The Effect of Openness to Experience, Self-Regulation, and Growth Mindset on Teachers' Transformational Leadership Reviewed From Academic Model in a Christian Higher Education

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Abstract

Teachers who use transformational leadership on their students raise the students' degree of value, maturity, and well-being. In their capacity as transformative leaders, teachers approach their students without resorting to coercion, but rather by virtue of morality. This study aimed to determine the effect of openness to experience, self-regulation, and growth mindset on transformational leadership reviewed from the academic model. The analysis in this study employs a quantitative methodology. The response rate is 33% out of 109 total population, so 36 samples are analyzed in this study. The data will be analyzed using regression analysis using Smart PLS software. The result of the study showed that (1) there is sufficient evidence to support the effect of openness to experience on transformational leadership; (2) there is no sufficient evidence to support the effect of self-regulation on transformational leadership; (3) there is no sufficient evidence to support the effect of growth mindset on transformational leadership; (4) there is no sufficient evidence to support the claim that academic model moderates the effect of openness to experience on transformational leadership; (5) there is no sufficient evidence to support the claim that academic model moderates the effect of self-regulation on transformational leadership; (6) there is no sufficient evidence to support the claim that academic model moderates the effect of growth mindset on transformational leadership.

Keywords: transformational leadership, openness to experience, self-regulation, growth mindset, academic model.

INTRODUCTION

It goes without saying that changes are inevitable. It is necessary to consider rapid advancements in science as well as in politics, economics, and technology as variables impacting educational practice. Education's mission must be preserved in the face of change. As a leader for the students, a teacher must foresee and adjust to forthcoming events so that the teacher might impart pertinent knowledge to students to better prepare them for the future while maintaining the purpose of education. Teachers must approach leadership in a transformative manner. Under the leadership of transformational leaders, people are inspired to go above and beyond what they had initially intended and felt was feasible. The leader establishes high expectations and holds the people to a higher degree of performance. Transformational leadership is centered on a bigger purpose than oneself (Bass & Bass, 2008, p. 1736). In teaching practice, teachers must inspire students to be creative and inventive individuals capable of adapting to change. To accomplish the learning aim, teachers must motivate, stimulate, and encourage students to grow and develop their potential so the students will grow as a whole.

For a teacher to function effectively as a transformative leader, the teacher must be receptive to new ideas and be willing to experiment with them. Lewis Goldberg's work has described, one of the aspects in Big Five Personality is openness to experience (Deyoung, Quilty, Peterson, & Gray, 2014, p. 46). A teacher who has a high level of openness to experience will most likely inspire the students to be creative and innovative individuals in their own right as well. As change happens and adaptation is required, teachers must regulate their behavior to maintain focus on the goal as it is intended. Leadership with meta-competency in self-regulation will help leaders perform more successfully by fulfilling the needs of diverse constituencies by being aware of what is required and proactively engaging themselves to build additional skills as needed (Yeow & Martin, 2013, p. 636). It is essential to approach every problem that arises in the course of daily practice in education with the
appropriate frame of mindset. A growth mindset is a state of mind in which one believes that success is the result of one's efforts. Challenges and difficulties are viewed as opportunities to learn and grow by those who have a growth mindset. Taking everything into consideration, openness to experience, self-regulation, and growth mindset are all necessary characteristics for teachers to possess in order to be transformational leaders.

The leadership of an organization has a significant impact on the development of the organization's culture. An organization's culture may impact the development of its leadership (Bass & Avolio, 1993, p. 112). The academic model is a means of conceptualizing organizational value in the context of practice that will have an impact on the culture. Two academic models for Christian higher education are proposed by Litfin (2004), including the following systemic model and umbrella model. This study was conducted in the Faculty of Education and Faculty of Science and Technology in a Christian university. The Faculty of Education has implemented a systematic academic model, and the Faculty of Science and Technology adopts umbrella academic model.

This research analyzed: (1) the effect of openness to experience on transformational leadership; (2) the effect of self-regulation on transformational leadership; (3) the effect of growth mindset on transformational leadership; (4) academic model as moderation on the effect of openness to experience on transformational leadership; (5) academic model as moderation on the effect of self-regulation on transformational leadership; (6) academic model as moderation on the effect of growth mindset on transformational leadership.

