

# A Narrative Review of Methodology Use in Motivational Strategies Studies in EFL Context (2006-present)

Bo Wang<sup>1,2</sup>

<sup>1</sup> School of International Studies and English, Beijing Foreign Studies University, Beijing, 100089, China

<sup>2</sup> School of Foreign Languages, Zhengzhou Business University, Zhengzhou, 451200, China

Correspondence: Bo Wang, School of International Studies and English, Beijing Foreign Studies University, Beijing, 100089, China. E-mail: 202220301013@bfsu.edu.cn

Received: September 21, 2024

Accepted: February 27, 2025

Online Published: March 4, 2025

doi: 10.5539/elt.v18n4p1

URL: <https://doi.org/10.5539/elt.v18n4p1>

## Abstract

Teachers' motivational practices are vital for enhancing students' motivation to learn languages in the English as a Foreign Language (EFL) context. Over the past 20 years, research has focused on three crucial questions: 1) How do teachers recognize the importance of motivational strategies, and how frequently do they implement them? 2) What is the relationship between teachers' motivational practices and learners' motivation in second language (L2) contexts? 3) How effective are teachers' motivational interventions in driving changes in student motivation and elevating their EFL learning outcomes?

A comprehensive review of 19 studies clearly demonstrates the diverse methodologies employed by researchers. These methods encompass quantitative approaches, including questionnaire surveys, mixed methods that integrate questionnaires, classroom observation schemes, and interviews, as well as quasi-experimental designs. Data has been meticulously collected from various perspectives, involving teachers, learners, and researchers, utilizing both self-reported and observational data. A robust array of statistical analyses—such as descriptive statistics, correlation analysis, exploratory factor analysis, regression analysis, and mediation analysis—has been conducted to reveal the relationships and causal connections among the identified variables, offering powerful insights into the effectiveness of teachers' motivational practices.

Given the rigorous methodologies and significant findings across these studies, this review not only outlines critical future research directions but also presents valuable pedagogical implications, highlighting the essential role that teachers play in motivating their students and significantly enhancing language learning outcomes.

**Keywords:** EFL teachers and learners, L2 motivation and achievement, motivational strategies, quantitative methodology

## 1. Introduction

Ellis (1994) defines L2 motivation as “the effort that learners put into learning the L2 as a result of their need or desire to learn it” (p. 509). Motivation, as a prominent indicator of success in English as a Foreign Language (EFL) learning, has sustained the research interests of scholars since the 1990s in the field of Second Language Acquisition, Psycholinguistics and Applied Linguistics as a whole. Related studies on language learning motivation include the socio-educational model of L2 acquisition, the L2 motivational self-system, self-determination and motivated engagement, complexity theory, emotions, individual differences, willingness to communicate, etc. Besides these issues, “What can teachers do to motivate their learners?” (Sugita & Takeuchi, 2010). Thus, the concerns about the effects of teachers' motivational practice on learner motivation and L2 attainment have shifted the investigation of motivation from the cognitive perspective to more social-situational and practical strategies implementation that may contribute to students' language learning motivation.

Dörnyei (2001) defines motivational strategies (short as MSs) as “the motivational influences that are consciously exerted to achieve some systematic and enduring positive effect” (p. 28). Guilloteaux and Dörnyei (2008) further propose that MSs are instructional interventions applied by the teacher to elicit and stimulate learners' motivation. It also referred to self-regulating strategies used purposefully by individual students to manage their motivation level, which is not within the scope of this review. In this new line of inquiry, the

various recommended strategies across different cultures were identified and testified in terms of their applicability, teachers' and learners' perceptions of their importance and frequency of use (e.g., Cheng & Dörnyei, 2007; Guilloteaux, 2013), and the possible correlations between teachers' implementation of such strategies and learners' motivated behaviours (e.g. Moskovsky et al., 2013; Sugita & Takeuchi, 2014) and motivational dispositions (L2 self) (e.g. Mackay, 2019; Papi & Abdollahzadeh, 2012), L2 proficiency and achievement (e.g. Alrabai, 2016; Bernaus & Gardner, 2008), and emotions (e.g. Alrabai, 2022). By the themes of this research paradigm, the methodology employed includes quantitative method, mix-methods and quasi-experimental design in the classroom context to examine and reveal the correlation and potential causal relation between teachers' motivational practice and learners' motivated behaviours and L2 attainment in different EFL contexts.

In this paper, we will review the methods employed in this line of research. Two questions will guide our review of the studies over the past 20 years. They are:

- (1) What quantitative research methods are employed in the motivational strategies studies?
- (2) What are the specific characteristics of each method in approaching the issues of teachers' motivational practice? (instruments, data collection, data analysis)

## **2. Literature Search**

This study used a systematic literature review approach as a search method (Campbell et al., 2014). Initially, the search was for journal articles on the Web of Science core collection (SSCI & A&HCI from 2006 to present), with key keywords "motivational strategies," "EFL teachers and learners," "motivational intervention" and "EFL teachers and learners", and "motivational practice" and "EFL teachers and learners" respectively. Altogether, 51 articles were found. The author first read through all the abstracts and excluded proceeding papers, editorials and book reviews. A further step of exclusion was conducted after a close reading of all the articles, considering that 1) teachers' motivational strategies, practices or intervention about learners is not the focus of the study; 2) the theory adopted is not related to motivation or motivational strategies; 3) the topic of the study is not related to EFL context; 4) only qualitative data employed, since this review focus on the quantitative methodology used. After these steps, only 14 articles left. After reading through the references and citations of all the articles, six more articles were added, mainly from two journals, *Innovation in Language Learning and Teaching* and *Current Psychology*. Ultimately, 19 studies were included in the review (see Table 1).

