

Transformational Leadership, Cultural Intelligence, Self-Efficacy, and Productivity among Higher Education Faculty: A Structural Model

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ABSTRACT

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This study aimed to assess the productivity of higher education faculty by developing a structural model incorporating predetermined factors such as transformational leadership exhibited by academic heads, the faculty's cultural intelligence, and self-efficacy. After undergoing scientific validation and reliability tests, this study utilized questionnaires in a descriptive-correlational and causal-comparative research design. Data were gathered from 500 higher education faculty in Northern Mindanao, Philippines. The results revealed a high level of productivity among

higher education faculty, particularly in producing instructional tools, engaging in professional development and community service, and a moderately productive



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level in research and publication. Remarkably, academic heads demonstrated an excellent display of transformational leadership. Higher education faculty exhibited high levels of cultural intelligence and self-efficacy. This implies that the academic head's exemplary display of transformational leadership highlights a commendable commitment to inspiring positive change and fostering growth within the academic setting. Simultaneously, the Higher Education Faculty exhibits remarkable levels of cultural intelligence and self-efficacy, showcasing their proficiency in navigating diverse cultural landscapes and their confidence in their capabilities. Ultimately, the structural model revealed that the productivity of higher education faculty is best explained by the influence of academic heads' transformational leadership, coupled with faculty cultural intelligence and self-efficacy. This model is known as Apdian's Model of Productivity Among Faculty in State Universities.

INTRODUCTION

Educators play a significant role in molding the future of a nation as they provide students with knowledge and skills. However, in the dynamic environment of academia, educators' productivity has emerged as a global concern. Globally, there is a belief that educators' work has changed in recent decades: the workload is heavier and more intense (Department of Education Australian Government, 2022). Creagh et al. (2023) indicate the detrimental effects of workload and intensified work demands on teachers, particularly in terms of their health, well-being, productivity, and retention rates, while also compromising their to effectively address educational priorities that facilitate the learning of all students. According to the Office for Standards in Education, Children's Services and Skills (2019), the Department for Education (UK) highlights that educators face adverse effects on their health, well-being, retention rates, and productivity as a result of heavy workloads, intensified work demands, insufficient resources, and ineffective management practices. These challenges further diminish their ability to successfully fulfill educational objectives that promote the learning needs of all students. In developing countries, the impact of institutional factors on academics' research engagement and productivity has been reported in various studies. Factors such as the availability of research funding, institutional policies, and support from colleagues and supervisors can influence academics' research engagement and productivity (Heng et al., 2020).

Global data indicates that educators often exceed their official working hours, surpassing other professionals worldwide, paralleled by assertions from teacher groups in the Philippines that the workload is jeopardizing the well-being

and productivity of educators (Ancho & Bongco, 2019). In the Philippines, faculty members are anticipated to prioritize three key components: instruction, scholarly inquiry, and engagement with the community (Salazar-Clemeña & Almonte-Acosta, 2007). One notable challenge experienced by education faculty in the Philippines is the workload and administrative duties they have to handle. Research indicates that heavy workloads influence teachers' overall effectiveness, efficiency, and well-being, leading to stress, burnout, and potential negative consequences on their performance and productivity (Tarraya, 2024; Van Droogenbroeck et al., 2014). A study conducted by Gonzales et al. (2022) in Northern Mindanao, Philippines, emphasized that teachers with heavy workloads may struggle to pursue professional development, experience exhaustion, and have lower motivation, potentially leading to early exits from the profession. The study of Gaikwad (2021) discusses the challenges of balancing research productivity and teaching by faculty in higher education in the Philippines. The study suggests that environmental and personal factors can impact faculty research productivity and suggests strategies for balancing research and teaching responsibilities. Quitoras and Abuso (2021) contend that faculty members face seven primary challenges hindering their publication productivity or preventing publication altogether. These challenges include time constraints, inadequate publication training, apprehension of rejection, diminished interest, inertia among faculty, financial constraints, and insufficient institutional backing. Numerous studies have illuminated the issue of reduced productivity among higher education faculty.

