The Relationship between Teacher Transformational Leadership and Students' Motivation to Learn in Higher Education

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Abstract

This quantitative study sought to examine whether there existed relationships between teacher transformational leadership and students' motivation to learn. In aggregate, 171 undergraduates recruited from a public Chinese university participated in the study through a random sampling. The participants were administered two instruments: the Multi-factor Leadership Questionnaire (MLQ) 5X-short to measure students' perceptions of the teacher transformational leadership in the educational context and the Motivated Strategies for Learning Questionnaires (MSLQ) to measure students' motivation to learn. The data collected were analyzed by Pearson's correlation and multiple regressions using the Statistical Package for Social Sciences (SPSS). The results from the multiple regression analyses further verified the findings in the previous literature that teacher transformational leadership could contribute to the students' increased motivation to learn. It is recommended in the study that professional development be the best practice to facilitate the problems and all the college teachers should attend the professional development about transformational leadership behaviors, and implement the newly-acquired knowledge and skills to elevate students' motivation to learn.

INTRODUCTION

Students' motivation has long since become the major concern for instructional communication scholars as an important variable to measure students' outcomes. Students' motivation matters much for students' success because it is the driving force pushing them forward. Thus, a plethora of research has mainly been initiated on the students' perspectives by providing campus-wide programs like students orientation, easy access to professional advice, and an alert system at an early date to enhance students' learning motivation (Fincher, 2010; Rowlands, 2010). In contrast, scant studies were researched from the teachers' perspectives. Teachers' behaviors have a substantial influence on students' motivation to learn and effective learning. Great teachers are great motivators showcasing charisma, professional knowledge, and enthusiasm and can intrinsically and extrinsically motivate their students to focus on the subject matter with ease. If students are extrinsically motivated to learn, their foci may rest in the grades they will gain in a particular course simply because, for example, higher grades will enable them to attend an elite university. But students of internal motivation tend to learn and understand the concepts more deeply and creatively, get more engaged in learning and showcase more preference for the challenges. Research regarding college students' learning suggests that internally motivated students

tend more likely to employ cognitive strategies such as elaboration and organization in their learning, giving rise to a deeper processing of the material (Svinicki & Mckeachie, 2014). Thus, Students' motivation is regarded as a coordinating indicator for the effectiveness of teacher instruction and students' learning and the teachers should fully take advantage of this to reinvent their teaching styles in order to intellectually stimulate students' motivation to learn.

Effective teachers have played many important roles in teaching: basically, they are the information disseminators but more importantly are classroom managers in charge of forging a warm, safe, acceptable, and genuine environment in which the students' learning is characterized by self-initiation, self-confidence, self-direction, and less anxiety (Rogers, 1983). That is to say, teachers can demonstrate leadership in teaching, and behaviors of teacher leaders can exert a sizable influence on students' learning (Bolkan & Goodboy, 2009, 2010; Pounder, 2008). Thus, teacher leadership has become the foci of many instructional leadership scholars in examining its impacts on students' learning in classroom settings. Scholars showing interest in teacher leadership explore it by examining a particular type of leadership—transformational leadership—a logical extension of teacher leadership (Pounder, 2006).

Because transformational leaders can motivate "followers to accomplish more than what is usually expected of them'' (Northouse, 2010) and make their followers intrinsically motivated (Bass & Riggio, 2006). Thus, according to Bolkan and Goodboy (2009), transformational leadership has been considered to be the vital indicator of students' learning in the educational settings, especially in the primary and secondary classrooms because instructional scholars perceive teachers as instructional leaders with charismatic personalities (idealized influence) who can intellectually stimulate their followers (students) to obtain academic greatness by clearly working out the shared vision (inspirational motivation) and taking personal needs into account (individualized consideration) and encouraging their followers' critical, innovative and creative thinking (intellectual stimulation). Additionally, further research for the application of transformational leadership should be conducted in the higher education classroom settings because of scant literature.

1. THEORETICAL FRAMEWORK— TRANSFORMATIONAL LEADERSHIP

Transformational leadership, first conceptualized by James MacGregor Burns (1978) in his masterpiece *Leadership,* is considered as the significant predictor of student learning in the higher education settings in the US (Bolkan & Goodboy, 2009). Transformational leaders can move their followers to achieve more than what is

expected (Northouse, 2010). Transformational leadership involves a combination of behaviors that is inspirational and motivational by nature to stimulate their followers to emulate or achieve their goals or missions at higher levels (Avolio & Bass, 2004). Transformational leadership can also be classified into the following four subcategories which are also called 4I's (Bass & Avolio, 1993, 1994).

Idealized influence, also called charisma, is the emotional component of transformational leadership (Antonakis, 2012). It describes leaders as role models with moral standards and visions that bring out positive changes in the followers. This component of transformational leadership offers a measure of the extent to which their followers admire and respect their leaders (Pounder, 2006).

Individualized consideration describes transformational leaders as ones who support, encourage and coach their followers to actualize their individual goals (Bass & Steidlmeir, 1999). Leaders who embrace individualized consideration can greatly enhance the organization's effectiveness by treating followers as unique individuals, listening to their developmental needs and then assisting them to achieve their potentials.

