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An Investigation into the Differential Use of Motivational Strategies by EFL Teachers in Physical and Virtual Teaching Environments: The Mediating Role of Teaching Styles

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Abstract : Motivation serves as a fundamental factor in the successful acquisition of a second or foreign language. Concurrently, teaching styles—as a recent development in the conceptual frameworks and underlying assumptions within the field of L2 teacher education—have considerably shaped our understanding of L2 teacher learning and the knowledge base. To this end, the present study investigated whether there are significant differences in the motivational strategies employed by Chinese EFL teachers in physical versus virtual teaching contexts. Additionally, the study sought to determine whether significant differences exist among Chinese EFL teachers' motivational strategies with respect to their teaching styles. A total of 210 Chinese EFL teachers completed questionnaires on motivational strategies and teaching styles. Among these 210 teachers, 108 (who conducted 8 out of 10 classes virtual) were primarily engaged in virtual instruction, while 102 (who conducted 8 out of 10 classes physical) were primarily involved in physical teaching. Regarding teaching styles, the teachers were classified into five distinct groups based on the results of the teaching styles questionnaire. The results of the statistical analyses indicated that the virtual teaching group outperformed the physical group in terms of motivational strategies. Furthermore, significant differences were observed among the five teaching style groups with respect to their use of motivational strategies. The present study offers several pedagogical implications.

Keywords: Physical Teaching, Motivational Strategies, Virtual Teaching, Teaching Styles

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INTRODUCTION

A growing body of recent research continues to underscore the central role of teacher-driven motivational strategies, with a 2024 library study confirming that robust application of such strategies significantly enhances both target language mastery and the creation of more positive classroom climates for learners worldwide (Wijaya, 2024). Highlighting the centrality of motivation in L2 learning, Csizer (2017) contends that

motivation lies at the heart of the language learning process as it is a crucial factor in gaining mastery over a second or foreign language. However, some learners may lose motivation along the course of language learning (Wang & Littlewood, 2021). Accordingly, teachers should make attempts at maintaining learners' motivation and possibly remotivating those who have become demotivated (Song & Kim, 2017). In so doing, teachers should adopt motivational strategies characterized as those strategies which maintain learners' motivation and bring back motivation online again (Yang & Sanchez, 2021).

Evidently, the context of teaching can exert influences on teachers' instructional practices as individuals' behaviors are rooted in their perceptions and awareness of the contextual factors (Ajzen & Fishbein, 2000). Since online teaching is considered a context which is different from conventional teaching settings (Lassoued et al., 2020), it can be assumed that teachers are likely to be different in terms of the motivational strategies they adopt. Nonetheless, there is a dearth of studies exploring the difference between EFL teachers' motivational strategies in face-to-face/ physical and online/ virtual teaching contexts.

Another factor which may affect teachers' remotivational strategies is their teaching styles. Teaching styles can render difference in teachers' instructional practices (Moè et al., 2022). A review of extant empirical studies reveals that, thus far, teaching styles have been explored in relation to identification of motivating and demotivating teaching styles (Moè et al., 2022), determining interpersonal need-supportive or need-thwarting styles contributing to positive consequences (Leo et al., 2022), teachers' critical thinking and self-efficacy (Amirian et al., 2022), academic confidence of teachers in training (Granero-Gallegos et al., 2022), and student learning involvement (Tang et al., 2022). However, the area of differences in teachers' motivational strategies in the light of their teaching styles is quite under-researched. The discrepancies in learning environment, rooted in the peculiarities of virtual and physical teaching contexts, can give rise to disparities in instruction (Fishman et al., 2013).

Given the lacuna in the current empirical research, and the roles of teaching environment and teaching styles in contributing to differences in teachers' instruction, the current study aimed at exploring any significant difference between EFL teachers' motivational strategies in physical and virtual teaching contexts. Moreover, the study set out to probe any significant differences among Chinese EFL teachers' motivational strategies in regard to their teaching styles. In line with the objectives of the study, the following research questions were formulated:

RQ1: Does the teaching context (physical versus virtual) yield a significant difference in the motivational strategies used by Chinese EFL teachers?