A study by Barnová et al. (2022) investigated the organizational climate in education and found that leadership styles, organizational climate, and school climate openness significantly impact teacher productivity. The study emphasized the importance of supportive principal behavior, engaged teacher behavior, and a positive organizational climate in promoting teacher productivity. These challenges can impede faculty productivity and compromise the quality of education offered. Hence, the findings from these studies are essential considerations when addressing productivity concerns among higher education faculty in the Philippines. Given the critical role of higher education in national progress, addressing faculty productivity is crucial in the Philippines. Improving faculty productivity can have a positive impact on the country's education system and contribute to economic growth and social advancement. Acknowledging and tackling challenges faced by educators allow policymakers, administrators, and institution leaders to establish an environment that fosters productivity and facilitates faculty in reaching their full potential. This motivation drives the researcher to investigate productivity and its influencing factors.

The leadership of academic heads significantly shapes an educational institution's culture and direction. Transformational leadership is a style of leadership that has an impact on employees' attitudes and behaviors. It encompasses inspiring motivation, intellectual stimulation, individualized consideration, and idealized influence (Bass & Riggio, 2013). Effective communication stands as one of the crucial tools in management, essential for team formation and the attainment of significant performance outcomes within an organization (Bucăța & Rizescu, 2017). Through effective communication of a vision, promoting open dialogue, and empowering staff, academic heads can motivate faculty members to achieve greater.

Earley and Ang (2003), as cited by Huff et al. (2014), introduced cultural intelligence (CQ) as the capacity of individuals to effectively navigate and adjust in environments marked by cultural diversity. Consequently, cultural intelligence offers insights into the variations among individuals in their ability to adapt to unfamiliar cultural contexts. Faculty members who possess high cultural intelligence play a crucial role in fostering an inclusive learning environment, ensuring that students feel valued and supported. Additionally, by being culturally competent, these faculty can collaborate with colleagues from diverse backgrounds, contributing to a positive work environment and increased productivity.

Self-efficacy, which stems from Bandura's theory, pertains to individuals' confidence in their ability to complete tasks and overcome obstacles. Teachers' self-efficacy pertains to their belief in their capacity to impact change in student engagement, classroom management, and crafting instructional strategies. In fact, the self-efficacy of teachers is a central phenomenon that can be seen as one of the contributors to the process of learning and effective teaching (Akil & Jafar, 2019; Bandura, 1997). When faculty members possess levels of self-efficacy, they tend to set goals, persist in the face of challenges, and exhibit increased effort and dedication. These behaviors are instrumental in enhancing productivity and attaining desired outcomes within educational settings.

The previous discussion provides insights into the importance of exploring how the transformational leadership displayed by leaders, faculty's cultural intelligence, and self-efficacy related to the productivity of participants. By examining how the leadership of heads, along with the cultural intelligence and self-efficacy of faculty members, are interconnected, researchers can gain a deeper understanding of the elements that contribute to faculty productivity in educational institutions. This understanding can then be used to develop targeted interventions and strategies aimed at improving leadership practices, enhancing cultural intelligence, and nurturing faculty's self-efficacy. Ultimately,

this research can lead to the creation of a supportive work environment that promotes collaboration, innovation, and productivity among higher education faculty.

FRAMEWORK

This study assumed that the higher education faculty's productivity is influenced by their self-efficacy, cultural intelligence, and their leader's demonstration of transformational leadership. Such assumptions find a theoretical basis in the Theory of Planned Behavior by Ajzen (1991), the Full Range Leadership Model by Avolio and Bass (2004), the Multicultural Competency Model by Sue (2003), the Social Cognitive Theory developed by Bandura (1986) and Self-Determination Theory developed by Deci and Ryan (2013).