Intellectual stimulation involves behaviors "to stimulate followers to be creative and innovative and to challenge their beliefs and values as well as those of the leaders" (Northouse, 2010). Leaders with intellectual stimulation can help their followers to figure out creative, innovative and novel ways of problem-solving. A team consisting of intellectually stimulated individuals can readily advance to higher levels of performance. Studies in the context of the organization have confirmed leaders of transformational leadership can empower their followers and increase their motivation (Bolkan & Goodboy, 2010; Pillai & Williams, 2004; Pounder, 2003).

Inspirational motivation describes leaders 'abilities to inspire or motivate followers by providing appealing visions to achieve shared goals. Inspirational motivation is closely related to individualized consideration and intellectual stimulation because its effectiveness depends on the interplay with the latter two components.

Recently, transformational leadership has been applied to the instructional context based on the premise that the classroom resembles the organization in that the teachers, much like the leaders, are responsible for the class management, move their students to achieve what is beyond their expectation, instill confidence in their students, align the students individualized needs to the team goals and encourage them to rethink the old problems. Thus, this study employed transformational leadership as the framework to examine the relationships between transformational leadership and students' motivation to learn in the higher education context because lots of previous research was carried out in the elementary and middle schools, but scant research was done in post-secondary institutions.

2. LITERATURE REVIEW

2.1 Student Motivation

Motivation is a term that derived from Latin language *movere* with the connotation of *to move*. Motivation is the deciding factor affecting students' success. Students' willingness to make great efforts to plan, monitor and reflect in their studies is driven by motivation, which is supposed to promote students' increased attention, efforts, and persistence and finally leads to a considerable increase in their learning and academic achievements. Motivation is generally thought to come from people's inner hearts. According to Eggen and Kauchak (1994), motivation is a driving force that guides people to act towards goals or objectives, which was shared by Ryan and Deci (2000) asserting that motivation is goal-oriented, and a motivated person has the impetus to act to achieve the goal. All those interpretations of motivation unanimously confirmed the important roles motivation plays in eliciting or stimulating people's effortful behaviors to achieve their goals. For the convenience of the study, I applied the following working definition: student motivation was defined as a process by which the learners direct their attention to meeting their scholastic objectives and focusing their energies on making their academic potential a reality (Christophel, 1999; Lepper, Greene & Nisbett, 1973). Motivation is regarded as a crucial coordinating variable in studying the relationships between teacher behaviors and student learning (Jaama & Koper, 1999). Effective teachers are great motivators, and when faced with a class of demotivated students, they tried to apply leadership theories into classroom teaching with the determination to both externally and internally motivate the students. Hinsey (2005) claimed the belief that students' motivation involved a mixture of both intrinsic and extrinsic motivation. Thus, these two categories of motivation will be described in greater detail in the following section.

2.2 Intrinsic Motivation

Intrinsic motivation was defined as the "the inherent tendency to seek out novelty and challenges, to extend and exercise one's capacities, to explore, and to learn" (Ryan & Deci, 1980). Under Ryan and Deci (1980), intrinsically motivated students showcased better abilities to adjust to schools, got engaged in learning and outperformed those who are extrinsically motivated. Moreover, intrinsically motivated students had longer perseverance in the task assigned to them, and they tended to employ a deep learning approach, and accordingly cultivated their critical thinking towards the learning materials (Wolters, 1998). This can be interpreted as the fact that intrinsic motivation of the students triggers their interests and enjoyment of the activities they are to engage by arousing curiosity and then inner desires to participate. Just as what Dev (1997) remarked in his study, intrinsic motivation involved the qualities that follow:

Intrinsic motivation has been defined as participation in an activity purely out of curiosity, that is for a need to know about something; the desire to engage in an activity purely for the sake of participating in and completing a task, and the desire to contribute. (p.15).

In the research, intrinsic motivation evolved from people's desire to simply know something out of curiosity to internal desires to accomplish and contribute to the things being done. Dev's explanation of intrinsic motivation to some extent is similar to conceptualization by Vallerand, Deci, and Ryan (1987), who sub-categorized intrinsic motivation into three components: to know, to accomplish and to experience stimulation. To know something is featured by people's participation to learn, discover and update their current knowledge. For example, students in the foreign language class are driven by the needs to learn some authentic skills to communicate with the natives. To accomplish is associated with people's sense of achievement. When students acquire some new expressions to interact with native speakers, they will have an affirmative feeling emerging within. To experience stimulation is concerned about the joy, thrill, and satisfaction they gain via their participation in the task or activity. When students put their newly-acquired skills to communicate with native speakers, they will be filled with enjoyment and excitement.

2.3 Extrinsic Motivation vs. Intrinsic Motivation

Extrinsic motivation differs from intrinsic motivation in that it gets people into the activities due to external rewards, praise or incentives rather than comes from the internal hearts. Such an example can be seen in the classroom: extrinsically motivated students are forced to get involved in the activities because of the rewards the teacher offers or evasion of punishment accordingly inflicted on them. In this sense, extrinsic motivation is instrumental in nature and "instrument rewards motivate individuals when they perceive their behaviors will lead to certain extrinsic tangible outcomes" (Barbuto, 2005).