RQ2: Are there any significant variations among Chinese EFL teachers' motivational strategies when compared across different teaching style categories?

Literature Review

1. Motivational Strategies

Recent studies have continued to underscore the critical role of motivational strategies in language education. For instance, a 2024 library study examining 30 EFL teachers' motivational strategy studies from 2017 to 2024 revealed that robust EFL teachers' motivational strategies significantly help second language learners master target language competencies and create more enjoyable classroom learning climates (Wijaya, 2024). Moreover, Ye and Hu (2024) conducted a mixed-methods study investigating 210 teachers' perceptions of L2 motivational strategies, finding that teachers reported underusing many motivational strategies relative to their perceived importance due to both external and internal constraints, highlighting an ongoing gap between teachers' beliefs and their actual motivational practices in the classroom.

Motivation is described as a driving force that pushes an individual to do something. Indeed, it would not be possible to learn a foreign language successfully without motivation. The importance of motivation in the teaching and learning process necessitates teacher awareness, as one of the important elements in the teaching process is that the teacher needs to have the role of a motivator for students (Astuti, 2013). Motivational strategies are described by Dörnyei (2001) as the techniques used by an individual to enhance his/her own goal-related behavior.

Furthermore, the review of related literature indicates that many studies have been carried out to identify and analyze diverse motives. These studies have also sought to validate motivational theories instead of only devising techniques to improve motivation (e.g., Alison & Halliwell, 2002; Brown, 2001; Chambers, 1999; Dörnyei, 2001b; Williams & Burden, 1997). In addition, focusing on the advantages associated with motivational strategies, Gardner and Tremblay (1994) assert that despite the practical importance of recommendations and corresponding implications, inadequate empirical evidence has been collected to justify strong claims in favor of the application of such strategies.

It should be reiterated that despite the fact that the majority of the strategies presented by Dörnyei and Csizér (2005) were based on sound theory and were found to be effective in certain classroom settings, almost all the techniques were derived from Western educational settings. Accordingly, the researchers assert that they cannot guarantee that such commandments would be practically useful in every cultural, ethnolinguistic, and institutional environment; there need to be more studies in this respect (Dörnyei & Csizér, 1998). In addition, awareness about the strategies to motivate learners can assist teachers in helping demotivated learners in a systematic way and, thus,

pave the way for taking appropriate measures in dealing with those EFL learners who have lost their motivation along the course of language learning (Falout, 2012).

2. Teaching Styles

Ellis (2010) observed that second language educators are not merely technicians who apply methods developed by SLA researchers. Rather, they are individuals who hold their own beliefs about L2 instruction and learning, beliefs that have been shaped by their prior experiences as language learners. Their instructional decisions are also guided by their personal theories of action.

Similarly, the concept of pedagogical or teaching styles refers to the overall classroom behavior exhibited by an instructor, extending beyond a specific teaching method or technique (Jarvis, 2004). Teaching strategies are sometimes confused with teaching styles. However, teaching strategies are the specific activities designed to implement an instructional method and facilitate learners' knowledge acquisition. Teaching styles may be influenced by teachers' personal experiences in teaching and learning, their educational background, and their cultural background (Grasha, 1996). Furthermore, in the context of second language teaching and learning, Cook (2008) maintains that teachers employ different techniques corresponding to their teaching style. For example, within an audio-lingual style, teachers use role-playing and structured repetition dialogues to practice English, placing primary emphasis on spoken language.

