

# Transformational Leadership and Heuristic Performance of Teachers Toward Sustainable Professional Development

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**Abstract:** With the rapid development of society, education plays an increasingly prominent role in promoting social and economic development. Teachers, as the main undertakers of teaching tasks, shoulder the responsibility of training talents. Focusing on teachers' transformational leadership and evaluating their heuristic methods will not only help to promote teachers' role change and professional development but also help to enhance students' academic achievement and promote students' all-around development.

**Keywords:** Transformational leadership, Heuristic performance, Teacher professional development.

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## 1. Introduction

With the coming of knowledge economy and learning society, education plays a more and more important role in social development. It not only directly affects the direction of future economic development, but also plays a positive role in promoting the development of science and technology and social progress.

In the field of education, teaching is the central task of the school, an important indicator of school development, and the main way to achieve educational goals. In this process, teachers play an important role. They shoulder the responsibility of training talents and are the fundamental guarantee to improve the quality of teaching. Teachers are the designers and implementers of the classroom, and the improvement of teaching quality cannot be separated from the improvement of teachers' teaching ability. This study focuses on teachers' transformational leadership and evaluates their heuristic methods, which will not only help to promote teachers' role change and professional development, but also help to enhance students' academic achievement and promote students' all-round development.

With the continuous advancement of educational reform, more and more people realize that teaching reform needs classroom revolution, which needs teachers with transformational leadership style to promote. Teachers' leadership style, as one of the components of teachers' teaching leadership, can not only promote classroom reform and improve the quality of teaching, but also promote the development of teachers themselves, thereby promoting the cultivation of leadership talents in schools.

As Wang and Hu (2017) mentioned, the leader's style, approach and behavior can affect the performance of subordinates, among which the transformational leadership style can lead to higher teacher satisfaction and better organizational performance [1]. Thus, current research on the use of professional development programs can trigger a high level of demand from teachers through awareness of the importance of taking on organizational tasks, the existence of mutual trust and commitment, and the ability of organizations to exceed expectations. It has been pointed out that the key to

the development of education lies in the scientific management of teachers, which is directly reflected in the heuristic performance of teachers under personal and professional pressures.

## 2. Theoretical Research

### 2.1. Research on Transformational Leadership

Fu Bo (2017) believes that since the 1980s, Transformational Leadership has gradually become a hot issue in western leadership theory. Downton's Rebel Leadership, published in 1973, established the embryonic form of transformational leadership theory. Subsequently, Burns first conceptualized transformational leadership in the book Leadership published in 1978, believing that transformational leadership is a process of mutual promotion between leaders and subordinates based on the motivation of higher-level needs, and defined it as "leaders seek and stimulate the potential motivation of subordinates through high-level ideas and values." Encourage subordinates to devote themselves to their work and establish a relationship of mutual encouragement and promotion between leaders and subordinates.

Later, Bass (1985) further developed this concept by defining transformational leadership as a leader who can give subordinates personalized care, make them aware of their responsibilities, and stimulate their pursuit of reputation, social status, and self-actualization, so as to improve the overall performance of the organization and achieve results beyond the original expectations [2].

The emergence of transformational leadership in schools coincides with the requirements of the second round of educational reform in the world when educational research focused on organizational learning, co-leadership, and problem-solving ability (Silins & Mulford, 2002). The research on transformational leadership in the field of education has also been valued by scholars. Leithwood (1992) and his colleagues have done a lot of research on school transformational leadership over a period of time and gradually formed a transformational school leadership model. Leithwood (1994) defines transformational leadership as a

leadership behavior that improves the ability of individuals and groups to solve problems in the process of school change. They believe that in the field of education, the establishment of organizational and member capabilities is an important part of transformational leadership research.