LITERATURE REVIEW
Transformational Leadership
George (2006) described transformational leadership as a style of leadership that influences both individuals and societal systems. In its ideal form, it fosters meaningful and positive development in followers with the ultimate objective of transforming followers into leaders. According to Burns (1978), leadership transformation is a process in which leaders and followers assist one another in reaching a greater level of morale and motivation (George, 2006, p. 1). Transformational leaders encourage their followers to connect with something greater than themselves. Such leaders advocate for self-sacrifice in the pursuit of moral values and higher aims, justifying such generosity by looking beyond the present moment to create a future worth pursuing (Goodwin, 2018, p. 355). Transformational leadership's effectiveness depends on the transformation of followers (Siangchokyoo, Klinger, & Campion, 2020, p. 1). Transformational leadership is a long-term approach that leads to improved student results. It also emphasizes the importance of building a quality assurance system in schools to keep teachers responsible for their instruction (Kwan, 2020, p. 25). Niessen et al. (2017, p. 22) stated in their study that transformational leadership is related to an increase in flourishing, which is accompanied by the rise in proactivity among teachers who reported a low degree of emotional tiredness.

Bass and Bass (2008, p. 1742–1749) identified four components in transformational leadership:
1) Idealized Influence
A transformational leader serves as a role model for high ethical behavior and earns the respect and trust of others.
2) Inspirational Motivation
A transformational leader inspires people by setting high standards, communicating optimism about future goals, and providing purpose for the job at hand. A compelling sense of purpose is essential if followers are to be inspired to take action on their behalf. Their sense of purpose and meaning provides the energy that propels a group forward.
3) Intellectual Stimulation
In order to transform, a transformational leader must challenge assumptions, take risks, and solicit the ideas of followers. Leaders using this style foster and support the development of creativity in their subordinates and employees. They cultivate and develop individuals who are capable of thinking for themselves.
4) Individualized Consideration
In addition to attending to each follower's needs, a transformational leader serves as a mentor or coach to the follower and actively listens to the follower's problems and requirements. When followers encounter difficulties, they may rely on the leader's empathy and assistance to get through it. The lines of communication are maintained open.

Openness to Experience
John and Srivistava (1999), as cited in Bono and Judge (2004, p. 903), described individuals' openness to experience indicates their propensity to be creative, reflective, innovative, resourceful, and perceptive. McCrae (1996) noted that individuals with a high level of openness to experience are emotionally sensitive as well as intellectually interested (Bono & Judge, 2004, p. 903). Openness to experience is the factor most closely related to intellectual and creativity. Individuals with a high degree of openness to experience tend to do better on tests of creativity and intelligence. They are most likely to choose careers in the sciences and the arts (Bornstein, 2018, p. 5).

There are two aspects of openness to experience. These aspects are openness and intellect. Openness indicates a propensity to engage with visual and sensory information. Intellect refers to a person's proclivity for engaging with abstract and intellectual knowledge. It is possible to discover persons who are
high in openness but low in intelligence or vice versa. Depending on how it is viewed, creativity may be regarded as either an aspect of or a result of openness or intellect. If creativity is considered a personality characteristic, it might be considered an aspect of the openness or intellect domain itself. If creativity is regarded as a characteristic of a product, then it may be viewed as a result of openness or intellect. J.C Kaufman et al. (2010) claimed that the only Big Five attributes positively correlated with all dimensions of creativity are openness to experience (Oleynick et al., 2017, pp. 11–15).

McCrae has stated this in several studies; it is likely that the degree to which cognitive, affective, and behavioral processes are intertwined is the manifestation of openness to experience. Opening up to new ideas is not only possible but also enjoyable for open individuals. Those who are just bright tend to have highly developed interests in specific fields in which they excel. Open individuals, on the other hand, have a diverse and ever-expanding array of interests. These efforts go beyond just academic endeavors as well (McCrae, 1993, 1997).