Moreover, the origins of teaching styles can be traced to teachers' pedagogical knowledge base, which is considered a crucial component in English language teacher education (Atai & Shafiee, 2017). The concept of pedagogical knowledge emerged from debates among experts regarding how teachers should be prepared. On one hand, some scholars argued that holding an academic degree in a subject area is both necessary and sufficient for teaching that subject (Akbari & Tajik, 2009). On the other hand, educational experts and teacher educators opposed this view, asserting that subject matter knowledge alone does not guarantee an individual's ability to teach effectively in that field (Akbari & Dadvand, 2011). As in all educational contexts, teachers in ELT settings adopt various pedagogical styles (Deeba Bazmi & Shakil, 2017). The pedagogical styles that teachers adopt may be influenced by multiple factors, including cultural and educational traditions, teacher training programs, and stages of social and economic development (Al Jadidi & Sanguinetti, 2010). Consequently, investigating teachers' pedagogical styles from diverse perspectives is of great importance.

3. Comparing Virtual learning with Physical Learning

Several studies have compared e-learning with face-to-face/ physical instruction, particularly regarding learners' satisfaction with online education. Early findings from such research indicated that technological innovations, digital literacy, motivation, teacher characteristics, and learner characteristics collectively determine the success of e-learning programs (Dillon & Gunawardena, 1995; Volery & Lord, 2000; Soong, Chan, Chua, & Loh, 2001). Furthermore, Hofmann (2002) examined the benefits of e-learning technology and reported that participants who completed an online course outperformed those who attended a traditional classroom-based course. More recent literature has addressed three primary modes of learning: physical, blended, and fully virtual.

In an empirical study, Zhanga (2005) investigated the contribution of interactive instructional video to the quality of e-learning systems. The results showed that students in e-learning environments expressed higher levels of satisfaction than those in physical settings or in less interactive e-learning contexts. Similarly, Lim and colleagues (2008) conducted a study on the status of e-learning among distance learners in Malaysia. Their findings suggested that universities offering distance education via e-learning should provide non-credit courses to enhance learners' acceptance of online learning.

As noted by Alhamami (2018), online learning can pose multiple challenges for learners. Indeed, learners need a high level of motivation to cope independently with the difficulties inherent in online environments. This is because online settings typically offer less interaction than conventional classrooms (Murday et al., 2008). Consequently, teachers must take into account learners' motivation and sense of responsibility in order to help them overcome such challenges (Alhamami, 2018).

METHODOLOGY

Participants and Context

The sample consisted of 210 Chinese EFL teachers, chosen through convenience purposive sampling, who taught at language institutes in Hong Kong across different proficiency levels. Their ages ranged from 24 to 53, and their teaching experience extended from 1 to 23 years. Both genders were represented, and all held at least a BA degree in TEFL, translation, or English literature (with some holding an MA). On the basis of their dominant teaching mode, the teachers formed two groups: a physical group (8 out of 10 classes taught in person; N = 102) and a virtual group (8 out of 10 classes taught virtual; N = 108).

Materials and Instruments

The current study employed an ex-post-facto design, which falls under the category of quasi-experimental research. In this type of design, the researcher does not manipulate the independent variable; rather, the independent variable (e.g., existing group characteristics or teaching contexts) has already occurred naturally before the study begins. The researcher then examines how this pre-existing independent variable affects a dependent variable (Ary et al., 2019). This design is particularly useful when random assignment or direct manipulation is not feasible, as it allows for the investigation of causal-like relationships in natural educational settings.

Data were collected using two main instruments: a Motivational Strategies Questionnaire and a Teaching Styles Questionnaire. Both instruments were carefully selected to align with the research objectives and the ex-post-facto framework, ensuring that the measurement of teachers' motivational strategies and their preferred teaching styles was both reliable and valid for the target population.

Motivational Strategies Questionnaire

To assess teachers' motivational strategies, the present study utilized a questionnaire originally developed by Cheng and Dörnyei (2007). This instrument consists of 48 items, each rated on a six-point Likert scale where 1 corresponds to "not important" and 6 corresponds to "very important." Such a scale allows respondents to express gradations of perceived importance rather than forcing a binary or limited choice, thereby enhancing the sensitivity of the measurement.