## **2.2. Research on dimensions of transformational leadership**

Hua Zheng (2019) mentioned in his doctoral dissertation that foreign scholars divide transformational leadership into multiple forms and design different scales to measure it. In 1995, Bass and Avolio divided transformational leadership into four main dimensions: charisma, personal care, and intellectual stimulation [3]. In addition, Bass et al. Developed the Multivariate Leadership Questionnaire (MLQ), which has been widely used in the research of transformational leadership [4]. There are also some researchers who conduct research based on the different backgrounds of leadership, among which the representative research result is that Leithwood subdivides the leadership style of educational transformation in school culture into six dimensions: individualized care, commitment to cultivate collective goals, exemplary behavior, high expectations, intellectual stimulation and vision construction [5]. Generally speaking, the structural division of transformational leadership in foreign countries is mostly based on the four dimensions of transformational leadership by Bass and others, and the MLQ questionnaire has been widely used [6].

Li Chaoping and Shi Kan (2005) put forward the four dimensions of transformational leadership in China based on the four dimensions of transformational leadership proposed by Bass and others, combined with the Chinese cultural context, including leadership charm, vision motivation, personalized care and moral example.

Meng Hui et al. (2013) proposed a transformational leadership to adapt to the rapid changes in contemporary China, including four factors: influence, vision motivation, personalized care and intellectual stimulation.

## **2.3. Research on individual performance**

Over the years, researchers have defined performance in many ways. Campbell (1990) defines performance as measurable and controllable individual actions that contribute to the achievement of organizational goals. Kane (1996) points out that the performance of an individual goes beyond a specific purpose and includes the legacy left by the individual. Motowidlo et al. (1997) stated that job performance is "behavioral, situational, assessable, and multidimensional" and defined it as "the aggregated value to the organization of discrete behavioral events performed by individuals over a standard time interval.". Brumback (1988) States that "success is not always positive and failure is not always negative", emphasizes the influence of the behavioral dimension of structure, and provides a comprehensive definition of performance as described below (this is considered a working definition of performance). Performance implies both behavior and results. Behavior originates from the performer and transforms performance from abstraction to action. Behaviors are not only tools for achieving outcomes, they are also outcomes themselves — products of the mental and physical effort applied to the task — and can be judged outside of the outcome.

The excellence and performance of teachers have always been the focus of the educational community. The efficient

performance of teachers is indispensable for the improvement of the whole education system. Teacher performance is defined as the ability to achieve the demands and needs of the professional development process to the required level through a homogeneous set of knowledge, perspectives, behaviors, and skills in a way that accurately presents things (Ghasemi & Keshavarzi, 2014). According to Werang and Lena (2014), teacher job performance is the quality and skill with which teachers put together all the necessary and relevant variables to increase and improve the educational process.

Selamat, Samsu, and Kamalu (2013) consider teacher's job performance as a teacher's teaching method and strategy, which is related to teacher's effectiveness. It is a process of determining the participation of teachers in the daily activities of the school, so that the affairs of the school can be properly managed. It is also considered that the significant attitudes of teachers are related to the results related to the teaching objectives.

## **2.4. Research on the Relationship between Transformational Leadership and Personal Performance**

Transformational leadership researchers abroad pay more attention to the effectiveness of transformational leadership and its mechanism. A survey conducted by Avolio and other scholars in 2004 shows that transformational leadership can affect employees' organizational commitment. In 2009, Gong et al pointed out that transformational leadership can improve employee creativity, in which self-efficacy plays a mediating role. In 2014, Dust et al. Found that transformational leadership behavior can effectively affect task performance in organizations.

Transformational leadership is a kind of teacher's leadership style, which refers to a kind of leadership behavior tendency that teachers to make students aware of the importance of learning in the process of education, stimulate students' high-level needs, and promote students to pursue higher-level tasks and goals, including vision motivation, intellectual stimulation, personalized care, and leadership charm. According to the social cognitive theory, teachers' leadership style plays an important role in demonstrating and guiding teenagers' leadership. It can guide students' perception, thinking, and emotional experience; it can also influence students' cognition, self-cognition, attitude, and behavior by creating class atmosphere and interpersonal relationships; it also has the effect of example, which can trigger students' imitation learning. Transformational leadership teachers are good at influencing students' sense of value through vision motivation, making them realize the social significance of learning, stimulating self-actualization needs and social responsibility, and improving the level of responsibility.