## **3. The Narrative Review**

### *3.1 Overview of Motivational Strategies Studies*

The research into teachers' pedagogical practice about learners' motivational change has been probing into three broad questions: 1) how do teachers perceive the importance of motivational strategies? 2) what is the relationship between teacher-motivational practice and English language learning motivation? 3) how effective are teachers' motivational practices/interventions in promoting students' motivational change and EFL learning? Different methods and instruments were employed for each research theme, including quantitative (questionnaire survey), mixed-methods (questionnaire, classroom observation scheme, interview, etc.) and quasi-experimental design. Data were collected from multiple perspectives of teachers, learners and researchers. Descriptive statistical analysis, correlation analysis, exploratory factor analysis, regression analysis and mediation analysis were used in these studies. The descriptive characteristics of each study are presented in Table 1. In the following three parts, we will review the methods employed and the three themes in the motivational practice studies.

Table 1. Descriptive characteristics of the 19 review articles

No.	Authors & publishing year	Research purpose	Framework	Participants and context	Research methods (instruments)	Statistical methods	Analysis	Findings
1	Cheng & Dörnyei (2007)	teachers' perceived importance and frequency of use of MS (A replication study of Dörnyei and Csizér (1998))	Dörnyei's (2001) MS framework	387 teachers of English in Taiwan	Quantitative 1) Importance questionnaire 2) Frequency questionnaire	1) Reliability analysis (10 clusters of MSs) 2) Mean values 3) The difference of the standardized scores for each strategy (z-diff).		1) some motivational strategies are transferable across diverse cultural and ethnolinguistic contexts. 2) certain motivational strategies (promoting learner autonomy) are culturally dependent.
2	Guilloteaux & Dörnyei (2008)	classroom-oriented investigation of the effects of MS on student motivation	Dörnyei's (2001) MS framework	a large-scale investigation of 40 ESOL classrooms in South Korea (27 teachers and more than 1,300 learners)	Quantitative 1) classroom observation (MOLT) 2) Student motivational state questionnaire 3) postlesson teacher evaluation scale	1) Cronbach alpha reliability coefficient 2) Composite variable computing 3) Multiple correlations analysis		language teachers' motivational practice is linked to increased levels of the learners' motivated learning behaviour as well as their motivational state.
3	Bernaus & Gardner (2008)	Relation between teacher motivation strategies, student perceptions, students motivation and English achievement	Teacher' pedagogic strategies (traditional and innovative)	31 EFL teachers and their students (N=694) in Catalonia, Spain	Quantitative 1) Strategy use questionnaires for both teachers and students 2) the mini-Attitude Motivation Test Battery (students' attitude, motivation and anxiety) 3) Student English achievement test	1) Path analysis 2) Hierarchical linear modelling analysis		1) teachers' reported use of strategies was not related to the students' English achievement, attitudes, motivation, or language anxiety; 2) students' perceptions of these strategies tended to be related to their attitudes and motivation at both the

						individual and class levels; 3) strategy use reported by students had a positive effect on the predictability of motivation on English achievement.
4	Ruesch, Bown & Dewey (2012)	Student and teacher perceptions of motivational Strategies	Dörnyei and Csizér (1998) and Cheng and Dörnyei (2007) with modification	126 students and 30 instructors in North America university language classes	Quantitative MS Questionnaires (17 strategies)	1) Mean values to rank the order of macrostrategies 2) A series of inferential statistical tests were performed to determine differences between students' and teachers' ratings of particular macrostrategies.
						1) The relationships between teachers and students and the classroom climate strongly influence learners' motivations. 2) not all teaching practices are perceived as motivational in every context. 3) students and teachers may have strikingly different perceptions of certain practices especially those that are culturally dependent.
5	Deniz (2010)	Students' perception of the importance of MS in comparison to their perception of teachers' use of MS	Dörnyei (2001)	179 student teachers (42 males and 137 females) in an ELT department in University, Turkey	Mixed-methods 1) The Motivational Strategies Scale, developed by Dörnyei (2001b) 2) Interview (40 participants from each grade)	1) arithmetical means and standard deviations were calculated for each Sub-dimension and item 2) chi-square analysis was performed 1) student teachers thought motivational strategies were very important for EFL learning, and that their instructors use some of these strategies but did not use other

							strategies considered to be important by the student teachers;
							2) Interviews showed that students thought studying the cultural values of the target language facilitates fluent use of the target language and assists retention.
6	Sugita & Takeuchi (2010)	What can teachers do to motivate their students?	Dörnyei's (2001) MS framework	5 Japanese English teachers of 8th and 9 <sup>th</sup> grades in an ordinary public lower secondary school in Kyoto, Japan; and their students (190 in total) in the 9 classes	Quantitative (classroom) 1) MS Questionnaire for teachers (15 items) 2) students' motivation questionnaire	1) Pearson's correlation analysis 2) t-test 3) Students' L2 proficiency test score	1) teachers used motivational strategies in a variety of ways; 2) there were only four out of 15 strategies that showed a significant correlation with students' motivation; 3) effectiveness of some strategies varied according to students' English proficiency level.
7	Papi & Abdollahzadeh (2012)	examine teachers' motivational practice in relation to the observed learners' motivation behaviour and their L2 self-guides.	Dörnyei's (2005, 2009) new L2 Motivation Self System	a total number of 741 male students from 26 classes (from 10 secondary schools) taught by 17 teachers with 5-29 (mean = 12) years of	Mixed-method (1) classroom observation scheme: the Motivational Orientation of Language Teaching (MOLT); (2) the Post-Lesson Teacher Evaluation scale;	1) The standardized scores were then used to compute composite scores and conduct relevant analyses 2) the independent samples t-test 3) factor analysis 4) Correlation analysis	1) the teachers' motivational practice is significantly related to the students' motivated behaviour; 2) while no differences were found between