The development of this questionnaire was grounded in Dörnyei's (2001) comprehensive framework of motivational techniques, which systematically categorizes strategies that language teachers can employ to enhance learner motivation. By building on this well-established theoretical foundation, Cheng and Dörnyei (2007) ensured that the instrument covered a broad range of relevant motivational dimensions.

Regarding its psychometric properties, Cheng and Dörnyei (2007) reported acceptable internal consistency reliability, as indicated by Cronbach's alpha coefficients for both the total scale and its individual subcomponents. These indices suggest that the questionnaire yields sufficiently consistent and reliable measurements when administered to populations similar to those in the original validation study

Teaching Styles Questionnaire

To measure participants' teaching styles, the present study adopted the questionnaire developed by Grasha (1996). This instrument comprises 40 items, each rated on a five-point Likert scale ranging from "strongly disagree" to "strongly agree." Such a response format allows respondents to express varying degrees of agreement or

disagreement with statements about their classroom practices, thereby capturing nuanced differences in teaching style preferences.

The questionnaire operationalizes five distinct teaching styles, each representing a different approach to classroom instruction and teacher-student interaction:

1. Expert style – The teacher possesses specialized knowledge and strives to transmit it to students, maintaining a role as a content authority.
2. Formal authority style – The teacher focuses on establishing clear learning goals, rules, and expectations, and evaluates student progress based on defined standards.
3. Personal model style – The teacher models appropriate ways of thinking and acting, encouraging students to observe and imitate effective learning behaviors.
4. Facilitator style – The teacher guides students through inquiry and problem-solving activities, emphasizing student-centered learning and individual exploration.
5. Delegator style – The teacher gives students substantial autonomy, allowing them to work independently or in teams on projects, with the teacher serving as a consultant.

Grasha's (1996) instrument has been widely used in educational research due to its strong theoretical foundation and its ability to capture the multidimensional nature of teaching styles. The five-style framework acknowledges that teachers may not fit a single category exclusively; rather, they might emphasize different styles depending on the context, subject matter, or student needs. This flexibility makes the questionnaire particularly suitable for investigating the relationship between teaching styles and other variables, such as motivational strategies in the present study.

Procedure

Prior to the main data collection, the two questionnaires (Motivational Strategies and Teaching Styles) were piloted with a separate group of 30 Chinese EFL teachers who did not participate in the main study but shared similar demographic and professional characteristics (e.g., teaching experience, educational background, and instructional contexts). The purpose of this piloting was to verify the reliability and clarity of the instruments and to ensure that any potential ambiguities or inconsistencies could be identified and addressed before the full administration.

Following the piloting phase, a total of 210 Chinese EFL teachers were invited to complete both questionnaires. They were informed, in compliance with ethical research standards, that their participation was entirely voluntary and that the collected data would be used solely for the purposes of the present study. No personal identifying information was collected, and confidentiality was guaranteed.

Among the 210 respondents, the participants were divided into two groups according to their predominant mode of instruction:

1. Virtual teaching group: 108 teachers who delivered 8 out of 10 classes virtual one.
2. Physical teaching group: 102 teachers who delivered 8 out of 10 classes in person.

Grouping Based on Teaching Styles

For the purpose of analyzing the second research question (concerning differences among teaching style groups), the teachers were categorized based on their highest scores on the five teaching styles of Grasha's (1996) framework. Specifically, each teacher's responses were examined to identify which of the five styles (Expert, Formal authority, Personal model, Facilitator, or Delegator) received the highest mean score. The resulting distribution was as follows:

Table 1. Grouping Based on Teaching Styles

Teaching Style	Number of Teachers (Highest Score)
Expert	31
Formal authority	30
Personal model	33
Facilitator	32
Delegator	31

However, a number of participants did not show a clearly dominant style; that is, their scores were either evenly distributed across multiple styles or showed no single style substantially higher than the others. These teachers (n = 53) were excluded from the analysis for the second research question because their teaching style profile did not allow for unambiguous classification. Consequently, the effective sample size for the teaching-style comparisons was reduced to 157 teachers (the sum of the five groups above: 31+30+33+32+31 = 157). The remaining 53 participants were retained only for the first research question (comparing physical and virtual contexts).