The Theory of Planned Behavior (TPB), developed by Icek Ajzen in 1991, is the central framework guiding this study's assumptions. The theory posits that behavior intentions are driven by subjective standards, attitude toward the action, and perceived behavioral control. The central point of the Theory of Planned Behavior is that a behavior is an outcome of personal and environmental factors. Faculty productivity, in this context, refers to the overall effectiveness and efficiency of teachers in their academic roles. It encompasses their ability to effectively educate students, conduct research, and contribute to the overall academic environment. This is an environmental factor because the individual teachers themselves do not solely determine it; the conditions, support systems, and leadership within the academic institution profoundly influence it. Transformational leadership, on the other hand, is also an environmental factor because it represents the leadership style and practices of academic leaders. These leaders play a pivotal role in setting the tone, culture, and direction of the academic institution. The personal factors mentioned in the study are the faculty's self-efficacy and cultural intelligence. Self-efficacy is a personal factor because it pertains to an individual's belief in their capabilities to accomplish specific tasks. It is a crucial psychological factor that can significantly influence productivity. Cultural intelligence is also a personal factor, and it represents an individual's ability to work effectively in diverse cultural contexts. In today's globalized academic landscape, cultural intelligence is essential for teachers who interact with students and colleagues from diverse backgrounds.

The Full Range Leadership Model (FRLM), which was developed by Avolio and Bass in 2004, presents a framework that covers a range of leadership styles. These styles span from passive and transactional to transformational leadership. In this model, transformational leadership is given importance as it is regarded as

an effective and influential style of leadership (Bass & Riggio, 2006).

The Multicultural Competency Model, which was developed by Sue and colleagues in 2003, offers a framework for understanding and evaluating an individual's intelligence. This model is widely used in the fields of education and diversity training. It can also be applied to assess how academic employees' cultural competency affects their productivity.

The Social Cognitive Theory developed by Albert Bandura highlights the role of self-efficacy in influencing individuals' motivation, behavior, and performance (Bandura, 1986). He also described Self-efficacy as "the ability of trust in organizing and executing the kinds of actions necessary to produce the accomplished achievements. Self-efficacy is a critical component of Bandura's social cognitive theory. Building signifies a person's beliefs about his ability to perform a task successfully. It was found that Self-efficacy is a significant determinant for individual development, persistence using difficulties, and emotional thinking and reactions that they did. The Self Determination Theory (SDT) developed by Deci and Ryan (1985) underscores that individuals have needs for autonomy, competence, and relatedness. According to this theory, fulfilling these needs promotes motivation and overall well-being. The applicability of this theory extends to predicting and supporting faculty productivity across areas.

OBJECTIVES OF THE STUDY

This study aimed to develop a structural model that best fits the higher education faculty's productivity. Specifically, the study sought to (1) assess the level of academic heads' demonstration of transformational leadership in terms of the following dimensions: a. idealized influence; b. individual consideration; c. inspirational motivation; d. and intellectual stimulation. (2) describe the level of cultural intelligence in terms of the following dimensions: a. behavioral; b. cognitive; c. metacognitive; d. and motivational. (3) assess the level of self-efficacy in terms of the following dimensions: a. classroom management, b. instructional strategies, and c. students' engagement. (4) measure the level of productivity in terms of a. professional development participation; b. producing instructional tools; c. research and publication; d. and community service. (5) correlate participants' productivity: academic heads' transformational leadership, cultural intelligence, and self-efficacy. (6) identify which variables best predict participants' productivity. (7) examine the comparative magnitude and strength of effects within the different hypothesized models of the study and determine which model best explains the productivity of higher education faculty using the indices and their corresponding standard values.

METHODOLOGY

Research Design

This study employed correlational and causal-comparative research designs. A correlational analysis was utilized as a research design that focused on understanding the relationships between naturally occurring variables (Bryman, 2016). In this type of study, the researcher aimed to identify how different variables were related to each other (Creswell, 2014). The objective was to examine the connections between these variables without manipulating them. On the other hand, a causal-comparative research design was employed to investigate the relationship between independent and dependent variables by comparing different groups. Higher education faculty productivity research helped identify causal models explaining variations in productivity among faculty members. The structural equation modeling (SEM) method was also used to support the investigation. Scientific studies increasingly used the potent multivariate technique known as structural equation modeling (SEM) to investigate and assess multivariate causal linkages. In contrast to other modeling techniques, SEMs examined the direct and indirect impacts of assumed causal linkages (Fan et al., 2016).

Research Site

For this particular study, the researcher collected data from participants who were employed at three state universities in Region 10, Northern Mindanao, Philippines, namely Mindanao State University-Iligan Institute of Technology, Central Mindanao University and the University of Science and Technology of the Southern Philippines.