				teaching experience	(3) the Student Motivational State questionnaire (SMS).		high-motivation and low-motivation learner groups in terms of their ideal second language (L2) selves, the low-motivation group had stronger ought-to L2 selves.
8	Guilloteaux (2013)	teachers' perception of MSs in terms of their importance and frequency of use	Dörnyei's (2001) framework Cheng and Dörnyei's (2007)	268 South Korean EFL teachers. (69 males, 199 females) divided into two groups to respond to the two survey questionnaires respectively	Quantitative Two questionnaire surveys: 1) Importance survey 2) Frequency survey the 48 MSS derived from Dörnyei's (2001) framework	1) Cronbach alpha indicating the internal consistency reliability 2) Mean-difference score 3) standardized z-diff score	1) "Promote learner autonomy" was reported the least frequently used strategies with the lowest mean difference (Mean-diff) among all the macrostrategies. 2) All the strategies were underused by teachers in the Korean EFL context, suggesting that teachers hardly thought of motivating students in their practice or simply lacked the skills to do so.
9	Moskovsky et al. (2013)	test the effects of teachers' motivational teaching practices on learners' motivated behaviours.	Dörnyei and Csizér (1998) and Cheng and Dörnyei (2007); Dörnyei's (1994) Model of L2 motivation	14 teachers and 296 EFL learners in Saudi Arabia divided evenly into an experimental (153) and a control group (143) for 8 weeks teaching program	quasi-experimental study 1) implementation guide of motivational strategies (10 items) 2) learners' motivation questionnaire (132 items).	1) chi-square tests 2) principal component analysis 3) mixed-model ANOVA 4) Multivariate analyses	1) increases in learners' motivation over time were significantly more pronounced in the experimental than control conditions, and they were in the predicted

							direction of a relative greater increase in the experimental group. 2) teachers' motivational behaviours not just only relate but do cause enhanced motivation in their SL learners.
10	Sugita & Takeuchi (2014)	the relations between the frequency of motivational teaching strategies and the strength of students' motivation induced by each MS over one semester	Not clearly stated	1 instructor and 222 full-time undergraduate EFL students from 5 language classes at a Japanese university (majoring in humanities)	Quantitative 1) 17-item MSs questionnaire for teachers' frequency of use 2) students' motivational intensity questionnaire 3) students' English proficiency test	1) hierarchical cluster analysis and the k-means method 2) t-test 3) Bonferroni correction method	1) two distinct clusters were found: students with higher English proficiency and higher motivational intensity (n 86) and students with lower English proficiency and lower motivational intensity (n 136); 2) the two clusters did not exhibit a similar trend regarding the relationship between frequency of motivational strategy use by teachers and students' motivation except two MSs.
11	Wong (2014)	Examine the perceived effectiveness of motivational strategies employed by teachers from	Dörnyei's (2001) motivational strategies framework ; Guilloteau x &	30 EFL classroom observations involving 10 teachers and more than 900 learners in	Mixed study (classroom) (25 1) MS strategies) effectiveness (MSE) observation scheme	1) Descriptive statistical analysis (mean value) 2) One-way ANOVA	6 of the motivational strategies were commonly viewed by the three groups of participants as being most

		teachers, students and researcher's perspective	Dörnyei (2008)	Hong Kong	2) post-lesson teacher evaluation scale 3) student motivation questionnaire (90 learners at different levels of English proficiency who completed questionnaires)		effective: These 6 motivational strategies can be classified in various ways: (1) and (3) are extrinsic in nature; (4) and (6) focus on classroom discourse; (5) is content-focused; and (2) is related to teacher style. A caveat here is that interpersonal, instrumental, and external elements operating in complex ways to create a motivating learning environment in Chinese EFL classrooms.
12	Alrabai (2016)	The effects of MS on learner motivation and achievement in English language classes in Saudi Arabia	Dörnyei and Csizér (1998), Dörnyei (2001), Cheng & Dörnyei (2007), Guilloteau x & Dörnyei (2008), Anderson (2012), Moskovsk y et al. (2013)	437 learners divided almost equally into two groups (experimental vs. control) and 14 EFL teachers were recruited	quasi-experimental study 1) an implementation guide (with 6 strategies) 2) MOLT 3) Student motivation questionnaire 4) Learner achievement test (language skills and content materials)	1) A chi-square test for the primary matching procedure 2) Statistical analysis (e.g. analysis of covariance and mediation analysis)	the motivational intervention in the experimental group led to increased learner motivation, which in turn led to higher achievement levels for learners in the experimental group than those in the control group.
13	Maeng and Lee's (2015)	examine the motivating behaviour of 12 in-service teachers of English in	Keller's ARCS model	12 in-service teachers of English in Korean	Mixed-methods 1) Classroom observation (video recording) 2) interview	1) Nvivo used for Content analysis of observation data and interview; 2) Friedman test to verify the influence of	1) the teachers did not effectively utilize motivational strategies or



		Korean.				the designated variables (experience and proficiency level) on these differences of strategy use.	tactics, except for attention. 2) teachers' MSs were correlated positively with their language proficiency but negatively with teaching experience.
14	Tavakoli et al. (2018)	the use of MSs by Iranian English teachers and to see whether there were any culture-specific strategies.	Cheng and Dörnyei's (2007)	185 EFL teachers in Iran	mixed-methods design 1) MS questionnaire 2) semi-structured interviews (10 teachers)	1) Rank by mean score of each macro-strategy 2) regression analysis 3) Statistical analysis 4) the independent samples t-test	some culture-specific differences in strategy importance and use were traced, particularly in terms of promoting learners' autonomy and goal-orientedness.
15	Karimi & Zade (2019)	effects of a motivation-oriented professional development course on teacher change of motivational practice and students' motivation	Kellers' ARCS model on teachers' use of motivational strategies	10 Iranian EFL teachers (4 males and 6 females aged at 23–55 years and with 1 to 22 years of teaching experience; 100 students (58 females and 42 males, aged at 14 to 36 with 1.5-to-12-year English learning experience)	Questionnaires and class observations 1) Course Interest Survey (a tool to measure students' motivation level based on Keller's ARCS model) 2) Student Evaluation of Teaching (Otani, Kim, and Cho 2012) 3) Motivational Delivery Checklist (MDC)	1) a non-parametric test 2) Mann-Whitney U Test 3) Normality test 4) the non-parametric statistical technique and Wilcoxon Signed Ranks Test 5) a paired samples t-test 6) The eta squared statistical analysis	1) there is a significant difference in teachers' use of MSs before and after the professional development course. 2) Teaching experience did not make any significant difference in teachers' use of motivational strategies. 3) teachers' use of motivational strategies had an insignificant effect on students' judgments of their teachers' teaching effectiveness