Data Analysis

Both descriptive and inferential statistical methods were employed to analyze the collected data.

1. Descriptive Statistics

To summarize and describe the basic features of the data, descriptive statistics were calculated. Specifically, for each group and for the total sample, the mean (average score), standard deviation (degree of dispersion around the mean), and variance (the square of the standard deviation, indicating the spread of scores) were computed and reported. These descriptive measures provided an initial understanding of the central tendency and variability within the motivational strategies scores across different teaching contexts and teaching style groups.

2. Inferential Statistics

a. Independent-Samples T-Test

To address the first research question—whether there is a significant difference in motivational strategies between teachers primarily engaged in virtual teaching versus those primarily engaged in physical teaching—an independent-samples t-test was conducted. This test compares the mean scores of two independent groups and determines whether any observed difference is statistically significant (i.e., unlikely to have occurred by chance). The test was applied to the motivational strategies questionnaire scores of the virtual group (n = 108) and the physical group (n = 102).

b. One-way Analysis of Variance (ANOVA)

To address the second research question—whether there are significant differences in motivational strategies among teachers with different teaching styles—a one-way ANOVA was performed. This test extends the t-test to more than two groups. The five teaching style groups (Expert, Formal authority, Personal model, Facilitator, and Delegator), identified based on teachers' highest scores on Grasha's (1996) teaching styles questionnaire, served as the independent variable. The dependent variable was the scores on the motivational strategies questionnaire. A significant ANOVA result would indicate that at least one teaching style group differs from the others in terms of reported motivational strategies. Post-hoc comparisons (e.g., Tukey's HSD) were planned to pinpoint specific group differences if the overall ANOVA proved significant.

Prior to running these parametric tests, the underlying assumptions (normality of distribution, homogeneity of variances, and independence of observations) were checked and found to be satisfactorily met. All statistical analyses were performed using SPSS (version 26), with an alpha level of .05 set for determining statistical significance.

RESULTS AND DISCUSSION

Results

To confirm the suitability and internal consistency of the two questionnaires for the specific context of the present study, Cronbach's alpha reliability coefficients were calculated. The results of the descriptive statistics and the Cronbach's alpha values for both instruments are summarized in Table 1.

Table 1.
Results of Descriptive Statistics and Cronbach's Alpha for the Two Instruments

	N	Minimum	Maximum	Mean	SD	Variance	Alpha
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	
Motivational Questionnaire	30	73.00	217.00	145.143	36.225	1312.251	0.760
Teaching Styles	30	55.00	146.00	124.22	23.12	534.534	0.820

Valid N (listwise)	30

According to the data presented in the above table, the Cronbach's alpha values for the motivational strategies questionnaire and the teaching styles questionnaire were 0.76 and 0.82, respectively. Both values are above the commonly accepted threshold of 0.70, indicating satisfactory internal consistency (Hulin et al., 2001). Regarding validity, Grasha (1996) reported that exploratory and confirmatory factor analyses (EFA and CFA) of the instrument revealed five underlying components.

The first research question aimed to determine whether there is any significant difference in the motivational strategies employed by Chinese EFL teachers in physical versus virtual teaching contexts. Table 2 displays the descriptive statistics of the motivational strategies questionnaire scores for the virtual and physical groups.

Table 3.
Descriptive Statistics of the Scores on the Motivational Strategies Questionnaire for the Virtual and Physical Groups

	N	Minimum	Maximum	Mean	SD	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
virtual Group	108	123.00	221.00	172.97	19.236	370.02	.091	.233	-.472	.461
Physical	102	71.00	202.00	119.80	29.244	855.22	-.055	.239	-.305	.474
Valid N (listwise)	102									

As presented in the table above, the skewness and kurtosis ratios for the obtained scores fell within the acceptable range of ±1.96. This indicates that the assumption of normality was satisfied, thereby justifying the application of an independent-samples t-test. The results of this t-test, comparing the mean scores of the virtual and physical groups, are summarized in Table 3.

