The Role of Transformational Leadership in The Classroom and Students' Outcomes: A Case Study of The Aviation Institute

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Abstract

Transformational leadership is an effective leadership style that influences followers outcomes in different contexts e.g., business, non-profit organizations, and educational setting. The role of instructors as transformational leaders in the classroom can influence students' outcomes, both objective and subjective. This study aims to investigate the relationship between the role of instructors as transformational leaders and student outcomes. The research method consists of (a) data collection via questionnaire, and (b) data analysis through structural equation modelling (SEM). The results contribute to the aviation institute by emphasising the role of instructors in enhancing students' outcomes.

Keywords: transformational leadership, student outcomes, aviation institute

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Introduction

One role of instructors is to develop a relationship between themselves and their students. Another role is to perform the duties of mentor or instructor (Bolkan & Goodboy, 2010). Certainly, instructors perform a variety of roles in the classroom and one of them is as a leader. An instructor as leader assumes a wide range of roles to support his or her students and help them succeed. These roles may be formally or informally assigned (Harrison & Killion, 2007). Harrison and Killion (2007) suggest that an instructor exhibits leadership in many ways. Some of their roles are formal with designated responsibilities. Other more informal roles emerge as a result of interaction with their students. The variety of roles ensures that they can find ways to lead that fit their talents and interests. Regardless of the roles they assume, instructors can be effective if they identify and promote key emotional and ethical qualities. Instructor-student relationships shape students' moral development in another sense—through their influence on students' emotional development. It is assumed that an instructor can teach students to behave morally by instilling in their virtues and standards, a clear sense of right and wrong (Weissbourd, 2003).

There are a variety of leadership styles e.g., situational leadership, leader-member exchange leadership, authentic leadership or servant leadership (Northouse, 2016). One effective leadership style that has been effective in educational contexts is transformational leadership. Students' perceptions of their instructor's transformational leadership qualities have been studied in educational settings. The results show a positive relationship between transformational leadership and students' extra effort, perceived instructor effectiveness, student satisfaction (Pounder, 2008), and students trust in, as well as respect for, their instructors (Harvey, Royal, & Stout, 2003). Importantly, transformational leadership has been found to be positively related with cognitive learning, affective learning, student motivation, student communication satisfaction, student participation, and perceived instructor credibility (Bolkan & Goodboy, 2009). In organizational literature, studies suggest that transformational leadership is associated with different outcomes. Similarly, in the educational context, it has been linked with student learning outcomes (Bolkan & Goodboy, 2009).

Significance and Problem Statement

Instructors' instructional roles are associated with student outcomes (Kyriakides, Creemers, & Antoniou, 2009). The term student outcomes has been used in many ways e.g., educational outcomes or societal outcomes. This study aims to explore the relationship between the role of an instructor and student outcomes. It is expected that the importance of the role of instructor will be made apparent, especially the role of instructor in the aviation institute.

Research Question

The research question developed for this study is: "What is the relationship between the role of instructor as transformational leader in the classroom and student outcomes?".

Literature Review
Transformational Leadership in the Classroom

There are variety of models used to describe leadership styles. Bass (1985) suggests that transformational leadership has been shown to be an effective management style in many organizational settings. It also represents an effective leadership behaviour in the classroom (Bokan & Goodboy, 2010). Transformational leadership has been applied to the educational context environment because faculty members, like organizational leaders, can transform the nature of the classroom. It has also been found that transformational leadership in the classroom positively influences student outcomes (Kyriakides, Creemers, & Antoniou, 2009; Pounder, 2008). Transformational leadership in the classroom, thus, refers to the behaviour that an instructor exhibits to promote transformational leadership (Bolkan & Goodboy, 2010). It is the combination of leadership processes including idealized influence, intellectual stimulation, inspirational motivation, and individualized consideration (Bass, 1985).

Recently, scholars have started to examine outcomes associated with transformational leadership in the classroom. The components of transformational leadership in the classroom are: (a) interactive teaching style, (b) challenging students, and (c) encouraging independent thought (Bolkan & Goodboy, 2010).

(a) Interactive teaching style is characterized by students sharing their impressions or feelings and expressing their wishes. Therefore, students exhibit the following: 1) familiarity with the class, 2) allocate content, 3) offer shared ideas, 4) analyse the consequences of decisions, 5) select optional consequences and solutions (Yakovleva & Yakovlev, 2014).

(b) Challenging students by using argument is one of the methods that instructors use in class. Instructors need to maintain a safe environment for students,

which means preventing debate from turning into a personal issue. It is necessary to consider "*What is the value for students in hearing opposing perspectives?*" or "*Is there a way to use the content of the debate to serve teaching goals*? (Krieger, 2005).