									but a significant positive effect on student motivation.
16	Min & Chon (2021)	how EFL teachers' motivational practice affects learners based on a motivational design for learning and performance	the ARCS model (Keller, 1987; Keller, 2001)	242 high school EFL learners (age: 16-17) and 12 teachers (age: 29 to 60; teaching experiences: 1-34 years) from private high schools in South Korea.	Mix-method use 1) MS Questionnaires (40 items) for teachers and learners respectively; 2) Reported L2 proficiency scores: 3) interview (8 learners)	1) an exploratory factor analysis 2) Independent t-tests with Bonferroni correction 3) Repeated measures one-way ANOVA, Bonferroni post-hoc tests and pairwise comparisons 4) Post-hoc comparisons (using a Tukey HSD test) 5) Simultaneous multiple regression		1) Teachers' MS might have been undervalued by learners or that teachers might have failed to support learners' motivational needs adequately. 2) The higher the learners' proficiency level, the more likely they are to acknowledge teachers' MS for their L2 learning and improvement. 3) The extent to which learners recognized the teachers' use of MS to boost their confidence was largely dependent on their L2 proficiency. 4) attention-getting strategies and confidence-building strategies significantly predicted L2 learners' proficiency.	
17	Mirzaei et al. (2022)	Examine the synergistic effects of ARCS-flipped teaching	the ARCS model	59 EFL learners in two intact classes in Iran	Quasi-experimental study 1) 4 essay-writing tasks before and after instruction	1) independent-samples t-test 2) a one-way-ANCOVA		1) although both the ARCS groups made expository-wr	

		on Iranian English-as-a-foreign-language (EFL) learners' expository-writing performance and motivation		The class with 31 learners (52.54%), held on even days, was assigned to the experimental group (i.e. ARCS-flipped setting) and that with 28 (47.46%), held on odd days, to the control group (i.e. ARCS-face-to-face setting)	2) 34-item, ARCS-based CIS 3) the Oxford Placement Test (for L2 proficiency) 4) semi-structured interviews	3) Paired-sample t-tests	iting gains, the flipped-teaching group attained more significant post-intervention achievement. 2)the ARCS-flipped course nourished L2 learners' expository-writing skills more effectively. 3) integrating virtual collaborative affordability fostered L2 learners' expository-writing skills and positive perceptions or that applying online flipped-writing instruction enhanced students' writing proficiency and hindered demotivation.
18	Alrabai (2022)	how integrating the positive and negative emotions affects EFL learner motivation, anxiety and language achievement	Dörnyei (2001)	6 EFL teachers with 209 EFL learners divided into three groups for 12 weeks: in group 1(learners exposed extensively to anxiety-regulating strategies), group 2 (exposed to motivation-promoting	Quasi-experimental study The influence of the treatment was assessed using 1) questionnaires 2)classroom observations, 3) achievement tests.	ANOVAs and MANOVAs were employed to capture treatment effects.	1) changes in learner anxiety, motivation and achievement over time differed significantly across the study groups. 2) While the analyses reveal a significant decrease in learner anxiety and a significant

strategies), and group 3 (exposed to combined anxiety-regulating and motivational strategies together).

increase in learner motivation and achievement over time among learners in all the study groups, significantly positive changes in motivation, anxiety, and learner achievement were observed in the integrated group.

- 19 Hennebry-Leung & Xiao (2023) examine the role of learners' personality and teachers' practice in shaping motivation and self-efficacy in language learning.
- Dörnyei's (2005) L2 Motivational Self System
- 277 learners of English in Hong Kong, aged 11-14 years, and 24 lesson observations, across 10 classes
- Mixed-methods  
 1) Motivation survey  
 2) Five-Factor Personality Inventory  
 3) MOLT observation schedule (teacher discourse, Encouraging positive retrospective self-evaluation)
- hierarchical multiple regression analysis
- 1) a significant role of personality and teachers' motivational practice in predicting language learning motivation and self-efficacy;  
 2) personality variables demonstrated large effect sizes for motivational orientations, and teacher practice variables evidenced large effect sizes for language learning self-efficacy.

### 3.2 How do Teachers Perceive the Importance and the Use Frequency of Motivational Strategies: the Motivational Strategies Scale

Dörnyei & Csizér (1998) was the first and often referred study to examine teachers' perception of their motivational practice in the Hungarian EFL context. The original motivational strategies questionnaire they designed consisted of 17 macro-strategies concerning teaching, climate, task, self-confidence, personal relevance, interest, language, usefulness, autonomy, effort, comparison, goal, group, culture, reward, peer-modeling, finished product and rapport. It measured the perceived importance and frequency of different motivational strategies used in Hungarian English classrooms.

Cheng and Dörnyei (2007), drawn on Dörnyei's (2001)<sup>1</sup> systematic overview of motivational techniques, established a 48-item questionnaire clustered into 10 macro-strategies through internal reliability analysis (Cronbach Alpha above 0.70). In this study, two identical questionnaire items with different scales were designed to measure the perceived importance and frequency of use of these strategies. Then, descriptive statistics were computed to rank the order of the 10 clusters in terms of the mean score of importance and frequency survey. Lastly, the importance and frequency items were compared by computing standardized scores (z-diff) to identify motivational strategies that were particularly underutilized relative to the importance attached to them by the responding teachers. The two most underutilized macro-strategies found relative to their importance were 'making the learning tasks stimulating' and 'familiarizing learners with L2-related culture' (p. 172). With the findings and comparison with Dörnyei and Csizér's (1998) study of Hungarian English teachers, this study concluded that although some motivational strategies are transferable across cultures, there are certain motivational strategies (e.g. promoting learner autonomy) are culture-dependent with learners in China's Taiwan.