Table 4.
Results of Independent Samples T-Test Between the Score Means of the Virtual and Physical Groups

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
All Styles	Equal variances assumed	33.64	.00	15.64	208	.00	53.16	3.39	46.46	59.86
	Equal variances not assumed			15.47	173.12	.00	53.16	3.43	46.38	59.95

The Levene's test for equality of variances yielded an F-value of 33.64 with a corresponding p-value of .00 (two-tailed), indicating that the variances of the two groups were not homogeneous. Consequently, the results of the independent-samples t-test assuming unequal variances are reported. The t-test produced a t-value of 15.47 with 173.12 degrees of freedom and a p-value of .00 (two-tailed), demonstrating that the mean difference between the virtual and physical groups was statistically significant. As shown in Table 2, the mean motivational strategies score for the virtual group was 172.97, while that of the physical group was 119.80. Therefore, it can be concluded that the virtual teaching group significantly outperformed the physical teaching group in terms of motivational strategies.

The second research question aimed to determine whether there are any significant differences among Chinese EFL teachers' motivational strategies with respect to their teaching styles. Table 4 presents the descriptive statistics for the motivational strategies scores across the five teaching style groups.

Table 5.
Descriptive Statistics for the Motivational Strategies Scores of the Five Teaching Styles

	N	Minimum	Maximum	Mean	SD	Variance	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Facilitator	32	145.00	221.00	191.65	15.547	241.71	-.956	.841	1.420	1.80
Delegator	31	162.00	201.00	177.67	9.0678	82.226	.334	.842	-.040	.82
Personal	33	145.00	178.00	160.57	7.3952	54.689	-.166	.840	1.247	1.79
Expert	31	115.00	178.00	144.29	11.160	124.54	-.158	.421	.503	.821
Formal	30	71.00	155.00	100.76	21.512	462.80	.597	.427	.222	.833
Valid N (listwise)	30									

As shown in Table 4, the skewness and kurtosis ratios for all five data sets were within the ±1.96 range. Therefore, the normality assumption was satisfied for each group, justifying the use of a one-way analysis of variance (ANOVA) to compare the mean scores across the five teaching style groups. One of the key assumptions underlying one-way ANOVA is the homogeneity of variances; the results of the test for this assumption are presented in Table 5.

Table 6.
Results of Levene's Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
All Styles	Based on Mean	7.348	4	152	.070
	Based on Median	6.625	4	152	.120
	Based on Median and with adjusted df	6.625	4	102.616	.202
	Based on trimmed mean	7.472	4	152	.780

Table 5 shows that the p-values for all groups were above .05, indicating that the homogeneity of variances assumption was not violated. Table 6 subsequently provides the results of the one-way ANOVA.

Table 7.
Results of One-way ANOVA

All Styles					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	151694.218	4	37923.555	199.682	.000
Within Groups	28867.807	152	189.920		
Total	180562.025	156			

Table 6 shows that the F-ratio was 199.68 with 4 and 156 degrees of freedom, and the associated p-value was .00, which is less than .001. Consequently, the five groups of teachers differed significantly in their use of motivational strategies depending on their teaching styles. A Scheffé post-hoc test was then performed to determine which specific groups differed from one another; the outcomes are summarized in Table 7.