(c) Encouraging independent thought is a method that aims to transfer student ability to a higher level. Instructors need to design the classroom to facilitate this transition by providing opportunities to all students. Practical and problem-based learning are used to encourage independent thought (Cranwell, Davis, Elliot, McKendrick, Page, & Spillman, 2017).

Students' Outcomes

Students' outcomes refers to (a) the learning objectives that an educational institute want students to achieve (academic outcomes), or (b) societal and life effect that result from students being educated and being a good citizen (non-academic outcome). Thus, this study classifies students' outcomes into two categories (Robinson, Lloyd and Rowe, 2008) as follows:

Educational outcomes or academic outcomes are the goals for students' learning and development which educational institutes aim to achieve. (Palomba & Banta, 1999). They are what a student needs to

know, understand and do to meet the requirements of his/her future work. Cumulative grade point average (CGPA) is one of the criteria used to measure students' learning outcomes. A cumulative grade point average (CGPA) is a calculation of the average of all of a student's earned points divided by the possible number of points. This grading system calculates for the student's complete education career. (Yogendra & Andrew, 2017).

Societal outcomes or non-academic outcomes are non-monetary outcomes and can be related to social issues. Student societal outcomes may imply the impact that education has on an individual and society (Robinson, Lloyd and Rowe, 2008). An educational institute plays an important role in encouraging students to increase his/her response to societal expectations (Berry & Workman, 2007). Educational institutes should look beyond the traditional measures of an individual. To do so, they should create indicators of students' outcomes that contribute to society. OECD (2011) suggests a variety of societal outcomes that should be emphasized e.g., better health, stronger civic engagement.

The existing literature reveals that faculty member leadership style influences student learning. However, the result might be different depending on the institutional

context (Sebastian, Huang, & Allenworth, 2017). The role of leadership in the classroom is associated with students' motivation which helps students to achieve goals. It also enhances students' motivation and commitment (Houchens, Zhang, & David, 2017; Oqvist & Malmstrom, 2017)

From the evidence available, two hypotheses have been developed as follows:

H1: Transformational leadership in the classroom is positively related to student CGPA.

H2: Transformational leadership in the classroom is positively related to students' outcomes.

Methods

Participants

This study collected data via an online questionnaire. Responses were according to a six-point Likert scale. The participants are students in the Aviation Personnel Development Institute (APDI), Kasem Bundit University. A total of 452 usable questionnaires were returned. The respondents were 105 males (23.2%) and 346 females (76.5%); 10 respondents (2.2%) were aged between 16-18 years old, 174 students (38.5%) were aged between 18-20 years old, and 268 students (59.3%) were aged over 20 years old.

Measures

Transformational leadership in the classroom was measured by the students' intellectual stimulation scale (Bolkan & Goodboy, 2010) consisting of 10 items that measure three components of transformational leadership in the classroom: interactive teaching style, challenging students, and encouraging independent thought. The original version was in English. The Thai version was translated by three Thai professors fluent in English. The translated version is semantic, content and normative equivalent of the questionnaire (Harkness & Schoua-Glusberg, 1998; Willgerodt, Kataoka-Yahiro, Kim & Ceria, 2005).

Each item was rated on a six-point Likert scale (6 = strongly agree, 1 = strongly disagree). Sample statements are "My instructor uses unique activities to get the class involved with the course material" and "My instructor uses exciting teaching techniques in class". Cronbach Alpha for the total scale is .92 (M = 43.98, SD = 8.79)

Students' outcomes were measured from student's moral behavior and learning outcomes. The basic moral behavior measurement scale consists of 15 items adapted from eight basic virtues (ONEC, 2008). There are three components including diligence, honesty, and discipline. Each component contains five items. It is rated with six-point Likert scale (6 = strongly agree; 1 = strongly disagree). Sample statements are "I lie", "I intentionally do my homework by myself", "I finish my homework on time". Cronbach Alpha for total item scale is .70 (M = 59.01, SD = 7.99). Each student's learning

outcome was measured by his/her CGPA (M = 3.04, SD = .43).

Data Analysis

A confirmatory factor analysis

Absolute fit measures (χ^2, CFI, TLI) were used to determine whether a covariance structural model fits the research hypotheses. Overall, the suitability of the path coefficient was verified as χ^2 = (22.83), p value = (0.00), RMSEA = (0.00), CFI = (0.97), TLI = (0.93) for the fit measure of factors of transformational leadership in the classroom. The fit measures of students' outcomes showed χ^2 = (2.37), p value = (0.12), RMSEA = (0.32), CFI = (0.99), TLI = (0.99). Therefore, the suitability of the path coefficient was verified.

