. We examined student assessments of their teachers' amount of effort to promote student interest, level of class preparation, students' level of engagement in class and frequency of brainstorming with other students in the category for student outcomes. All metrics were reported on a four-point Likert scale: 1) strongly disagree; 2) disagree; 3) agree, and 4) strongly agree. In addition, to measure students' perception, we provided an Islamic religious education exam with five questions and possible scores ranging from 1 to 5.

Procedure of Data Collection and Data Analysis

Using a difference-in-difference method we first assessed the CBL programme's treatment impact. The difference-in-difference technique captures the treatment effect by comparing the change in the mean over time of the outcome variable for the treatment group to the difference in the standard over time for the control group. This is known as the parallel trend assumption because it requires temporal trends in outcome variables to be parallel in both groups before treatment. It must be noted that beliefs demand identical moves, not variable levels of outcomes. If this assumption is correct, the difference in change over time between the treatment and control groups is regarded as a treatment-caused effect (Angrist & Pischke, 2008). Empirical validation of the premise of parallel trends necessitates data collection at many periods before treatment. We cannot, however, directly test the assumption of similar developments because we only have data for a single time before and after intervention. Nonetheless, given the relatively high degree of homogeneity between the treatment and control groups, any variations in trends in the outcome variables are unlikely to be related to factors other than the CBL programme intervention. The empirical model (Perraillon, Lindrooth & Welton, 2019) is used to get the difference-in-difference estimate.

In addition to adopting CBL in the classroom, treatment group teachers received CBL consultations throughout the semester, which may be associated with teacher self-efficacy independently. Although we discovered that the usage of CBL by treatment group teachers rose considerably after treatment, any treatment effects found using the difference-in-difference methodology may be ascribed partly to consultation. We employed a two-stage least squares instrumental variable estimate method to tackle this problem. This method allowed us to empirically quantify the changes in CBL use generated by CBL programmes and examine how these exogenous changes were related to madrasa teachers' teaching skill.

Findings/Results

Teacher Analysis: CBL Program Relationship with the Teaching Skill of Madrasa Teachers in Learning

Table 1 shows the contribution of the CBL programme to madrasa teachers' teaching skill and subscales, as measured by the design differences indicated in Equation 1. The first column reveals that the CBL programme was connected with a 0.942 standard deviation rise in the teaching skill of madrasa teachers (p 0.01). Column 2 indicates that the CBL programme had a significant relationship with the teaching skill of madrasa teachers in instruction, with a standard deviation of 1.011 (p 0.01), and Column 4 shows that the CBL programme had a significant relationship with teaching skill in engagement, with a standard deviation of 0.899 (p 0.01). The

results in Column 3 reveal that the CBL programme had no significant influence on madrasa teachers' teaching skill in classroom management. This suggests that the positive impact of CBL programmes on the overall teaching skill of madrasa teachers was driven by teaching skill in teaching and student involvement. CBL had the most significant influence on teachers' teaching skill in engagement among the madrasa teachers' teaching skill.

Table 1: Case-Based learning and Teaching Skills: Difference-in-Differences Estimates

	(1)	(2)	(3)	(4)
Dependent variable:	Teaching skills of madrasa teachers	Teaching skills in instruction	Teaching skills in management	Teaching skills in engagement
Post Treat	0.942***	1.011***	0.509	0.899***
	(0.299)	(0.272)	(0.327)	(0.242)
Post	0.012	0.318	0.028	0.013
	(0.202)	(0.184)	(0.235)	(0.166)
Treat	0.740** (0.245)	0.811** (0.263)	0.588** (0.250)	0.571*** (0.179)
Student math score	0.046	0.103	0.089	0.067
	(0.165)	(0.136)	(0.160)	(0.157)
Female	0.091	0.202	0.088	0.020
	(0.473)	(0.452)	(0.497)	(0.315)
MA and above	0.082	0.022	0.077	0.083
	(0.304)	(0.264)	(0.311)	(0.237)
Total teaching experience	0.004**	0.003**	0.003*	0.003*
	(0.002)	(0.001)	(0.002)	(0.001)
Experience at current school	0.001	0.002	0.000	0.002
	(0.002)	(0.003)	(0.002)	(0.002)
Permanent	0.724*	0.559	0.662	0.674**
	(0.378)	(0.338)	(0.446)	(0.272)
Observations	174	174	174	174
R-squared	0.222	0.319	0.131	0.212

Note: ***p < 0.01, **p < 0.05, *p < 0.1.