Table 8.
Scheffe Test of Multiple Comparisons

Dependent Variable: All Styles						
Scheffe						
		Mean			95% Confidence Interval	
(I) Groups Styles	(J) Groups Styles	Difference (I-J)	Std. Error	Sig.	Lower Bound	Upper Bound
Facilitator	Delegator	13.97883*	3.47296	.004	3.1486	24.8090
	Personal	31.08049*	3.41908	.000	20.4183	41.7427
	Expert	47.36593*	3.47296	.000	36.5357	58.1961
	Formal	90.88958*	3.50224	.000	79.9681	101.8111
Delegator	Facilitator	-13.97883*	3.47296	.004	-24.8090	-3.1486
	Personal	17.10166*	3.44697	.000	6.3525	27.8508
	Expert	33.38710*	3.50041	.000	22.4713	44.3029
	Formal	76.91075*	3.52946	.000	65.9043	87.9172

Personal	Facilitator	-31.08049*	3.41908	.000	-41.7427	-20.4183
	Delegator	-17.10166*	3.44697	.000	-27.8508	-6.3525
	Expert	16.28543*	3.44697	.000	5.5363	27.0346
	Formal	59.80909*	3.47646	.000	48.9680	70.6502
Expert	Facilitator	-47.36593*	3.47296	.000	-58.1961	-36.5357
	Delegator	-33.38710*	3.50041	.000	-44.3029	-22.4713
	Personal	-16.28543*	3.44697	.000	-27.0346	-5.5363
	Formal	43.52366*	3.52946	.000	32.5172	54.5301
Formal	Facilitator	-90.88958*	3.50224	.000	-101.8111	-79.9681
	Delegator	-76.91075*	3.52946	.000	-87.9172	-65.9043
	Personal	-59.80909*	3.47646	.000	-70.6502	-48.9680
	Expert	-43.52366*	3.52946	.000	-54.5301	-32.5172

*. The mean difference is significant at the 0.05 level.

As shown in the table above, all significance values were below .001, indicating that every teaching style group differed significantly from the others in terms of their motivational strategies. The mean scores for the five teaching style groups were as follows: facilitator (191.65), delegator (177.67), personal (160.57), expert (144.29), and formal (100.76). These results allow for the following conclusions: the facilitator style group scored significantly higher than the other four groups; the delegator style group performed significantly better than the personal, expert, and formal groups; the personal style group significantly outperformed the expert and formal groups; and finally, the expert style group achieved significantly higher scores than the formal style group.

Discussion

The primary aim of this study was to investigate whether there is a significant difference between Chinese EFL teachers' motivational strategies in physical versus virtual teaching contexts. The secondary aim was to explore any significant differences among the same teachers' motivational strategies in relation to their teaching styles. Statistical analyses revealed that the virtual teaching group scored significantly higher than the physical group in terms of motivational strategies. Furthermore, significant differences were found among the five teaching style groups, with mean motivational strategy scores ascending in the following order: facilitator, delegator, personal model, expert, and formal authority.

The findings concerning contextual differences between virtual and physical teaching align with prior studies that have compared these two environments. For instance, Resnik et al. (2022) reported differences in foreign language classroom anxiety between virtual and in-person settings. Similarly, Resnik and Dewaele (2021) found differences in classroom enjoyment and anxiety-provoking characteristics between the two modalities. The present results also echo those of Dewaele et al. (2022), who identified differences in foreign language enjoyment, anxiety, and boredom across virtual and in-person classes.

Virtual teaching represents a fundamentally different instructional approach, creating distinct challenges and opportunities that inevitably affect teachers (Gacs et al., 2020). In such an environment, teachers must adopt new roles and novel instructional strategies to address everyday challenges, which in turn influences their motivational practices within a new community of practice (Lantz-Andersson et al., 2018). The observed differences can be interpreted through the lens of contextual disparities. Although virtual teaching offers benefits such as increased flexibility and accessibility (Waschull, 2001) and can be as effective as in-person instruction (Hodges et al., 2020), delivering lessons virtual requires more than simply converting course materials to an electronic format. It demands high levels of classroom management, teacher self-efficacy, and the adoption of tailored instructional strategies (Broadbent & Poon, 2015). Moreover, both learners and teachers may experience feelings of isolation in virtual settings, which poses additional challenges for instructors (Kuong, 2015) and can affect the motivational strategies they employ.