The current literature regarding motivation stays more focused on the positive benefits intrinsic motivation brings and the negative effects of extrinsic motivation on intrinsic motivation. Deci, Koestner, and Ryan (1999) claimed that extrinsic motivation could impair intrinsic motivation. Consequently, Lumsden (1994) admonished that the use of extrinsic motivation should be utilized with great caution, and it is recommended that extrinsic motivation should be reduced in an attempt to cultivate intrinsic motivation, which was shared by Kohn(1993), concluding "the presence of extrinsic motivation discourages the intrinsic motivation".

However, extrinsic motivation still has some positive impacts. According to Brophy (2010), it would be ideal to build intrinsic motivation in students because some tasks are unattractive in nature, thus failing to attract and instigate interest of the students. Here extrinsic motivation

can be used to entice them to carry out those boring tasks by providing external rewards which come as extrinsic stimuli increasing students' internal motivation (Deci, Koestner, & Ryan, 1999). According to our own real-life experiences, we tend to act in positive ways suppose we receive some extrinsic rewards like sincere compliments, feedback, and affirmation. Thus, extrinsic motivation is also one component driving human behaviors. But in reality, we should maximize the use of intrinsic motivation to keep students internally energized and mobilized, meanwhile, apply extrinsic motivation when needed.

2.4 Student Motivation in Instructional Contexts

There emerged a substantial body of research done by applying transformational leadership to motivating students to learn in classroom settings. That research has yielded positive results in terms of the impacts of transformational leadership on students' motivation. Also, the past research indicated that effective teachers excelled at fostering the social dynamics of classroom communication and disseminating domain-specific knowledge to their students (Bolkan & Goodboy, 2009).

The study of Richmond (1990) examined the relationship between teacher power and motivation in classroom settings with particular concern about the long-term impacts of the Behavior Altercation Techniques employed by teachers on students' motivation. The authors asserted that the aim of education should be placed on fashioning students' motivation even after they graduated from universities instead of obtaining student compliance for a short-term period. The 366 undergraduates enrolled in an elective course in communication were surveyed and the data collection was finished before the semester ended. The study found that student motivation was considerably affected by the critical links between communicative behaviors displayed by the teachers and student learning. When teachers use coercive behaviors to let students get engaged into learning in a way that teachers favor, students can make changes in their learning behaviors, but this may negatively impact the student likability to the teachers and reduce the student affective and cognitive learning. Therefore, the maintenance of a positive teacher-student relationship is of vitality in that such a relationship can avail the teachers of more chances to communicate with their students for better learning. Simultaneously, the author recommended that some will-be and in-service teachers should be equipped with communicative techniques to be used in forging a harmonious relationship between teachers and students.

According to Bain (2004), motivation could exert different influences on people's learning in different ways. Deep learners are people who are motivated to accept the challenge of mastering something in a particular subject and do their best to comprehend every complexity in it. Strategic learners are people who show great interest in achieving high grades but rarely showcase a willingness to change their ideas because great motivation comes mainly from good grades on the tests. Finally, some people are surface learners who are reluctant to devote themselves to delving deeply into a topic for fear of failure, and thus they appeal to learning the materials by rote and reproducing what they have learned. This type of learners can also be called performance-avoiders who lack confidence. So Bain thought the most effective teachers should carefully design the individualized learning tasks and objectives to motivate their learning from surface to deep.

The research done by Bolkan S., Goodboy, A. K., & Griffin, D. J. (2011) aimed to investigate how transformational leadership (intellectual stimulation) influence students' motivation and their approaches to the studies. The research findings indicated that the approaches students employed were impacted by both their motivational orientations and the teachers' behaviors. The authors claimed that intrinsically motivated students tended to be deep and strategic learners instead of being surface learners in their learning process, which echoed with what Bain (2004) advocated. Motivation impacted students' approaches to learning. Students employing a deep approach searched for "meaning in the matter being studied" and applied it "to other experiences and ideas with a critical approach". Students employing a surface approach tended to memorize and learn something by rote in an isolated way (Duff, 2004). Students employing a strategic approach could approach learning in organized and effortful ways, and achieve optimal success…by using space and time effectively (Mattick, Dennis, & Bligh, 2004).

According to Singh (2011), motivation, also known as the internal drive, activated behavior and gave it direction. It is one of the most crucial factors leading people to achieve greater heights. According to the author, motivation could be classified into intrinsic and extrinsic motivation. Intrinsic motivation is defined as motivation characterized by the task being interesting and enjoyable and deriving from the people's inner hearts. Intrinsic motivation is thought to be closely related with high educational achievements and student enjoyment. In contrast, extrinsic motivation refers to extrinsic incentives like rewards that serve as motivators for people to act. The author also pointed out that central human motivation was achievement motivation, which was a desire to do something well in order to achieve excellence. The need for achievement for different students varied. A plethora of studies revealed that students with high academic motivation were more inclined to spike in academic achievement and keep dropout rates at a lower level (Blank, 1997). Still, the author detailed what intrinsically motivated students were like, which resembled what Bain(2004) and Bolkan, Goodboy & Griffin(2011) have said, despite the fact that the author didn't overly pointed out students with intrinsic motivation could turn into deep

and strategic learners. Intrinsically motivated students can adopt strategies that ask for more efforts and require them to deal with information more deeply. Intrinsically motivated students can be lifelong learners and proceed to learn something beyond the school contexts.