Based on Cheng and Dörnyei's (2007) motivational strategies questionnaire, researchers replicated this kind of study to examine whether the motivational strategies were transferable across cultures in Japan (Sugita & Takeuchi, 2010; 2014), South Korea (Guilloteaux, 2013), Turkey (Deniz, 2010), North America (Ruesch, Bown & Dewey, 2012), China's Hong Kong (Wong, 2014) and Iran (Tavakoli et al., 2018). Findings generally corroborated Cheng and Dörnyei's (2007) in that some strategies were culture-specific. However, the limitation of this line of study was the reliance solely on self-reported data and the lack of data triangulation (Alrabai, 2016). Thus, it could not present a complete picture of the effects of teachers' actual use of the motivational strategies on student motivation and potential student achievement.

### 3.3 The Correlation between Teachers' Motivational Practice and Learner's Motivated behaviours and L2 Achievement: Quantitative Method and Mixed-method

Guilloteaux and Dörnyei (2008) complemented the previous studies by conducting a classroom-oriented investigation into the correlation between teachers' MSs and students' motivated behaviours. Three different types of instruments were employed in this study:

(1) A classroom observation scheme, the motivation orientation of language teaching (MOLT), was designed to observe and evaluate features of the learners' motivated behaviour and the teacher's motivational teaching practice. Twenty-five motivational variables of a teacher's motivational teaching practice were observed, defined and grouped into 4 four categories: teacher discourse, participation structure, encouraging positive retrospective self-evaluation, and activity design. Observational variables measuring learners' motivated behaviours included attention, participation and volunteering for teacher-fronted activity. The observer (the first author, Guilloteaux) coded the classroom event for each minute according to the scheme. (A pilot study involving 8 sample classes was conducted before the main study to test all the instruments.)

(2) The student motivational state questionnaire, with 20 items, was designed to assess the students' situation-specific motivational disposition related to their current L2 course: (a) attitudes toward the course (9 items), (b) linguistic self-confidence (8 items), and (c) L2 classroom anxiety (3 items).

(3) A post-lesson teacher evaluation scale was developed as a short 9-item rating scale focused on various motivation-specific features of the teacher's instructional behaviour. This was done to increase the research reliability and triangulate the researcher's appraisal of the teachers' motivational practices.

In terms of data analysis, the procedure went as follows:

#### (1) Computing Composite Variables

Teachers' motivational practice was identified as the first composite variable by calculating the mean values of variables in the 25 constituents of the classroom observation scheme and nine items of the post hoc teacher evaluation scale. The Cronbach alpha reliability coefficients were 0.70 and 0.91 for the two observational tools

of teachers' classroom practice, showing high internal consistency. Moreover, a correlation was confirmed ( $r = 0.46$ ;  $p < 0.01$ ) between the two measures.

The second composite variable, learners' motivated behaviours, was generated from the observational data of students' classroom motivation activities, which is evident in their attention, participation, and volunteering actions.

The third composite variable, the self-reported student motivation index, emerged from a student questionnaire measuring their attitudes toward the L2 course, linguistic self-confidence, and anxiety. The Cronbach alpha values for the three variables were 0.85, 0.80, and 0.63, respectively, indicating high inter-correlation.

## (2) Correlation between Teachers' Motivational Practice and Student Motivation

The main issue that classroom motivation research concerns is identifying the determining factors of learners' motivated behaviours and, consequently, the expected learning outcomes. In this study, the correlation coefficients (0.61) confirmed a strong link between teachers' motivational practice and students' motivated learning activities, as the typically meaningful range set between the 0.3-0.5 range. Another set of relations between students' self-reported data in their responses to the questionnaire and their motivated classroom behaviours showed a lower but still significant relationship ( $r=0.35$ ,  $p < 0.05$ ). The result indicated that students' perception of the language course would influence how they approach the specific tasks in the course regardless of their attitudes toward the task.

Further, multiple correlations were computed to examine the strength of the relationship between the antecedents (teacher-motivational practice and self-reported student motivation) and the motivational outcome (learner-motivated behaviour). It was found that the teacher's motivational practice and self-reported student motivation explain 40% of the variance in the students' motivated behaviour measure. The correlation between the teacher's motivational practice and the students' self-reported motivation was also computed. Moreover, it was found that the correlation between the two measures was significant, which further confirmed the validity of the results and suggested that the teacher's motivational practice affected the learners' responses in the classroom and their general appraisal of the whole course. The researchers argued that this significant positive relationship indicated that language teachers can make a real difference in boosting their students' motivation by applying various motivational strategies and techniques.

Following this line of study, researchers exerted efforts to refine the classroom observation scheme to elevate the reliability of this procedure. Papi & Abdollahzadeh (2012) followed Guilloteaux and Dörnyei (2008) in examining the influence of teacher motivational practice upon students' motivational behaviours observed in the classroom: alertness (they adopted Ellis' view to use 'alertness,' a more behavioural-oriented construct instead of 'attention'—a psycholinguistic construct describing the mental noticing in L2 learning experience), participation and volunteering. Drawn on Dörnyei's (2005, 2009) new model, the L2 Motivational Self System, it expanded the theme of research to examine a step further the correlation between observed learners' motivation behaviour and their L2 self-guides in the context of Iran. Like Guilloteaux & Dörnyei's (2008) approach to data analysis, the three composite variables (Teacher Motivational Practice, Student Motivated behaviour, and Student Motivational State) were computed to examine the relationship patterns. Pearson product-moment correlation was run. The results of the correlation analysis on Teacher Motivational Practice and Student Motivated behaviour demonstrated that the two factors have a strong relationship, sharing about 52% of the variance. The correlation results also confirmed the existence of strong associations between Teacher Motivational Practice and the three measures of students' motivated behaviours (alertness, participation and volunteering). However, as hypothesized, the students' ideal L2 selves did not seem related to their motivated behaviour.

In Wong (2014), the identified 25 strategies were developed into the Motivational Strategies Evaluation scheme, the teacher post-lesson evaluation scale, and the student motivation scale. The items in the three instruments were identical so that using the mean value of each strategy; we were able to see which motivational strategies were effective as perceived by the teachers, researcher, and students and with a one-way ANOVA to determine whether there were any significant differences between the three parties' perceptions of the effectiveness of motivational strategies. Results indicated that 6 of 25 strategies were unanimously viewed as adequate by the teachers, students, and the researcher, and "there are interpersonal, instrumental, and external elements operating in complex ways to create a motivating learning environment in Chinese EFL classrooms" (p. 142).