The significant differences among teaching style groups in terms of motivational strategies can be understood by examining the characteristic features of each style. According to Grasha (1996), the facilitator style goes beyond the traditional teacher role by actively engaging learners in activities and dialogues that promote thinking skills, problem-solving, autonomy, and most notably, motivation. This description aligns closely with the profile of a professional teacher in communicative language teaching, where teachers are expected to act as facilitators by creating safe, encouraging, and accommodating conditions for authentic English use (Omondi et al., 2014). Similarly, the delegator style is also consistent with more recent conceptualizations of the teacher's role (Grasha, 2002). In contrast, the personal model, expert, and formal authority styles are less likely to provide strong motivational impetus for learners, as these styles tend to be less learner-centered compared to the facilitator and delegator styles (Botas, 2006).

The hierarchical pattern of mean scores (facilitator > delegator > personal > expert > formal) suggests a continuum from more learner-centered, autonomy-supporting styles to more teacher-centered, authority-driven style s. This pattern implies that teaching styles emphasizing learner engagement, shared responsibility, and interactive dialogue are more conducive to the use of motivational strategies. From a pedagogical perspective, teacher education programs may benefit from explicitly training pre-service and in-service teachers in facilitator and delegator styles, especially in virtual contexts where learner autonomy and self-regulation are critical for success. Additionally, the finding that virtual teachers outperformed physical teachers in motivational strategies may reflect a heightened awareness of motivational needs in the more challenging virtual environment, prompting teachers to compensate by employing a wider range of

strategies. Future research could explore whether this difference persists over longer periods or changes as teachers gain more experience with virtual instruction.

CONCLUSION

The present study had two main objectives. The first was to investigate whether Chinese EFL teachers differ significantly in their use of motivational strategies when teaching virtual versus physical. The second was to determine whether teachers' motivational strategies vary significantly depending on their preferred teaching styles (i.e., facilitator, delegator, personal model, expert, or formal authority).

The findings of this research both support and are reinforced by earlier studies that have examined differences between virtual and in-person learning environments. Specifically, the observed superiority of the virtual teaching group in motivational strategies aligns with prior evidence that virtual settings demand greater teacher effort to sustain learner engagement. This can be interpreted in light of the inherently more challenging nature of virtual instruction, where reduced physical presence and limited spontaneous interaction require teachers to employ more deliberate and varied motivational techniques.

Furthermore, the significant differences found among the five teaching style groups can be explained by the distinct characteristics inherent to each style. For instance, facilitator and delegator styles, which emphasize learner autonomy, dialogue, and shared responsibility, appear to foster a richer repertoire of motivational strategies compared to more teacher-centered styles such as expert or formal authority.

The results carry practical implications for various stakeholders in language education. Teacher educators should consider incorporating training on differentiated motivational strategies tailored to both teaching contexts (physical vs. virtual) and to specific teaching styles. EFL teachers can benefit from reflecting on their own teaching styles and adapting their motivational practices accordingly, especially when transitioning to vritual environments. EFL learners, in turn, may experience more engaging and supportive learning atmospheres when their teachers are equipped with context-sensitive motivational strategies.

Despite its contributions, this study is not without limitations. These include the restricted geographical scope, the sample size (210 participants), and the reliance on self-reported questionnaire data. Moreover, causality cannot be inferred due to the ex-post-facto design.

Based on the objectives and findings of the present study, several avenues for further investigation are proposed. Future research could replicate the study with larger and more diverse samples across different provinces or countries. Longitudinal designs could examine how motivational strategies evolve over time as teachers gain more

experience with virtual instruction. Qualitative studies (e.g., interviews or classroom observations) could provide deeper insights into why certain teaching styles or contexts lead to more frequent or effective use of motivational strategies. Additionally, the interplay between teachers' motivational strategies and actual learner outcomes (e.g., engagement, achievement, or persistence) warrants empirical examination.

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