Recently, Kim, Hushman, So, and Holzberg (2017) conducted a qualitative study in the physical context to examine the relationships between teacher transformational leadership and student intrinsic motivation as well as expectancy-value in the physical education context. Altogether, 295 students from two private middle schools were administered four questionnaires. All the data collected were analyzed through multiple regressions. The results showed that positivity was detected between all four sub-components of transformational leadership and student intrinsic motivation and expectancy-value. In particular, intellectual stimulation is the telling determiner affecting student motivation and expectancy-value, which is a little different from the past research that idealized influence and individualized consideration were considered as strong indicators that promoted students' motivation (Pyo & Kim, 2008). This required physical teachers in the middle schools update their knowledge constructs and be taught some transformational leadership skills with the determination to arouse students' curiosity to get them motivated and engaged by communicating to their students some inspiriting ideas in learning and thinking.

Another quantitative study initiated by Chowdhry & Osowska (2017) was designed to elicit the relationship of intellectual stimulation with motivation and deep learning under the higher education environment. The sampling population was 128 participating students in the engineering department at Edinburgh Napier University. To collect the perceptions of students, a quantitative feedback questionnaire was employed, which was formed based on student intellectual stimulation scale, teaching and learning questionnaire and motivated strategies for learning questionnaire. The results revealed that a statistical significance and weak positivity existed between intellectual stimulation and intrinsic motivation scales and a statistical significance and moderate positivity was found between intellectual stimulation and deep learning approach scales.

3. RESEARCH METHODS

The study aimed to examine if there existed relationships between teacher transformational leadership and students' motivation to learn at a public mid-sized university located in a southern province of China. The study was centered on the examination of the impacts of transformational leadership on students' motivation to learn and further to explore the impacts of transformational leadership on student learning outcomes.

3.1 Problem Statement

Nowadays, the problems regarding transformational leadership are listed as follows: Abundant literature regarding transformational leadership can be found in the western cultures, while less was done in the eastern cultures. Then, literature in China is still in its infancy, and most stays focused on its application in the primary and secondary schools, but scant research was done in the context of higher education. Furthermore, academic outcomes of students are at a record low level with students taking a downhill interest in foreign language learning.

Learning motivation is one of the most important non-intellectual elements which will influence students' learning. Sufficient learning motivation will exert a substantial influence on language learners with encouragement, guidance and enhancement. However, insufficient motivation or demotivation will lead to a bad learning result or even complete failure. Thus, confronted with such severe situations of college students' demotivation or insufficient motivation, there emerged a nationwide concern for the improvement of teaching quality in the college levels (Pounder, 2014). Accordingly numerous researchers have directed their attention to the study of students' motivation to learn. The need arose as to how college students' motivation to learn in Chinese higher education could be effectively improved. Thus, it is imperative and significant to conduct quantitative research by examining whether there exist positive links between teacher transformational leadership and students' motivation to learn, and what behavioral factors displayed by teachers can contribute to an increase in students' motivation.

The existing literature on students' motivation mainly focused on the perceptions of students themselves at primary and secondary schools, while scant research was carried out in higher education settings (Baba & Ace, 1989; Bolkan & Goodboy, 2009; Harvey et al., 2004; Pounder, 2008).

3.2 Population and Sample Selection

The sampling population was randomly selected in order to generate the representativeness advocated by Cone and Foster (2004) in terms of selecting who was qualified as the subjects in the study. In total, 171 participating students are recruited from a mid-sized university in a southern province of China at the start of summer semester 2020. Those qualifying participants varied in age, ethnicity, nationality and social backgrounds. The survey was administered at least two weeks later after the summer semester 2020 began when all the respondents were totally familiar with the courses they were enrolled in and the teachers so that they could respond to the questionnaires objectively. Those participants were not given extra credits for their participation in the survey.

The sample size is of great importance to guarantee the validity and reliability of the results. Thus, the researcher chose to utilize G* Power 3.1.9.2 to decide on the appropriate sample size for the research. Zodpey (2004) and Eng (2003) asserted that oftentimes alpha is 0.05. According to Araujo and Froyland (2007), statistical power at 0.80 is a traditional value, but the researcher adopted a more strong value at 0.89. The researcher adopted a medium effect size (r= 0.30 in this case). Therefore, parameters in the exact G*Power test were set as follows: Effect size fz = 0.15, α err prob = 0.05, power (1-β err prob) = 0.89. It is calculated by G*Power that altogether the minimum sample size would be 70 subjects needed to research in this study.

3.3 Research Instruments

Two instruments were used to decode students' perceived teacher transformational leadership and students' motivation to learn. The Multi-factor Leadership Questionnaire (MLQ) 5X-short by Bass and Avolio (2000) was utilized to measure students' perceptions of their teacher transformational leadership in the Chinese higher education context. And the Motivated Strategies for Learning Questionnaires (MSLQ) by Pintrich, Smith, Garcia, and McKeachie (1991) was employed as a measure of students' motivation to learn and academic performance. Each item in the MLQ was designed in 5-point Likert-scale and each item in MSLQ was designed in 7-point Likert-scale. Demographic information was attached to the front page of two instruments so as to collect information concerning the participants' ages, genders, ethnic backgrounds, as well as their majors.