Karimi & Zade (2019), based on Keller's ARCS<sup>2</sup> model, examined the effects of a motivation-oriented professional course on teacher change in motivational practice and student motivation. Course interest surveys, student evaluations of teaching surveys, and motivational delivery checklists were constructed as instruments to get triangulated data. After a range of statistical tests, such as non-parametric test, Mann-Whitney U test, paired

samples T-tests and eta squared statistical analysis, the study found that teachers' use of MSs had an insignificant effect on students' judgment of teaching effectiveness but a significant positive effect on students' motivation.

In Hennebry-Leung & Xiao (2023), by using a motivation survey of students, a five-factor personality inventory and MOLT to 277 learners of English in Hong Kong, this study added learners' personality as another variable together with teachers' practice to see how they affect students' motivation and self-efficacy in learning English. Through multiple regression analysis, the results indicated a significant role of learners' personality and teachers' MSs in predicting L2 motivation and self-efficacy: personality variables showed large effect sizes for motivational orientations; teachers' MSs showed large effect sizes for L2 learning self-efficacy.

Besides the classroom-oriented investigation of teachers' motivational practice and its effect on students' motivational disposition and motivated behaviours, other studies employed a mixed-method approach to include qualitative data and conducted various statistical analyses to get a complete understanding of the correlation between teachers' motivating practice and students' L2 proficiency (e.g. Sugita & Takeuchi, 2010; 2014; Maeng and Lee's 2015) and achievement (e.g. Bernaus & Gardner, 2008). For example, Min and Chon (2021) used the ARCS model as the theoretical framework. Based on existing studies, they adopted and revised a 40-item questionnaire specific to the Korean educational context. Thus, teachers' successful use of these strategies could be measured or evaluated by themselves, researchers, and learners. Independent t-tests confirmed the hypothesis, with teachers' ratings of MS higher than the learners. They suggested that learners might have undervalued teachers' MSs or that teachers might have failed to support learners' motivational needs adequately. The findings suggested that learners were susceptible to improving their L2 proficiency if teachers could successfully engage them with attention-getting strategies and give constant support for them to develop their success expectancy.

Overall, correlation studies have employed various instruments to collect multiple sources of data and multiple statistical analyses to testify to the effectiveness of teachers' motivational practices on learners. They were rigorous to a great extent. However, they adopted a cross-sectional design, with data collected once at the end of the term without controlled conditions to ascertain the causality. These relationships can only be established experimentally or via a longitudinal study (e.g., Moskovsky et al., 2013).

### *3.4 The Potential Causal Relation between Teachers' Implementation of MSs and Learners' L2 Achievement: Quasi-experimental Design*

Moskovsky et al. (2013) was the first empirical study to verify the causal relation between teachers' motivational practices and students' motivation. Using a quasi-experimental study with a pre-post-intervention plus control design, it tested the effects of teachers' motivational practices on learners' motivated behaviours in Saudi Arabia. In line with Moskovsky et al. (2013), Albarai<sup>3</sup> (2016) refined the study. It took a step further to conduct a quasi-experimental and longitudinal study investigating the effects of motivational strategies on learner motivation and achievement in English language classes in Saudi Arabia. 14 EFL teachers were recruited, and their 437 students were divided equally into two groups (experimental vs. control). Instruments included an implementation guide (with six strategies obtained from participants from the pilot study), MOLT, student motivation questionnaire, and learner achievement test (language skills and content materials).

The research procedure went as follows:

#### (1) Pretreatment

A careful matching procedure was conducted to minimize the preexisting differences between the two groups and ensure that the teachers' implementation of MSs was the single key difference. A set of chi-square tests was also performed to test the teachers' and students' demographic data statistically, which revealed that the condition had a null effect on all variables. Thus, it was confirmed beforehand that the two groups had no preexisting differences.

Another procedure was used to identify the most valued MSs for the Saudi EFL classroom context. Through the pilot study, six strategies ranked the highest (with mean scores of over 4 of 5) were obtained and later applied in the first stage of the study for the experiment treatment. The strategies identified were also designed into an implementation guide with specific techniques for participant teachers to employ in their intervention practice through a pretreatment training project. To guarantee the implementation of MSs in the experimental group, this study asked teachers to expose learners to motivational moments during each lesson based on Anderson's (2012) idea that "every motivational moment should involve the learners' exposure to a single motivational strategy for no more than 60 seconds" (as cited in Alrabai, 2016, p.7).

## (2) Instruments and Experiment

The classroom observation instrument was designed based on Guilloteaux & Dörnyei's MOLT (2008) with adaptation to evaluate both teacher motivational practices and learners' motivated behaviours in the classroom. Variables (28 into 8 constructs) measuring teacher's motivational practice included teacher behaviour, teaching style, activity design, managing anxiety, building self-confidence, arousing curiosity, promoting autonomy and establishing relevance. The variables (14 into 2 constructs) attributed to motivated learner behaviour in the classroom clustered around learners' level of attention and participation in learning tasks.

Classroom observations were conducted three times at the beginning, middle, and end of the treatment (T1, T2, T3) instead of regularly. Compared to the original version of Guilloteaux & Dörnyei's (2008) observation process, it was refined and much more feasible for the coder to have enough time to evaluate both teachers' MS practice and learners' behaviours.

The student motivation questionnaire (66-item) covered variables (8 constructs) consisting of motivational intensity, linguistic self-confidence, intrinsic motivation, attitudes towards the English teacher, attitudes towards the English course, motivational self-evaluation, learner autonomy, and language anxiety. It was administered at the beginning and end of the treatment. This questionnaire took about 40-50 minutes for learners to respond, which took further ethical consideration of the participants compared to the comprehensive 132-item questionnaire in Moskovsky et al. (2013).

The supplement material reported the design of the learner achievement tests, the validity and reliability check, and the grade calculation.