Self- Regulation

Vancouver and Day (2005) defined self-regulation as a technique that assists in attaining and maintaining goals in which those goals are internally expressed (Yeow & Martin, 2013, p. 626). Self-regulation is defined as self-generated ideas, feelings, and behaviors that are planned and cyclically altered to achieve personal goals. Self-regulation is defined as cyclical since the feedback from previous attempts is used to make changes during current efforts. Because personal, behavioral, and environmental elements are continually changing over the process of learning and performance, such changes are required (Zimmerman, 2005, p. 14).

Self-regulation is influenced by metacognition, self-beliefs, and emotional reactions, such as doubts and anxieties, that arise in response to specific performance situations (Inzlicht et al., 2020; Zimmerman, 2005). An article was written by Cole et al. (2019) discusses self-regulation theories based on the idea that top-down executive processes may modify prepotent reactions. Prepotent reactions are acts that are likely to be taken first in the event of a particular circumstance preceding subsequent reactions. Cognitive processes execute a prepotent reaction. These cognitive processes are referred to as the executive process by cognitive and neuroscience experts. Through the activation of executive processes, prepotent response inclinations may be modified, avoided, modulated, or terminated, and this is how self-regulation is developed (Cole et al., 2019, pp. 2–3).

Growth Mindset

A mindset is a mental tendency that may be described as a state of mind. A mindset shapes an individual's perception of the world. It is the way to make sense of everything that has an impact on individuals. It also enables a person to assess individuals, concepts, things, and events consistently. The mentality is made up of a collection of ideas and beliefs, which form patterns of habits. Habits influence the way individuals think, feel, and do (Johnson, 2019, p. 12). The mindset concept enables the following interpretation of the observed noun span data, considering between possible action objectives stimulates cognitive mechanisms that help the pre-decision phase setting preferences (Gollwitzer, 2012, p. 528). A person's mindset affects how they respond to achievement situations (Zingoni, 2016, p. 36).

Dweck (2016, p. 18) categorized mindset as two types, which are fixed mindset and growth mindset. People with a fixed mindset believe that their characteristics are immutable and cannot be changed. Those who have a fixed mindset feel that they are either naturally excellent or poor at something based on their genetic. The growth mindset is founded on the notion that fundamental human traits can be developed via efforts, tactics, and the assistance of others (Ng, 2018, p. 20). Despite the fact that people's initial skills, aptitudes, interests, and temperaments may differ in every aspect, everyone has the ability to change and grow as a result of application and experience (Seitz & Owens, 2021, p. 1). People with a growth mindset think that intellect is flexible and can be changed, and they feel that setbacks are opportunities to learn and improve. Students with a growth mindset could perceive failure as a motivator that encouraged them to continue their education because they believed in the significance of the effort (Dweck, 2016, pp. 6–7).

Academic Model

Model is a method of conceiving something (Wolterstorf, 2004, p. 50). The academic model is a manner of conceptualizing academic institutions in order to foster a religion-based commitment to the integration of faith and learning. The integration of faith and learning will impact the institution's practices, including faculty recruiting, student recruitment, student life, scholarship fund allocation, classroom instruction, the form and quality of faculty scholarship, and the selection of trustees and senior administrators (Hughes & Adrian, 1997, pp. 1–3). Integrating faith and learning aims to provide a holistic education for all students (Rine, 2018, p. 331).

Litfin (2004) suggested two sorts of academic models for Christian higher education: systemic and umbrella. Christian concepts are frequently relegated to the domain of the personal in totally secular organizations. Institutions that use the systemic approach strive to make Christian thought pervasive throughout the organization. This institution's curriculum is generally comprehensive with Christian thinking. The objective is to employ ideas from all
perspectives and do so from a particular intellectual position that is influenced by Christian tradition. As a result, this institution recruits its faculty entirely from people who understand and work within the Christian tradition and those who are living examples of it (Litfin, 2004, pp. 18–20).