3.4 Research Questions

Teachers advocating the application of transformational leadership to their classrooms are regarded as effective teachers (Walumbwa, Wu & Ojode, 2004) and students are accordingly willing to exert extra efforts for having such teachers and are satisfied (Pounder, 2008). Plus students' learning outcomes are reported to spike when students learn under the transformational teachers. Therefore, the following research questions are waiting to be further tackled in this study:

What is the relationship between teacher transformational leadership and students' motivation to learn at a mid-sized university in a southern province of China?

To what extent, can teacher transformational leadership predict students' motivation to learn at a mid-sized university in a southern province of China?

4. RESULTS AND DISCUSSIONS

This paper sought to determine whether there existed correlations between teacher transformational leadership and students' motivation to learn in a mid-sized university in a southern province of China. In so doing, correlational analyses and multiple regression analyses were utilized to examine whether such correlations existed between teacher transformational leadership and students' motivation to learn.

4.1 Analysis of Research Question 1

What is the relationship between teacher transformational leadership and students' motivation to learn at a mid-sized university in a southern province of China?

The correlations between teacher transformational leadership and students' motivation to learn in a Chinese public university were preferred to analyze by using Pearson's correlation.

As seen in Table 1, Sig. (2-tailed) was less than 0.05 and the Pearson coefficient was 0.625 ($0.3 > r < 0.7$), which meant that teacher transformational leadership and students' motivation to learn were positively and moderately correlated with each other.

Table 1
Correlations between teacher transformational leadership and students' motivation to learn

		MLQ	MSLQ
MLQ	Pearson Correlation	1	.625**
	Sig. (2-tailed)		.000
	N	170	170
MSLQ	Pearson Correlation	.625**	1
	Sig. (2-tailed)	.000	
	N	170	170

Note. MLQ=Multifactor Leadership Questionnaire, MSLQ=Motivated Strategies of Learning Questionnaire
**. Correlation is significant at the 0.01 level (2-tailed).

A detailed correlation between all the variables of MLQ and MSLQ was calculated through Pearson's correlation (See Table 2). The results showed that the four dimensions of MLQ were positively correlated with students' "Self-efficacy", "Intrinsic Value", "Self-regulation" and "Cognitive Strategy Use" at high or moderate level ($0.30 < r < 0.80$). That is to say, the teachers showing charming personalities, providing appealing visions, recognizing individual needs and advocating innovative problems-solving strategies in teaching could enormously increase student's motivation to learn. Among those correlations, teacher's "Idealized Influence", and "Inspirational Motivation" were most positively and strongly correlated with students' "Intrinsic Value" ($0.70 < r < 0.80$). That meant teachers showcasing charisma or vision could substantially motivate their students to work towards the shared goals by bringing about changes in students' internal beliefs or values in the process of learning. In contrast, the teachers "Idealized Influence", "Inspirational Motivation", "Individual Consideration" and "Intellectual Stimulation" were positively but weakly correlated with Test Anxiety ($r < 0.30$). That meant in

China, teachers showing transformational leadership could reduce students' test anxiety to a certain extent, but generally speaking, students must work hard themselves and get well prepared in faces of tests to overcome it.

Table 2
Correlations between II, IM, IS, IC and SE, IV, TA, SR and CSU

		SE	IV	TA	SR	CSU
II	Pearson correlation	.613**	.705**	.213**	.545**	.574**
	Sig. (2-tailed)	0	0	0.005	0	0
IM	Pearson correlation	.628**	.707**	.177*	.533**	.576**
	Sig. (2-tailed)	0	0	0.021	0	0
IS	Pearson correlation	.597**	.668**	.203**	.534**	.545**
	Sig. (2-tailed)	0	0	0.008	0	0
IC	Pearson correlation	.572**	.660**	.207**	.546**	.547**
	Sig. (2-tailed)	0	0	0.007	0	0

Note: II=Idealized Influence, IM=Inspirational Motivation, IS=Intellectual Stimulation, IC= Individualized Consideration, SE=Self-efficacy, IV=Intrinsic Value, TA=Test Anxiety, CSU=Cognitive Strategy Use, SR=Self-regulation
**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

N=170

In summary, we can see that the four variables of MLQ have positive correlations with students' motivation to learn at high or moderate level ($0.30 < r < 0.80$). Foreign language teachers' "Intellectual Stimulation", and "Individualized Consideration" could moderately contribute to students' "Self-efficacy", "Intrinsic Value", "Self-regulation" and "Cognitive Strategy Use". Foreign language teachers' "Idealized Influence" and "Inspirational Motivation" are moderately correlated with students' "Self-efficacy", "Self-regulation" and "Cognitive Strategy Use". Foreign language teachers' "Idealized Influence" and "Inspirational Motivation" are highly correlated with students' "Intrinsic Value". However, foreign language teachers' "Idealized Influence", "Intellectual Stimulation", "Individualized Consideration" and "Inspirational Motivation" all have relative significant but weak correlations with students' "Test Anxiety". That meant Chinese Foreign language teachers could impact students' anxiety of tests to some degree, but for the most part, test anxiety could be reduced on the part of students whose internal factors such as a good master of the knowledge instructed, adoption of effective learning strategies or efficiency in learning could help much.