The results of the influence of adopting CBL on the teaching skill of madrasa teachers and their subscales are presented in Table 2. Column 1 of Panel (b) contains the findings of the first stage regression (using Equation 2); the intervention programme raised the chance of applying CBL by 44.6 percentage points (p 0.05) in the classroom either "frequently" or "in all or virtually all topics." This demonstrates that the CBL intervention programme generated significant changes in how teaching occured in the classroom. Table 2 Panel (a) displays the results of the second stage of the instrumental-variable approach regression (Equation 3). The

projected CBL frequency values from the first-stage regression estimates were gathered and placed into the deterioration to estimate Equation 3. Exogenous increases in the usage of CBL were related to an increase in the teaching skill of madrasa teachers by 2,270 standard deviations (p 0.1) in Column 1 of panel (a). CBL also increased self-efficacy in instruction and engagement by 2.115 standard deviations (p 0.1) and 2.016 standard deviations (p 0.05), respectively. CBL was shown to have no significant influence on teaching skill in classroom management, as in the difference-within-difference estimate.

Table 2: Case-Based Learning and Madrasa Teacher Teaching Skills: Two-Stage Least Squares Estimates

(a) Second stage				
Dependent variable:	(1)	(2)	(3)	(4)
	Teaching skills of madrasa teachers	Teaching skills in instruction	Teaching skills in management	Teaching skills in engagement
Predicted CBL	2.270*	2.115*	1.143	2.016**
	(1.190)	(1.159)	(0.945)	(0.949)
Post	0.122	0.421	0.250	0.378
	(0.646)	(0.636)	(0.509)	(0.522)
Treat	841** (0.334)	0.768** (0.325)	.603** (0.288)	0.597** (0.259)
Controls	YES	YES	YES	YES
Observations	174	174	174	174

(b) First stage	
Dependent variable: Cases-based learning	(1)
Post Treat	0.446** (0.158)
Post	0.194
	(0.131)
Treat	0.013
	(0.066)
Controls	YES
Observations	174
F-statistic	14.89

Note: ***p < 0.01, **p < 0.05, *p < 0.1.

Student Analysis: CBL Programme Relationship with other Student Factors

The beneficial relationships shown between madrasa teachers' social qualities and CBL may be mediated by the impact of CBL on pupils. Students were put in one classroom at Madrasa Aliyah

Pekanbaru, while teachers in charge of different courses arrived in separate classes at other times to teach their respective subjects; hence, grade level analyses relating to student and teacher outcomes were not possible. Students and teachers could communicate at the madrasa level but the school-level study lacked statistical power because our data only included twelve madrasas. As a result, we can only estimate the link between CBL student reports and student replies. and conclude indirectly that any influence identified in the student data may be connected to the positive association discovered in the madrasa teacher data between CBL and teachers' teaching skill.

Table 3 shows the estimated difference-in-difference (calculated using Equation 1) and student survey data. Estimates were derived for the entire sample and the madrasa subsample, which consisted of the three treatment group madrasas with the highest CBL increases and their matching control madrasas. According to the teacher and student surveys results, teachers from Madrasah Aliyah Negeri 1, Madrasah Aliyah Negeri 2, and Madrasah Aliyah Negeri 4 increased their usage of CBL the most following the CBL programme. Column 2 of panel (a) reveals that the CBL intervention programme resulted in a 0.155 standard deviation rise in the perception of attempts to gain teachers' interest (p 0.1). The CBL programme had no statistically significant link with other student factors. We discovered that the CBL programme improved the madrasa teachers' impression of interest by 0.360 standard deviations (p 0, 05) in panel (b), where the study was confined to the three care schools where CBL rose the highest with their matched control madrasa. This demonstrated tremendous growth.