## (3) Data Analysis

This study proved rigorous and unequivocal through careful sampling, treatment, data collection, and arduous statistical analysis. The supplementary material, which included two appendixes (classroom observation form and students' questionnaire), three tables of social demographic information about the participating teachers and students, thirteen tables of descriptive statistics and multivariate analysis results, and further explanations about the three achievement tests, pretreatment training, and the computing process of composite variables prepared before the correlation analysis, was a piece of good piece of evidence.

The mean scores of the teacher motivational practice variables in the treatment group showed a positive change over time (T1, T2, T3). In contrast, the control group represented a negative decline for most of these variables. It implied that teachers in the control group might have let go of what they had learned in the pretreatment training without intervention in their strategy use. Thus, from a teacher learning perspective, it is suggested that teachers need adequate training and help with facilitation regularly to guarantee the effectiveness of their learning strategies or instructional techniques.

A repeated-measure ANOVA test confirmed that implementing MSs positively affected learners' L2 motivation. A within-subjects ANOVA confirmed that the condition and the time x condition interaction factor significantly affected learner achievement over time. Mediation analysis revealed the causal relationship between motivational strategies used by teachers and learners' L2 achievement mediated by their motivation.

The findings not only echoed the previous studies (e.g. Guilloteaux and Dörnyei, 2008; Moskovsky et al., 2013) on the significant positive correlations established between EFL teacher motivational practices and learner motivation but also further experimentally validated the causal relationships between MSs used by teachers and learners' L2 achievement in a classroom context with learner motivation working as a mediation factor. It was groundbreaking because it was among the first empirical and experimental studies to verify the fundamental assumptions in motivational theories that teacher-motivational behaviour causally affects learner motivation levels and that higher motivation leads to higher L2 achievement (Alrabai, 2016).

More recent studies have expanded the research scope by using intervention studies with design-featured instructions that specifically cater to students' emotion regulation in L2 learning (e.g., Alrabai, 2022). These studies have also examined how technology, as a decisive facilitating factor in the teaching and learning environment, works with teacher practice (e.g., Mirzaei et al., 2022) to affect students' motivation and L2 attainment.



#### 4. Conclusion and Implication

This review focused on the quantitative methodology employed in motivational strategies studies in the context of EFL learning over the past 20 years. Both quantitative method and mixed method were employed to investigate teachers' and learners' perceptions of the attached importance and use of MSs, the effectiveness of MSs, and the correlation between teachers' motivational practice and learners' L2 motivation, proficiency and achievement. Various instruments were used to collect multiple data sources, including MS questionnaires or scales, classroom observation schemes like MOLT or COLT, student motivation questionnaires, interviews, English language proficiency tests, and achievement tests. Multiple statistical analysis methods were applied to check the internal reliability of the instrument, gauge the incremental effects on both teachers and students induced by the MSs, and verify the correlations between the variables identified to fully understand the effectiveness of teachers' motivational practice. Quasi-experimental classroom intervention design was able to ascertain the condition and time factor through careful matching and pretreatment procedure of a control group and an experimental group, trace the differences and changes of teacher practice longitudinally, students' motivated behaviours and L2 achievement induced by the implementation of MSs and thus further testify the causal relation established between teachers' motivational practice and students' motivated L2 performance.

The rigorous research methods used to explore the effectiveness of teachers' motivational practices and the accumulated findings in this field have clearly outlined the future direction and pedagogic implication as follows: 1) more context-dependent and longitudinal studies are called to target the implementation of motivational strategies and its overall effectiveness in the dynamic and complex classroom context; 2) assess the teachability of motivational strategies and how specific strategy could be taught in pre-service program and profession development program; 3) verify whether motivational teacher practices can be modified through intervention; 4) examine the relationship between motivational strategy use and sound teaching (Guilloteaux & Dörnyei, 2008). As the field of second language acquisition/development in applied linguistics is embracing the complex dynamic systems theory (CDST) and new methodologies are emerging in attempt to capture the complex causal relations between teaching and learning (Hiver & Al-hoorie, 2020; Larsen-Freeman, 2018), it is expected that researchers will find new ways to explore the effectiveness of teachers' motivational practice in the ever-diverse L2 learning contexts.

#### Notes

Note 1. Dörnyei's (2001) comprehensive framework of 102 L2 motivational strategies clustered into four categories:

Creating the basic motivational conditions (adopting appropriate teacher behaviours, providing a pleasant and supportive classroom atmosphere, and forming a cohesive learner group with appropriate group norms.)

Generating initial motivation (enhancing learners' language-related values and attitudes, increasing learners' expectancy of success and goal-orientedness, making teaching materials relevant, and creating realistic learner beliefs.)

Maintaining and protecting motivation (making learning enjoyable, presenting tasks in a motivating way, setting specific learner-goals, improving learners' self-confidence, and promoting cooperation, autonomy, and self-motivating strategies among learners.)

Encouraging positive retrospective self-evaluation (promoting motivational attributions, providing motivational feedback, increasing learner satisfaction, and offering rewards and grades in a motivating manner.)

Note 2. Keller's (2010) ARCS model framework encompasses 4 subcategories as the influencing factors on motivation and instructional design: attention, relevance, confidence, and satisfaction (Karimi & Zade, 2019; Min & Chon, 2021).

Note 3. The 6 strategies identified in Alrabai's (2016, p. 7) pilot study was:

(1) Develop a positive relationship with your students (M = 4.76, SD= 0.28).

(2) Help your students cope with their language anxiety (M = 4.59, SD= 0.31).

(3) Build your students' self-confidence (M = 4.51, SD= 0.33).

(4) Stimulate student curiosity to learn English (M = 4.37, SD= 0.31).

(5) Enhance student autonomy and control over learning (M = 4.22, SD = 0.49).