4.2 Analysis of Research Question 2
To what extent, can teacher transformational leadership predict students' motivation to learn at a mid-sized university in a southern province of China?

First, a multiple regression analysis was utilized to determine to what extent teacher transformational leadership can predict students' learning motivation (Self-efficacy) by using MLQ scores, student class levels, and their genders as independent variables, and self-efficacy as dependent variable. As shown in Table 3, only MLQ score can significantly predict students' self-efficacy in a foreign language classroom, $F_{(3,166)}=35.640$, $p<0.001$. R square value was 0.392, an indication that the model constructed can explain 39.2% of the variance in students' motivation (self-efficacy).

Table 3
ANOVAa

	Model	Sum of Squares	R Square	df	Mean Square	F	Sig.	Durbin- Watson
1	Regression	5792.991		3	1930.997	35.640	.000b	1.163
	Residual	8993.885	0.392	166	54.18			
	Total	14786.876		169				

a. Dependent Variable: SE
b. Predictors: (Constant), MLQ, gender, class levels

As seen in Table 4, p value of MLQ is less than 0.001, so there is a clear linear relationship between dependent variable (Self-efficacy) and independent variable (MLQ).

This model illustrated that teacher transformational leadership could exert significant impacts on students' self-efficacy in learning and teacher transformational leadership could positively predict students' self-efficacy to learn in a foreign language classroom. The teachers in advocacy of transformational leadership can produce students of high self-efficacy by implementing personal validation, making them believe that they can significantly influence or control their academic or personal success (Bandura,1997). When students feel welcomed, recognized as individuals, and their efforts matter, they will be filled with confidence or strength of belief that they can accomplish the assigned tasks. Besides, teachers with transformational leadership can lead to increased students' self-efficacy by providing timely support for the issues the students meet with in the process of learning: students of disproportionately high failure should be provided supplemental instructions while students of higher achievement should be provided optimal challenges to cater for their individualized needs. In this way, students of varied academic backgrounds are not feeling overwhelmed or under-challenged and higher self-efficacy could be gained.

Table 4
Coefficientsa for variables predicting students self-efficacy

| Model | Unstandardized coefficients | | Standardized coefficients | t | Sig. | Collinearity statistics | |
	Std. Error	Beta			Tolerance		VIF
(Constant)	22.730	3.978		5.714	.000		
1 gender	.377	1.598	.014	.236	.814	.995	1.005
class	-1.649	1.153	-.088	-1.431	.154	.976	1.025
MLQ	.348	.035	.606	9.875	.000	.974	1.027

a. Dependent Variable: Self-efficacy

Another multiple regression was carried out to explore to what extent teacher transformational leadership can predict students'(Intrinsic Value) by using MLQ scores, student class levels, and their genders as independent variables, intrinsic value as dependent variable.

The results of Table 5 showed that also MLQ score is the sole independent variable that can significantly predict students' intrinsic value in a foreign language classroom, $F_{(3,166)}=55.455$, $p<0.001$. R square value was 0.501, which means the model constructed can explain 50.1% of the variance in students' motivation (Intrinsic Value).

Table 5
ANOVAa

Model	Sum of squares	R square	df	Mean square	F	Sig.	Durbin-watson
Regression	7745.553		3	2581.851	55.455	.000b	1.218
1 Residual	7728.571	0.501	166	46.558			
Total	15474.124		169				

a. Dependent variable: intrinsic value
b. Predictors: (Constant), MLQ, gender, class levels

P value of MLQ is less than 0.001(see Table 6), a clear linear relationship exists between dependent variable (Intrinsic Value) and independent variable (MLQ). This model illustrated that teacher transformational leadership could positively predict students' intrinsic value to learn in the foreign language classroom. The teachers showcasing transformational leadership in the classroom instruction can be an intrinsic motivator who can nurture and increase students internal beliefs, and then they enjoy the participation into the activities designed by their teachers.

The students thereafter are motivated to learn and thus learning becomes a personally meaningful task for them. Transformational teachers should create a welcoming environment where students have the opportunities to engage in interesting, personally relevant, and challenging activities. In this way, students perceive what they are learning is closely related with their former experiences and they accordingly think the materials used in the course are of great importance and utility.

Table 6
Coefficientsa for variables predicting students intrinsic value

| Model | Unstandardized coefficients | | Standardized coefficients | t | Sig. | Collinearity statistics | |
	Std. Error	Beta			Tolerance		VIF
(Constant)	17.064	3.687		4.628	.000		
1 gender	-.312	1.481	-.012	-.210	.834	.995	1.005
class	-.552	1.068	-.029	-.517	.606	.976	1.025
MLQ	.413	.033	.703	12.649	.000	.974	1.027

a. Dependent variable: Intrinsic value

The third multiple regression was conducted to determine to what extent teacher transformational leadership can predict students' motivation (Test Anxiety) in the process of foreign language learning by using MLQ scores, students' class levels, and their genders as independent variables, and test anxiety as dependent variable.