Umbrella institutions seek to provide a Christian "umbrella" under which various voices can thrive. The climate of an umbrella institution can foster rigorous Christian thought while also acting as a platform for that thinking to engage with other views. Because a certain critical mass symbolizes the sponsoring Christian tradition, that voice stays privileged. Despite this, the institution is genuinely diverse. Everyone is welcome under the tent as long as they can contribute to the institution's goal. In such institutions, the perspective of the sponsoring organization will generally be retained more or less discernible, depending on the circumstances. It may manifest itself in various ways, including the curriculum and extracurricular activities, as well as the composition of the governing board, staff, and student population. However, numerous non-Christian groups and activities may also be found on campus, and the institution makes a real effort to ensure that the campus is welcoming to everyone (Litfin, 2004, pp. 14–17).

RESEARCH METHOD
This study employed a quantitative approach. Using the Smart PLS program, a correlational analysis will be performed on the collected data. The model of this research is depicted in Figure 1 below.

![Fig-1: Correlational model of variables](image)

H1: Openness to experience has a positive effect on transformational leadership.
H2: Self-regulation has a positive effect on transformational leadership.
H3: Growth mindset has a positive effect on transformational leadership.
H4: Academic model moderates the positive effect of openness to experience on transformational leadership.
H5: Academic model moderates the positive effect of self-regulation on transformational leadership.
H6: Academic model moderates the positive effect of growth mindset on transformational leadership.

This research is conducted in the Faculty of Education and the Faculty of Science and Technology in a Christian university in Tangerang, Indonesia, using stratified random sampling for data collection over three months from March to May 2021. The survey approach utilizing a questionnaire in the Indonesian language was employed to gather data in this study. This questionnaire is anonymous, sent via email, and uses a Likert scale. Reminder emails are sent twice during the survey period. The response rate is 33% out of 109 total population, so 36 samples are analyzed in this study. Twenty-three respondents are lecturers in the Faculty of Education, and 13 respondents are lecturers in the Faculty of Science and Technology. 20 (56%) lecturers are female, and 16 (44%) lecturers are male. 3 (8%) respondents are 20-29 years old, 19 (53%) lecturers are 30-39 years old, 8 (22%) lecturers are 40-49 years old, 6 (17%) lecturers are more than 49 years old.

This study is first to do the outer model test, followed by the inner model test and multicollinearity test. After these tests are completed, a hypothesis test will test six hypotheses constructed of three independent variables, one moderating variable and one dependent variable.

RESULT
Convergent Validity
The total number of item in the questionnaire are 66 items. This research used SmartPLS to process the data. Every item in the questionnaire will be evaluated. In general, indicators with outer loadings between 0.40 and 0.70 should be evaluated for removal from the scale only if doing so increases the composite dependability (Hair, Hult, Ringle, & Sarstedt, 2015, p. 128). The number of valid items remaining was 20 items. Convergent validity test will be done by considering the AVE value. Hair et al. (2015, p. 130) stated that a score of 0.50 or higher implies that the construct explains more than half of the variation of its indicators. In other words, an AVE of less than 0.50 implies that more variance persists in item error than in concept variance. The AVE value of Openness to Experience, Self-regulation, Growth Mindset, and Transformational Leadership were 0.65, 0.59, 0.822, and 0.66, consecutively.

Discriminant Validity
The approach to assess discriminant validity is by considering the cross-loadings value. The outer loading on the linked concept should higher value than any of its cross-loadings on other constructs (Hair et al., 2015, p. 130). Table 1 shows all variables satisfy the discriminant validity.

Table 1: Correlational analysis

<table>
<thead>
<tr>
<th>Variable</th>
<th>Outer Loadings</th>
<th>Cross-loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Openness to Experience</td>
<td>0.70</td>
<td>0.10</td>
</tr>
<tr>
<td>Self-regulation</td>
<td>0.65</td>
<td>0.15</td>
</tr>
<tr>
<td>Growth Mindset</td>
<td>0.60</td>
<td>0.14</td>
</tr>
<tr>
<td>Transformational Leadership</td>
<td>0.62</td>
<td>0.23</td>
</tr>
</tbody>
</table>