(6) Establish relevance between what your students learn in English class and their lives outside of the classroom (M = 4.08, SD = 0.67)

## References

- Alrabai, F. (2016). The Effects of Teachers' In-Class Motivational Intervention on Learners' EFL Achievement. *Applied Linguistics*, 37(3), 307-333. <https://doi.org/10.1093/applin/amu021>
- Alrabai, F. (2022). The role of mixed emotions in language learning and teaching: A positive psychology teacher intervention. *System*, 107, 102821. <https://doi.org/10.1016/j.system.2022.102821>
- Bernaus, M., & Gardner, R. C. (2008). Teacher Motivation Strategies, Student Perceptions, Student Motivation, and English Achievement. *The Modern Language Journal*, 92(3), 387-401. <https://doi.org/10.1111/j.1540-4781.2008.00753.x>
- Cheng, H., & Dörnyei, Z. (2007). The Use of Motivational Strategies in Language Instruction: The Case of EFL Teaching in Taiwan. *Innovation in Language Learning and Teaching*, 1(1), 153-174. <https://doi.org/10.2167/illt048.0>
- Campbell, M., Egan, M., Lorenc, T., Bond, L., Popham, F., Fenton, C., & Benzeval, M. (2014). Considering methodological options for reviews of theory: Illustrated by a review of theories linking income and health. *Systematic Reviews*, 3(1), 114. <https://doi.org/10.1186/2046-4053-3-114>
- Dörnyei, Z. (2001). *Motivational strategies in the language classroom*. Cambridge: Cambridge University Press. <https://doi.org/10.1017/CBO9780511667343>
- Dörnyei, Z., & Csizer, K. (1998). Ten commandments for motivating language learners: Results of an empirical study. *Language Teaching Research*, 2(3), 203-229. <https://doi.org/10.1177/136216889800200303>
- Deniz, S. (2010). Student Teachers' Evaluation of the Motivational Strategies Used in Foreign Language Teaching. *Social behaviour and Personality: an international journal*, 38(9), 1269-1286. <https://doi.org/10.2224/sbp.2010.38.9.1269>
- Ellis, R. (1994). *The Study of Second Language Acquisition*. UK: Oxford University Press.
- Guilloteaux, M.J., & Dörnyei, Z. (2008). Motivating language learners: a classroom-oriented investigation of the effects of motivational strategies on student motivation. *TESOL Quarterly*, 42(1), 55-77. <https://doi.org/10.1002/j.1545-7249.2008.tb00207.x>
- Guilloteaux, M.J. (2013). Motivational strategies for the language classroom: Perceptions of Korean secondary school English teachers. *System*, 41(1), 3-14. <https://doi.org/10.1016/j.system.2012.12.002>
- Hennebry-Leung, M., & Xiao, H. A. (2023). Examining the role of the learner and the teacher in language learning motivation. *Language Teaching Research*, 27(1), 30-56. <https://doi.org/10.1177/1362168820938810>
- Hiver, P., & Al-Hoorie, A. H. (2020). *Research methods for complexity theory in applied linguistics*. Bristol, England: Multilingual Matters. <https://doi.org/10.21832/9781788925754>
- Karimi, M. N., & Hosseini Zade, S. S. (2019). Teachers' use of motivational strategies: Effects of a motivation-oriented professional development course. *Innovation in Language Learning and Teaching*, 13(2), 194-204. <https://doi.org/10.1080/17501229.2017.1422255>
- Larsen-Freeman, D. (2018). Looking ahead: Future directions in, and future research into, second language acquisition. *Foreign Language Annals*, 51, 55-72. <https://doi.org/10.1111/flan.12314>
- Maeng, U., & Lee, S.-M. (2015). EFL teachers' behaviour of using motivational strategies: The case of teaching in the Korean context. *Teaching and Teacher Education*, 46, 25-36. <https://doi.org/10.1016/j.tate.2014.10.010>
- Min, M. H., & Chon, Y. V. (2021). Teacher Motivational Strategies for EFL Learners: For Better or Worse. *RELC Journal*, 52(3), 557-573. <https://doi.org/10.1177/0033688219900812>
- Mirzaei, A., Shafiee Rad, H., & Rahimi, E. (2022). Integrating ARCS motivational model and flipped teaching in L2 classrooms: A case of EFL expository writing. *Computer Assisted Language Learning*, 1-30. <https://doi.org/10.1080/09588221.2022.2068614>
- Moskovsky, C., Alrabai, F., Paolini, S., & Ratcheva, S. (2013). The Effects of Teachers' Motivational Strategies on Learners' Motivation: A Controlled Investigation of Second Language Acquisition. *Language Learning*, 63(1), 34-62. <https://doi.org/10.1111/j.1467-9922.2012.00717.x>

- Papi, M., & Abdollahzadeh, E. (2012). Teacher motivational practice, student motivation, and possible L2 selves: An examination in the Iranian EFL context. *Language Learning*, 62(2), 571-594. <https://doi.org/10.1111/j.1467-9922.2011.00632.x>
- Ruesch, A., Bown, J., & Dewey, D. P. (2012). Student and teacher perceptions of motivational strategies in the foreign language classroom. *Innovation in Language Learning and Teaching*, 6(1), 15-27. <https://doi.org/10.1080/17501229.2011.562510>
- Sugita, M., & Takeuchi, O. (2010). What can Teachers Do to Motivate their students? A Classroom Research on Motivational Strategy Use in Japanese EFL Context. *Innovation in Language Learning and Teaching*, 4(1), 21-35. <https://doi.org/10.1080/17501220802450470>
- Sugita McEown, M., & Takeuchi, O. (2014). Motivational strategies in EFL classrooms: How do teachers impact students' motivation? *Innovation in Language Learning and Teaching*, 8(1), 20-38. <https://doi.org/10.1080/17501229.2012.741133>
- Tavakoli, M., Yaghoobinejad, H., & Zarrinabadi, N. (2018). Using Motivational Strategies in L2 Classrooms: Does Culture Have a Role? *Current Psychology*, 37(3), 477-487. <https://doi.org/10.1007/s12144-016-9523-2>
- Wong, R. M. H. (2014). An investigation of strategies for student motivation in the Chinese EFL context. *Innovation in Language Learning and Teaching*, 8(2), 132-154. <https://doi.org/10.1080/17501229.2013.777449>

### Copyrights

Copyright for this article is retained by the author(s), with first publication rights granted to the journal.

This is an open-access article distributed under the terms and conditions of the Creative Commons Attribution license (<http://creativecommons.org/licenses/by/4.0/>).