## **3. Methodology**

### **3.1. Design and Sample**

This study mainly used the methods of literature research and questionnaire survey. Through literature research, the problems to be solved and preliminary ideas are put forward. Data collection, statistics, and analysis were conducted using a questionnaire. This study used quantitative research methods to quantitatively describe the relationship between teachers' transformational leadership style and heuristic job

performance, aiming to provide feasible strategies for teacher development.

A descriptive correlational research design was used in this study. Stratified random sampling method was used to select 110 students from the target junior middle schools as the research object. Of the questionnaires distributed, 100 were returned for statistical analysis, with a response rate of 90.9%.

### 3.2. Instrument

The questionnaire designed in this study consists of three parts. The first part is the profile of the respondents, including gender, grade, and school affiliation. The second part is the evaluation of teachers' transformational leadership style by the respondents, including the following factors: Idealized Influence (II), Inspirational Motivation (IM), Intellectual Stimulation (IS), Individual Consideration (IC). The third part is the evaluation of teachers' heuristic performance by the interviewed students, including the following dimensions: Task Performance (TP), Contextual Performance (CP), Adaptive Performance (AP), Counterproductive

Work Behavior (CWB). There are 20 items in the Transformational Leadership Scale and 24 items in the Teacher Heuristic Performance Scale. The questionnaire used a Likert five-point scale, from 1 to 5 representing the transition from full compliance to full non-compliance.

### 3.3. Research Hypothesis

According to the purpose of the study, the following hypotheses were tested in this study:

HO1: When grouped by grade, there was no significant difference in respondents' evaluation of teachers' transformational leadership style.

HO2: There was no significant difference in respondents' evaluation of teachers' heuristic individual performance when they were grouped by school affiliation.

HO3: There was no significant relationship between the assessment of transformational leadership style and the individual performance of heuristic teachers.

### 3.4. Data Analysis

Data was collected, aggregated, and processed through statistical tools or SPSS programs, and then interpreted and analyzed. Statistical tools used included frequency, percentage, weighted mean, one-way ANOVA, independent sample t-test, and Pearson r correlation. The Likert Scale is presented in tables wherein responses were summarized, classified, and tabulated.

## 4. Findings and Discussions

The main goal of this study was to investigate the relationship between transformational leadership style and teacher heuristic performance.

### 4.1. Reliability analysis

Cronbach's Alpha coefficient is used to measure the reliability of each scale. Using SPSS 24.0 software, the results showed that Cronbach's Alpha coefficient of the transformational leadership style scale and heuristic job performance scale is 0.774, 0.830, indicating that the reliability of each variable of the scale has reached the acceptable standard, the credibility is good, and the validity analysis can be continued.

### 4.2. Validity analysis

Factor analysis is one of the important methods to test the validity of the questionnaire, including exploratory factor analysis and confirmatory factor analysis. The test results show that the KMO sample measure of each variable is greater than the medium level of 0.7, and the significance probability of the sphericity test of each variable is 0.000, all less than 0.01, which indicates that factor analysis can be carried out.

### 4.3. Descriptive statistical analysis

In order to grasp the situation of the survey data more clearly, this paper made a descriptive statistical analysis of demographic variables on the data obtained from all the questionnaires, and the results are shown in Table 1:

**Table 1.** Descriptive Statistical for the respondents

	Frequency	Percent	Cumulative Percent
SEX	1.0	48	48.00
	2.0	52	100.00
GRADE	1.0	35	35.00
	2.0	34	69.00
	3.0	31	100.00
SCHOOL AFFILIATION	1.0	73	73.00
	2.0	27	100.00
Total	100	100.0	100.0

Among them, the number of boys is 48, accounting for 48%, and the proportion of girls is 52%; in the grade classification, the proportion of the first, second and third is 35%, 34% and 31%; According to the school affiliation, there are 73 students in public schools and 27 students in private schools.