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Table-1: The discriminant validity test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Openness to Experience</th>
<th>Self-Regulation</th>
<th>Growth Mindset</th>
<th>Transformational Leadership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Openness to Experience</td>
<td>0.812</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Regulation</td>
<td>0.672</td>
<td>0.772</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth Mindset</td>
<td>0.742</td>
<td>0.761</td>
<td>0.907</td>
<td></td>
</tr>
<tr>
<td>Transformational Leadership</td>
<td>0.791</td>
<td>0.683</td>
<td>0.682</td>
<td>0.812</td>
</tr>
</tbody>
</table>

Reliability
The reliability test by looking at their composite reliability, also shows that all variable are reliable because their composite reliability is 0.70 or higher (Hair et al., 2015, p. 61).

Inner Model Test – Goodness of Fit
The goodness of fit metrics in PLS-SEM stress how near the predicted values of the dependent variables are to the actual values (Garson, 2016, p. 62). The test shows that the mean of the predictive value of the model (R-square) is 69.1%

Table-2: Hypothesis testing

<table>
<thead>
<tr>
<th>Path</th>
<th>Coefficient</th>
<th>Standard Deviation</th>
<th>T-Statistics</th>
<th>P-Value</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Openness to Experience</td>
<td>-0.064</td>
<td>0.229</td>
<td>0.280</td>
<td>0.390</td>
<td>Do not reject Ho</td>
</tr>
<tr>
<td>Academic model as moderating variable</td>
<td>0.095</td>
<td>0.329</td>
<td>0.016</td>
<td>0.494</td>
<td>Do not reject Ho</td>
</tr>
<tr>
<td>on Growth Mindset</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Self-Regulation</td>
<td>0.005</td>
<td>0.329</td>
<td>0.016</td>
<td>0.494</td>
<td>Do not reject Ho</td>
</tr>
<tr>
<td>Academic model as moderating variable</td>
<td>0.051</td>
<td>0.329</td>
<td>0.016</td>
<td>0.494</td>
<td>Do not reject Ho</td>
</tr>
<tr>
<td>on Growth Mindset</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Growth Mindset</td>
<td>0.031</td>
<td>0.369</td>
<td>0.084</td>
<td>0.466</td>
<td>Do not reject Ho</td>
</tr>
</tbody>
</table>

From the table above shows that (1) there is sufficient evidence to support the effect of openness to experience on transformational leadership; (2) there is no sufficient evidence to support the effect of self-regulation on transformational leadership; (3) there is no sufficient evidence to support the effect of growth mindset on transformational leadership; (4) there is no sufficient evidence to support the claim that academic model moderates the effect of openness to experience on transformational leadership; (5) there is no sufficient evidence to support the claim that academic model moderates the effect of self-regulation on transformational leadership; (6) there is no sufficient evidence to support the claim that academic model moderates the effect of growth mindset on transformational leadership. The structural model is shown in Figure 2 below.

Multicollinearity Test
All exogenous variables show their VIF value 5 or less. This indicates no possible collinearity issue (Hair et al., 2015, p. 158). In fact, the VIF value of Openness to Experience, Self-regulation, and Growth Mindset are 3.08, 2.76, and 3.30 consecutively.

Hypotheses Test
Path coefficient is examined to test the hypotheses through the bootstrapping process with 5% significance. Ho is rejected if t > 2.437, and there will be sufficient evidence to accept H1 if P < 0.05. The result of the hypotheses test is shown in Table 2 below.

Fig-2: Path coefficient
DISCUSSION

The effect of openness to experience on transformational leadership

Data analysis of this research shows a positive effect of openness to experience on transformational leadership as the t value is 2.547 > 2.437 and P-value 0.006 < 0.05. This study supports the research conducted by Zoppiatis and Constanti (2012) titled “Extraversion, Openness, and Conscientiousness: The Route to Transformational Leadership in the Hotel Industry”, which suggests that transformational leadership is positively associated with openness to experience.