A correlation analysis

For a scale evaluation of the survey, the construct validity verification is the concept of measurement which represents the accuracy of the construct or concept used for research (DeVellis, 2003). The value representing the degree of correlation between research concept variables at the verification of construct validity is called the correlation coefficient. In this study, a correlation analysis was conducted to confirm the dimensions of each factor and determine the relationship and direction among the factors. As shown in Table 1, the majority of path coefficients are significant, p<0.01, and p<0.05. In addition, the correlation among variables shows no high values (r>0.9), excepting factors which have the same value as the independent variables. Therefore, the discriminant validity has been confirmed.

Table 1. The correlation of variables

	CGPA	ITS	CS	EIT	DIL	HON	DIS
CGPA	-						
ITS	.11*	-					
CS	.14*	.81**	-				
EIT	.10*	.81**	.81**	-			
DIL	.15**	.37**	.34**	.38**	-		
HON	-.07	.16**	.15**	.08	.14**	-	
DIS	.96*	.37**	.29**	.30**	.78**	.24**	-

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

CGPA = cumulative grade point average, ITS = interactive teaching style, CS = challenging students, EIT = encourage independent thought, DIL = diligence, HON = honesty, DIS = discipline

A verification of the research model

Verification of the overall research model was conducted. Since the fitness of the model was shown as χ^2 = (70.87), p = (0.00), RMSEA = 0.00, CFI = 0.96, TLI = 0.94, the research model was judged as an explicable and satisfactory model for verifying the hypotheses.

A verification of research hypotheses

For hypothesis 1 (H1), it was shown that transformational leadership in the classroom has a significant positive influence on cumulative grade point average (CGPA) (β = 0.13, p<0.01). For hypothesis 2 (H2), transformational leadership in the classroom has a significant positive influence on students' outcomes (β = 0.39, p<0.01). Thus, both research hypotheses have been accepted.
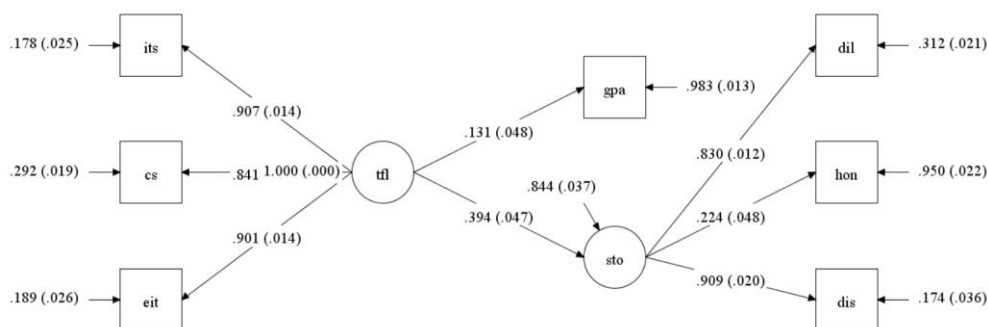

Figure 1. The result of path analysis of the research model. All paths are significant at p<.01
Note: tfl = transformational leadership in the classroom, gpa = cumulative grade point average, sto = student outcomes, ITS = interactive teaching style, CS = challenging students, EIT = encourage independent thought, DIL = diligence, HON = honesty, DIS = discipline

Research Findings and Discussion

The results of this study can answer the research question "What is the relationship between the role of transformational leadership in the classroom and students' outcomes?"

In summary, the results from this study confirm that transformational leadership is effective in an educational setting which is similar to the conclusions of Bolkan and Goodboy (2010) and Kyriakides, Creemers, and Antoniou (2009). Interactive teaching style, challenging students and encouraging independent thought behaviors of instructors influence students. Thus, instructor behaviors

positively influence students' outcomes including diligence, honesty, and discipline.

The results of the current study suggest that students exhibit more moral behaviors when they perceive professors as getting them involved in the learning process, challenging them to be the best students they can be, showing them that hard work is worth it, and helping them think deeply and critically about course concepts. Apart from that, these behaviors are also positively associated with student CGPA. This means that if instructor's behavior as transformational leaders in the classroom is high, the CGPA of students will increase. This finding is the same as in a previous study by Bolkan and Goodboy (2009, 2010).

Implications, Limitation, and Future Research

This study will enhance knowledge of faculty development programs in educational institutes. The results reveal that an instructor's leadership role in the classroom can enhance students' outcomes including educational outcomes (measured by students' CGPA) and societal outcomes (measured by student's positive behaviours such as diligence, honesty and discipline). Thus, instructors need to pay more attention to his/her class behaviour. One limitation of the current study is its study context. This study was conducted in the Aviation Personnel Development Institute. It is recommended that further studies should be conducted in different contexts or different educational institutes.

The study of transformational leadership in the college classroom is in its infancy, and there are many possibilities for future research. This is true for the idea in general and for the notion of faculty member behaviors specifically. Future researchers may focus on the role of faculty members as leaders in the classroom, specifically, to determine how an interactive teaching style, challenging students, and encouraging independent thought influences students' experiences or other related outcomes.

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