Table 3: Case-Based Learning and Student Outcomes: Difference-in-Differences Estimates

(a) Sample: All schools				
Dependent variable:	(1)	(2)	(3)	(4)
	Teacher preparation	Teacher inducement	Share idea	Class participation
Treat Post	0.090	0.155*	0.159	0.093
	(0.086)	(0.084)	(0.114)	(0.079)
Controls	YES	YES	YES	YES
Observations	2266	2266	1944	2266
R-squared	0.013	0.011	0.011	0.072
(b) Sample: CBL top 3 schools				
Post Treat	0.240	0.360**	0.214	0.027
	(0.130)	(0.090)	(0.157)	(0.114)
Controls	YES	YES	YES	YES
Observations	1146	1146	988	1146
R-squared	0.012	0.018	0.011	0.059

Note: ***p < 0.01, **p < 0.05, *p < 0.1.

Relationship between CBL and the Perception of Teacher Preparation and Student Participation in Class

Table 4 summarises the results of the variable instrumental technique. Estimates for the total sample (Panel (a)) and the subgroup of the three madrasas with the most considerable improvement in CBL, and their matching control schools (Panel (b)), are shown separately. CBL boosted the impression of madrasa teacher interest induction efforts by 0.792 standard deviations (p 0.1) and the extent to which students communicated ideas with each other in a class by 0.995 standard deviations (p 0.1) in Panel (a). There was no statistically significant association between teacher class preparation and student class participation. When the analysis was limited to three madrasas that experienced the most increase in CBL and their matched control madrasas, increased use of CBL was associated with a 0.674 standard deviation increase in perceptions of classroom preparation teachers (p 0.1), a 1.010 standard deviation increase in perceptions of the madrasa teacher's interest in persuasion efforts (p 0.1 0.01), and a standard deviation increase in students' sharing of ideas in class.

Table 4: Case-Based Learning and Student Outcomes: Two-Stage Least Squares Estimates

(a) Second stage – All schools				
Dependent variable:	(1)	(2)	(3)	(4)
	Teacher preparation	Teacher inducement	Share idea	Class participation
Predicted CBL	0.457	0.792*	0.995*	0.472
	(0.438)	(0.439)	(0.603)	(0.429)
Controls	YES	YES	YES	YES
Observations	2266	2266	1944	2266
(b) Second stage - CBL top 3				
Dependent variable:	(1)	(2)	(3)	(4)
	Teacher preparation	Teacher inducement	Share idea	Class participation
Predicted CBL	0.674*	1.010***	0.724*	0.075
	(0.348)	(0.355)	(0.433)	(0.303)
Controls	YES	YES	YES	YES
Observations	1146	1146	988	1146
(c) First stage				
Dependent variable: Cases-based learning	(1)	(2)		
	All schools	CBL top 3		

Treat Post	0.196*** (0.038)	0.357*** (0.052)
Controls	YES	YES
Observations	2266	1146
F-statistic	346.90	295.38

Note: ***p < 0.01, **p < 0.05, *p < 0.1.

Discussion, Conclusion and Implications

In this study, we examined whether teaching skill was improved when madrasa aliyah teachers in Indonesia used more CBL. According to estimates produced using a difference-in-difference design and an instrumental variable approach, the CBL method had a favorable influence on the teaching skill of madrasa teachers. In addition, difference-in-difference design analysis of student data revealed that the CBL programme positively influenced students' views of the degree of effort a teacher expended to pique students' interest. CBL was positively related to madrasa teachers' class preparation, efforts towards madrasa teacher inducement, the frequency with which students shared ideas in class and the frequency of class participation of students with the most significant increase in CBL use.

The positive relationships between CBL and madrasa teachers' teaching skills suggest that learning practices are not just the product of madrasa teachers' teaching skills, as is commonly assumed, but may also contribute to changes in the teacher's perspective in developing the quality of learning (Tang et al., 2023; Martinez, 2022; Shaked, 2022), providing high effort in student learning ethos (Nahar et al., 2022), and finding new ideas in developing learning activities to improve the quality of madrasas on the national and international level (Dilekçi & Karatay, 2023). Based chiefly on cross-sectional data analysis, academics tend to regard madrasa teachers' teaching skill as a factor of the learning method approach and it contributes to developing learning innovations — including distance learning. This will build an equitable learning that reaches all elements of the students. The CBL method can facilitate this so that educational equality is actualised, and social justice is implemented (Zee & Koomen, 2016; Tambak et al. al., 2023). This study gives empirical evidence for an alternative understanding; it may also be used for learning techniques to influence madrasa teachers' teaching skill. Data analysis using the quasi-experimental CBL approach spanning two time periods gave more evidence for determining causality than earlier research based on cross-sectional data. This study introduceed teaching practice as a moderating element impacting madrasa teachers' pedagogy, and contributing to the literature on teacher teaching skill development for hybrid and distance learning (Ma & Zhou, 2022).