Openness to experience is a personality trait in which people have a natural curiosity and interest in new ideas and information. (McCrae, 1993, p. 832), which is shown by the teachers who participate in this research. John and Srivitasva (1999) were quoted Bono and Judge, stated that The ability to be open to new experiences represents creativity and imagination. The majority of teachers indicated that they had a vision for the future development of their organization. This vision comes from the ability to explore abstract information. One aspect of intellectualty that contributes to openness to experience is the ability to examine conceptual knowledge. Teachers who are intellectual and open will be able to study new ideas and experiment with them. A teacher with a high degree of openness to experience would most likely encourage students to be creative and inventive individuals in their own right, allowing the teacher to act as a transformational leader effectively.

The effect of self-regulation on transformational leadership.

This study’s data analysis revealed no sufficient evidence to support the effect of self-regulation on transformational leadership, as the t value is 1.057 < 2.437 and P-value 0.146 > 0.05. This study supports the statement by Barth-Farkas and Vera (2014) in their essay "Power and Transformational Leadership in Public Organizations," which investigates self-regulation as one of the dimensions of high power variable. Their study found that there is a negative correlation of self-regulation on transformational leadership.

In self-regulation, there are two foci, promotion focus, and prevention focus. Promotion focus is characterized by a desire to fulfill the needs of achievement in an individual. The prevention focus reflects the aim to satisfy an individual’s security requirements. According to Barth-Farkas and Vera (2014), promotion focus has a negative correlation with transformational leadership. The promotional focus will cause someone to think about oneself instead of elevating others. On the other hand, transformational leadership is about motivating followers to develop their potential and work together to attain a goal.

The effect of growth mindset on transformational leadership

The data analysis for this study indicated there is no sufficient evidence to support the effect of self-regulation on transformational leadership as the t value is 0.313 < 2.437 and P-value 0.378 > 0.05. People with a growth mindset believe that intelligence is malleable and can be shaped through effort and hard work. Thus growth mindset is an incremental theory (Seitz & Owens, 2021, p. 1). In this study, the indicator that reflects incremental theory is eliminated to improve the reliability. As a result, this study cannot fully explain the growth mindset variable.

Academic model moderates the effect of openness to experience on transformational leadership

Data analysis of this research revealed no sufficient evidence that the academic model moderates the effect of openness to experience on transformational leadership as the path coefficient value is -0.064. Openness to experience is one of the personality traits in Big Five Personality. During maturity, one's personality is more likely to remain steady (Borghuis et al., 2017, pp. 641–657). Manogu (2019) cited Erickson, personality is one of the general revelation, indicates that whether a person is Christian or not, they have the opportunity to have openness to experience personality. The academic model is a method for incorporating a Christian worldview into regular educational activities. The academic model will shape the atmosphere and culture of the institution, but it will not change people's personalities, which is one of the factors influencing someone's transformational leadership style.

Academic model moderates the effect of self-regulation on transformational leadership

Data analysis of this research revealed no sufficient evidence that the academic model moderates the effect of self-regulation on transformational leadership, as the t value is 0.061 < 2.437 and P-value 0.494 > 0.05. There is no sufficient evidence to support the effect of self-regulation on transformational leadership, thus the res. Thus the analysis of the academic model as moderating variable does not moderate the effect of self-regulation on transformational leadership.

Academic model moderates the effect of growth mindset on transformational leadership

Data analysis of this research revealed no sufficient evidence that the academic model moderates the effect of growth mindset on transformational leadership, as the t value is 0.084 < 2.437 and P-value 0.466 > 0.05. There is no sufficient evidence to support the effect of growth mindset on transformational leadership. Thus, the analysis of the academic model as moderating variable does not moderate the effect of growth mindset on transformational leadership.
LIMITATION AND FUTURE STUDY

This study only used self-regulation in general. Subsequent research might employ two foci of self-regulation as dimensions in self-regulation: promotional focus and prevention focus. The teachers fill out the questionnaire to represent transformational leadership as a self-assessment. However, the result might be better if the questionnaire was also provided to the students to assess the transformational leadership of their teacher. Unfortunately, the sample size of the subpopulations was insufficient to fulfill statistical power standards (Latan & Noonan, 2017, p. 226) that combined two groups of model academics. A larger sample size might show a different result for future research.

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(May), 9–27.