As illustrated in Table 7, independent variable MLQ scores can positively predict students' test anxiety in a foreign language classroom, $F_{(3,166)}=4.124$, $p<0.01$. R square value was 0.069, which showed that 6.9% of the variance in students' motivation (test anxiety) could be explained by using this model.

Table 7
ANOVAa

Model	Sum of squares	R square	df	Mean square	F	Sig.	Durbin-watson
Regression	383.397		3	127.799	4.124	.007b	1.281
1 Residual	5144.626	0.069	166	30.992			
Total	5528.024		169				

a. Dependent variable: Test anxiety
b. Predictors: (Constant), MLQ, gender, class level

The results from Table 8 demonstrate that p value of MLQ score is under 0.05, thus, the constant, MLQ and test anxiety are statistically significant. That is to say, there exists a linear regression between MLQ and students' motivation (Test Anxiety). This model denoted that teacher transformational leadership could significantly impact students' test anxiety in a foreign language classroom. The teachers in implementation of transformational leadership can help to reduce students' test anxiety in ways that accord with the four dimensions of teacher transformational leadership. The transformational teachers can take advantage of their charming personalities to instill confidence and a strong sense of moral values in them. The teachers can also intellectually stimulate their students to work out new approaches and develop innovative ways to transform test anxiety into a motive that spurs them on to achieve better academic performance instead of an obstacle to their learning. Besides, students' test anxiety can be diminished through teachers' treating students as individuals with personalized needs, by which they can assist them in traversing this challenge. Lastly, the teachers can inspirationally stimulate and energize their students with test anxiety to actualize their shared goals through cultivating a sense of worth, confidence and opportunity. In so doing, the students can facilitate or overcome the test anxiety under the assistance of teachers equipped with transformational leadership.

Table 8
Coefficients[a] for variables predicting students test anxiety

| Model | Unstandardized coefficients | | Standardized coefficients | t | Sig. | Collinearity statistics | |
| | B | | | | Tolerance | | |
	Std. Error	Beta				VIF	
(Constant)	13.726	3.008		4.563	.000		
1 gender	1.623	1.208	.101	1.343	.181	.995	1.005
class	-1.511	.872	-.131	-1.733	.085	.976	1.025
MLQ	.064	.027	.183	2.409	.017	.974	1.027

a. Dependent variable: Test anxiety

The fourth multiple regression analysis followed to test to what extent teacher transformational leadership can predict students' motivation (Self-regulation) by using MLQ scores, students' class levels, and their genders as independent variables, and self-regulation as dependent variable. As seen in Table 9, the constructed multiple regression model was significant with F (3,166) =25.606, p<0.001. R square value was 0.316, which showed that 31.6% of the variance in students' learning motivation (self-regulation) could be explained by using this model.

Table 9
ANOVA[a]

	Model	Sum of squares	R square	df	Mean square	F	Sig.	Durbin-watson
	Regression	5140.465		3	1713.488	25.606	.000b	0.914
1	Residual	11108.412	0.316	166	66.918			
	Total	16248.876		169				

a. Dependent variable: Self-regulation
b. Predictors: (Constant), MLQ, gender, class level

Table 10
Coefficients[a] for variables predicting students self-regulation

| Model | Unstandardized coefficients | | Standardized coefficients | t | Sig. | Collinearity statistics | |
| | B | | | | Tolerance | | |
	Std. Error	Beta				VIF	
(Constant)	20.638	4.421		4.669	.000		
1 gender	1.199	1.776	.043	.675	.500	.995	1.005
class	-1.547	1.281	-.078	-1.207	.229	.976	1.025
MLQ	.326	.039	.541	8.324	.000	.974	1.027

a. Dependent variable: Self-regulation

Table 11
Coefficients[a] for variables predicting students cognitive strategy use

| Model | Unstandardized coefficients | | Standardized coefficients | t | Sig. | Collinearity statistics | |
| | B | | | | Tolerance | | |
	Std. error	Beta				VIF	
(Constant)	20.638	4.421		4.669	.000		
1 gender	1.199	1.776	.043	.675	.500	.995	1.005
class	-1.547	1.281	-.078	-1.207	.229	.976	1.025
MLQ	.326	.039	.541	8.324	.000	.974	1.027

a. Dependent variable: Cognitive strategy use

Table 12
ANOVA[a]

	Model	Sum of squares	R square	df	Mean square	F	Sig.	Durbin-watson
	Regression	11292.354		3	3764.118	28.904	.000[b]	0.734
1	Residual	21617.552	0.343	166	130.226			
	Total	32909.906		169				

a. Dependent variable: Cognitive strategy use
b. Predictors: (Constant), MLQ, gender, class level