Experience may play a significant role in strengthening the teaching skill of madrasa teachers. According to social cognitive theory, experience mastery improves when they believe their work as madrasa teachers is productive. CBL might improve students' educational experiences, which would improve madrasa teachers' skill in instruction. The results of this study contribute to the development of learning innovations carried out by madrasa teachers to produce quality students, and also develop teachers' abilities in hybrid learning or distance learning (Lestari, Rahmawatie, & Wulandari, 2023; Egonsdotter, & Bengtsson, 2022; Lee, Albedah & Liu, 2023; Kaur et al., 2020; Hussein, 2021).

Due to data constraints, we did not directly analyse the link between pupils and madrasa teachers' teaching skill. The favorable links shown between CBL and student results, on the other hand, indicate the likelihood of mastery experiences (Panadero, Jonsson, & Botella, 2017; Marsh et al., 2019). There was a positive and statistically significant change in how the three madrasas that experienced the greatest increase in CBL carried out their teachers' initiatives to pique interest and prepare classes, as well as an increase in the frequency with which they shared ideas with other students in the hybrid class (Ma, & Zhou, 2022). If expressed to teachers, students' good opinions of teachers in the classroom can help teachers who appreciate the effectiveness of their own teaching. Additionally, contributing ideas in class is probably linked to involvement in the course material. Positive opinions of madrasa teachers and more interaction between students during class discussions are likely to result in mastery experiences that advance teacher teaching skill.

Future research should address the issues with this study. The first potential weakness of this study is the use of a real objective assessment of madrasa teacher teaching skills. According to some scholars, madrasa teachers should develop their teaching skills in accordance with the particular teaching circumstances they face, such as the subject they are teaching in distance learning (Yao et al., 2023). Although the extra predictive value and generalisability of such characteristics have not been identified, further research using different measures of madrasa teacher teaching skill may result in more robust estimations. Second, this study employed self-reported teacher teaching skill indicators from teachers. Simply measuring teachers' evaluations, on the other hand, might lead to positive or negative self-assessment bias, distorting and underestimating the link between teachers' teaching skills and others. Several data sources to assess teaching skills, such as teacher and student evaluations, could lead to more accurate and stable results (Panadero, Jonsson, & Botella, 2017; Marsh et al., 2019). Third, the primary findings have limits in terms of generalisability. This study had a limited sample size and was only done in schools in the Pekanbaru Metropolitan City. In addition, the response rate to the madrasa teacher survey was poor. As a result, generalising the findings to national or international levels may have limitations. Future research should broaden the scope and quantity of madrasa professors to acquire more generalisable results. Finally, this study looked only at the influence of CBL after it had been in place for one semester. The instructional technique may be broadened to acquire complete knowledge of how CBL influences the teaching skill of madrasa teachers (e.g., more than one semester). Long-term impacts should also be evaluated using outcomes recorded at subsequent periods.

This study provides empirical evidence for another understanding. It may also be used, as a form of learning innovation, to influence the teaching abilities of madrasa teachers who study Islamic religious education through learning activities. Data analysis using a quasi-experimental approach over two periods supported our causal interpretation more than previous studies based on cross-sectional data. This research has implications not only for teachers' instructional skills but also for the development of learning innovations for both hybrid and distance learning using CBL methods. Blended or distance learning should be developed to make learning accessible to all students, especially in the current technological age. Learning at school and at home is facilitated through madrasas with distance learning. CBL methods can obviously bridge this. Therefore, it is of great importance to further study and improve the teaching skills of madrasa teachers through a competent CBL approach in ongoing future research.

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