### 4.4. Correlation analysis

In order to explore the influence of demographic variables on transformational leadership and teachers' heuristic job performance, this paper first made a correlation analysis of the variables involved. In this part, the correlation analysis method used in the study is Pearson correlation, and the analysis results are shown in Table 2 and Table 3.

**Table 2.** Correlation Analysis of Influence of evaluation of respondents on Transformational Leadership

	GRADE	SCHOOL AFFILIATION
LEADERSHIP	Correlation 0.080	-0.184
	p 0.427	0.067

As can be seen from the table above, the P value between GRADE and LEADERSHIP was 0.427 with a correlation coefficient of 0.080 and  $P > 0.05$ , implying acceptance of the original hypothesis, indicating that there was no correlation between GRADE and LEADERSHIP, proving that hypothesis 1 was correct.

The P value between SCHOOL AFFILIATION and LEADERSHIP was 0.067, with a correlation coefficient of -0.184,  $p > 0.05$ , indicating acceptance of the original hypothesis, indicating that there is no correlation between SCHOOL AFFILIATION and LEADERSHIP.

**Table 3.** Correlation Analysis of Influence of evaluation of respondents on heuristic individual performance

	GRADE	SCHOOL AFFILIATION
PERFORMANCE	Correlation -0.098	-0.043
	p 0.331	0.672

As can be seen from the table above, the P value between GRADE and PERFORMENT is 0.331, the correlation coefficient is -0.098,  $P > 0.05$ , which means that the original hypothesis is accepted, indicating that there is no correlation between GRADE and PERFORMENT.

The P value between PERFORMENT and SCHOOL AFFILIATION is 0.672, with a correlation coefficient of -0.043,  $P > 0.05$ , which means that the original hypothesis is accepted, indicating that there is no correlation between PERFORMENT and SCHOOL AFFILIATION, which proves that hypothesis 2 is correct.

**Table 4.** Pearson Correlation Analysis of Transformational Leadership and heuristic individual performance

Pearson Correlation		
		PERFORMANCE
LEADERSHIP	Correlation	0.036
	P-value	0.031
* $p < 0.05$ ** $p < 0.01$		

In Table 4, the p value of PERFORMENT and LEADERSHIP was 0.031, and the correlation coefficient was 0.036,  $p < 0.05$ , which meant that there was a positive correlation between PERFORMENT and LEADERSHIP, negating the original hypothesis.

## 5. Conclusion

Based on the research status of transformational leadership and the reality of target junior middle school, this study explored the impact of transformational leadership on teachers' heuristic personal performance.

On the basis of reviewing the relevant literature research of each variable, this study puts forward the research hypothesis combined with the literature analysis. In the measurement of variables, the widely recognized scale is referred to, the questionnaire method is used for data collection, and the SPSS24.0 is used for data collation and analysis. Finally, the hypotheses were tested and the results were obtained.

The results of this study show that: ① When grouped by grade, there were no significant differences in respondents' ratings of teachers' transformational leadership styles. ② When grouped by school affiliation., there was no significant difference in respondents' evaluation of teachers' heuristic performance. ③ There was positive significant relationship between the assessment of transformational leadership styles and heuristic teacher performance.

The results of this study are expected to bring some enlightenment to organizational managers.

First of all, facing the complex and changeable internal and external environment, school managers should attach importance to the influence of teachers' transformational leadership style on the development of schools and the growth of students. Teachers with transformational leadership styles are generally pioneering and aggressive. They can be far-sighted, stimulate students' internal motivation to learn, and promote curriculum reform.

At the same time, school managers should select teachers with transformational leadership traits when selecting teachers. In addition, in view of the fact that transformational leadership behavior can be learned, organizations can improve teachers' leadership skills in the classroom and with students through training, and improve teachers' understanding of the mechanism of transformational leadership.

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