Participants and Sampling Procedure

The study consisted of a total of 500 higher education faculty from different state universities in Region-10, Northern Mindanao, Philippines, for the academic year 2023-2024. Inclusion in the study required participants to have had a minimum of three (3) years of teaching experience. The study utilized proportional stratified random sampling, which involved taking random samples from stratified groups in proportion to the population and allowed researchers to obtain a sample population that best represented the entire population being studied (Hayes, 2023). Within each University, the participants were selected using simple random sampling. The sample size was determined using the Raosoft App, considering a margin of error of 5%.

Instrumentation

The research instrument for data gathering was a survey questionnaire composed of four parts. The first two sections of the research questionnaires were patterned from previously conducted studies related to the present study. The third part was modified to denote possession, while the final section of the questionnaire was a research-made research questionnaire. Part I determined the participants' academic heads' Transformational Leadership. The Survey of Transformational Leadership (STL): Program Staff Version was developed by Texas Christian University in 2009. The questionnaire measured four dimensions: (1) idealized influence, (2) inspirational motivation, (3) intellectual stimulation, and (4) individual consideration. Part II measured the participants' cultural intelligence using a scale based on the Cultural Intelligence Scale (CQS) that had been developed by Ang and Van Dyne in 2003. The scale consisted of 21 items and was designed to assess an individual's cultural intelligence across four factors: (1) cognitive, (2) metacognitive, (3) behavioral, and (4) motivational. Part III described the participants' self-efficacy and identified the indicators based on Megan Tschanmen-Moran and Mary Anita Woolfolk Hoy's Teacher's Self-Efficacy Scale 1. The Teachers' Sense of Efficacy Scale 1 consisted of three (3) dimensions: (1) student engagement, (2) instructional strategies, and (3) classroom management. There were 24 questions that sought to gather responses on teachers' self-efficacy. In Part IV, participants' productivity was assessed using a researcher-developed questionnaire titled Teacher's Productivity. It comprised four distinct dimensions: (1) professional development, (2) producing instructional tools, (3) research and publication, and (4) community service.

The combination of research-made and the modified questionnaire, after adoption, underwent content validation by four experts, after which pilot testing was done involving approximately 30 randomly selected participants who were not considered part of the final study sample. The outcomes of this pilot test served as the initial basis for refining and enhancing the questionnaire's validity and reliability. The accumulated pilot data were analyzed using SPSS for a thorough examination. The calculation of Cronbach's alpha coefficient followed, aiding in assessing the internal consistency and reliability of the instrument's items (Hair et al., 2019). The result of Cronbach's alpha coefficient of Transformational Leadership (0.966), Cultural Intelligence (0.916), Self-efficacy (0.954), and Teachers' Productivity (0.959) was shown and interpreted as reliable and approved to proceed with the administration of the survey.

To guarantee the quality and dependability of research results and implement the aforementioned data collection procedures in accordance with ethical standards, the following research protocols were observed: The researcher sought

approval from the adviser after careful assessment and review of the manuscript for the dissertation. Subsequently, the dean of the School of Teacher Education approved the proposal defense schedule after a comprehensive evaluation of the final manuscript. After the proposal defense, the researcher completed the Research Ethics Application Form and submitted it, along with the approved research proposal, to the Office of the Vice President for Research, Publication, and Extension. The Research and Publication Office's Associate Director assessed the proposal and Research Ethics Form to ensure they adhered to the University's format and guidelines. Subsequently, the Research Ethics Form was sent to the Vice President for Research, Publication, and Extension for additional examination and approval by the Research Ethics Review Committee. The researcher then wrote letters and obtained permission from the Presidents of State Universities in Region 10. The researcher also secured the participants' consent to participate in the study. Additionally, the participants were guaranteed that their answers would be handled with the highest level of confidentiality.

Data Collection

First and foremost, the initial step involved the preparation of the research instrument. The researcher proactively crafted survey questionnaires tailored for the faculty participants, each bearing a unique identification number positioned in the upper left corner of the paper. Subsequently, the second step entailed obtaining approval from the State University Presidents to conduct the survey and collect data from the designated participants. The researcher personally submitted formal letters to the university presidents, formally seeking permission to administer the test survey and questionnaires among the faculty participants. After receiving approval from the university presidents, the researcher convened with the participants for the arranged meeting. During that session, the researcher provided the participants with both the survey forms and informed consent documents. The participants received detailed information about the study's processes, and they were assured that any information they disclosed would be kept confidential.