As displayed in Table 10, independent variable MLQ score ($p < 0.05$) is the only factor significantly influencing students' self-regulation. So it can be concluded that the constant, MLQ and self-regulation are statistically significant and independent variable MLQ can positively predict students' self-regulation in a foreign language classroom. That is to say, there exists a linear regression between MLQ and students' motivation (Self-regulation). This model showed that teachers with transformational leadership skills could significantly impact students' self-regulation in learning in a foreign language classroom context. In order to enhance students' self-regulation in learning, firstly teachers should be armed with adequate knowledge regarding transformational leadership, which can be accomplished through attending professional development for training transformational teachers and then the teachers are committed to implementing transformational leadership skills in the classroom instruction. The transformational teachers can increase students' self-regulation in the ways as follows: the teachers can clearly articulate both the long and short term learning goals expected to achieve. In this way, students are goal-oriented as to what they are expected of in their learning. The teachers should work to listen to the voices from the students about their strengths and weaknesses in order to meet the individuals' learning needs and then, work out specific, useful, and effective learning strategies guiding students to self-regulate their study time and set realistic learning goals.

The fifth multiple regression analysis was done to examine to what extent teacher transformational leadership can predict students' motivation (Cognitive Strategy Use) by using MLQ scores, students' class levels, and their genders as independent variables, and Cognitive Strategy Use as dependent variable.

MLQ is the only factor with p value less than 0.05 (See Table 11), which means it can positively predict students' motivation to learn (Cognitive Strategy Use), $F(3,166) = 28.904$, $p < 0.001$. R square value was 0.343 (See Table 12), which showed that 34.3% of the variance in students' learning motivation (cognitive strategy use) could be explained by using this model.

From the model constructed above, we can see that teacher transformational leadership is a significant predictor, increasing students' cognitive strategy use in a foreign language classroom. Transformational teachers should develop effective strategies that are relevant and connected with students' former experiences, through which students can fully recognize the usefulness of the strategies proposed by their teachers and willingly utilize them in their learning. Transformational teachers should help to develop and activate students' pre-existing knowledge or preskills needed to accomplish a task or use a strategy with ease on the condition that students oftentimes have fragmented knowledge, and they thus need some background knowledge to become strategic learners. The teachers can go further by paying personal attention to the struggling students who are undergoing challenges in learning by forging a harmonious teacher-student relationship, which can shorten the psychological distance between the teachers and the students and make students develop likeability to their teachers and a trust in the learning strategies formulated by the teachers.

5. IMPLICATIONS OF THE STUDY

The findings in this paper have remarkable implications of the application of teacher transformational leadership to higher education.

Initially, The university should be supportive of the implementation of transformational leadership and work to integrate transformational practices into instruction by offering teacher professional development regarding transformational leadership skills. Professional development is a way that digs deeper into teachers' personal development by upgrading their existing knowledge, and renew their instructional practices. In so doing, the university can make it a necessity for all the teachers to attend professional development to cement their pedagogical theories and update their teaching practices. Professional development must be seen as a process, not an event and it needs to provide teachers with specific, concrete, and practical ideas that directly relate to the daily operation of their classrooms. The teacher professional development should not divorce with the routine instruction but orient itself to the teachers' specific needs and conform to the curricular requirements and standards set both at the university and national levels. The teacher professional development should be designed as a systemic process through which the teachers can be lifelong learners, and there should be a consistency within different professional developments instead of sporadic events for teachers to receive training.

Then, the university must require that the participating teachers who received professional development concerning transformational leadership put the newly-

acquired knowledge and skills into instruction for the benefits of students' motivation and academic outcomes. Besides, participation in professional development should be institutionalized. That means there should be systemic supervision across the university to track the effectiveness of the professional development. Questions detected through the supervision, and feedback from the participating teachers should be gathered in order to make some improvements and then perfect the professional development.

6. RECOMMENDATIONS FOR FUTURE RESEARCH

Recommendation 1: The sample population is small in scales which limits the generalization of the results to other student population. That is to say, the small sampling may not represent the perceptions of the whole student body. Thus, future research should choose to sample more participants with diverse social, geographic and ethnic backgrounds from other universities. In this way, more information will be provided to improve the validity and effectiveness of the study.

Recommendation 2: This is a non-experimental and correlational study conducted in a quantitative way, so further qualitative research by using interviews or open-ended questions to elicit students' actual experiences about or attitudes towards teacher transformational leadership behaviors might provide more comprehensive insights into the study.

Recommendation 3: This study is focused on the impacts of transformational leadership on students' motivation to learn. There are other leadership styles affecting students' learning motivation and academic outcomes. Thus, the future research should also include other leadership styles such as transactional leadership, and passive avoidant leadership as independent variables to examine their effects on students' motivation to learn. Then, the results from impacts of other leadership styles on students' motivation can be compared with those of the current study, in which way the reliability and validity of the results can be strengthened.

7. CONCLUSION

The purpose of the study is to explore the relationships between teacher transformational leadership and students' motivation to learn in the foreign language classroom offered in a public Chinese university. The results from the multiple regression analyses further verified findings in the previous literature that teacher transformational leadership could contribute to the increased students' learning motivation and their academic performance. It is recommended in the study that professional development be the best practice to facilitate the problems and all the teachers should attend the professional development about

transformational leadership behaviors, and implement the newly-acquired knowledge and skills to elevate students' motivation.

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