The inclusion criteria for participants in this study required individuals to have a minimum of three years of teaching experience. This criterion was essential to ensure that participants possessed a substantial background in the educational field, providing a foundation for insightful contributions to the research on transformational leadership, cultural intelligence, and self-efficacy in relation to teachers' productivity. The duration of participant involvement in this study was intentionally designed to be concise, ranging from 10 to 15 minutes. Participants had the right to withdraw from the study at any point without

facing any consequences. In the event of withdrawal, the researcher respected the participant's decision and ceased data collection from that individual. This ensured the ethical treatment of participants and acknowledged their autonomy in participating in the study.

To uphold transparency and address any potential conflicts of interest, the researcher disclosed any affiliations, financial interests, or relationships that might have influenced the study's outcomes. This commitment to transparency fostered credibility and trust in the research process. The study prioritized the privacy and confidentiality of participants by implementing robust data protection measures. All collected data was anonymized and stored securely, with access restricted to authorized personnel only. Participants' personal information was kept confidential, ensuring their privacy throughout the research process.

Participants were recruited through a transparent and ethical process, clearly outlining the study's objectives and requirements. Informed consent was obtained from all participants before their involvement, detailing the nature of the study, potential risks, and benefits. A comprehensive risk assessment was conducted to identify and mitigate potential risks to participants. Additionally, participants were informed of potential benefits, both personal and societal, arising from their contribution to the study. This ensured that participants made informed decisions about their involvement. The study considered the broader community impact by disseminating research findings in accessible formats. A data-sharing plan was established, outlining the responsible and ethical sharing of study outcomes with relevant communities, stakeholders, and the wider academic field. This approach aimed to contribute positively to educational practices and policies.

Statistical Techniques

For problems 1 to 4, descriptive statistics such as mean and standard deviation were used to describe the variables in this study. For problem 5, Pearson product-moment correlation was utilized to determine the statistical significance of the relationship between participants' productivity and their assessment of their academic heads' transformational leadership, cultural intelligence, and self-efficacy. For problem 6, Multiple regression was used to determine which variable, singly or in combination, best predicted higher education faculties' productivity. For problem 7, a structural equation model was to be established to examine the comparative magnitude and strength of effects with the hypothesized models of the study and to find the best model that fits with higher education faculties' productivity using the indices with their corresponding standard values.

RESULTS AND DISCUSSION

Table 1

Summary of Level of Academic Heads' Transformational Leadership

Indicators	Mean	SD	Interpretation
Idealized influence	4.54	0.501	Excellent
Individual Consideration	4.52	0.485	Excellent
Inspirational Motivation	4.53	0.506	Excellent
Intellectual Stimulation	4.54	0.467	Excellent
Overall Mean	4.53	0.453	Excellent

The first statement of the problem investigated the level of academic heads' transformational leadership. With an overall mean of 4.53 and being interpreted as excellent with a standard deviation of 0.453, all four aspects of academic heads' transformational leadership—idealized influence, individual consideration, inspirational motivation, and intellectual stimulation indicators—were measured to be highly manifested by the academic heads. With an overall descriptive level of excellent academic heads' demonstration of transformational leadership for all four (4) dimensions perceived by the higher education faculty in Region 10—Northern Mindanao, it is worthy of taking note that the Full Range Leadership Model developed by Avolio and Bass (2004) places significant emphasis on transformational leadership, which is considered the most effective and impactful leadership style (Bass & Riggio, 2006). According to Berkovich (2016), the transformational leadership theory has emerged as one of the most influential models in education in recent decades. Kouzes and Posner (2017) propose that transformational leadership is based on the principles of inspiring and motivating individuals toward a shared vision to attain goals at an elevated standard. Hooper and Bernhardt (2016) describe transformational leadership as a framework for fostering collaboration among school stakeholders toward a common objective. Embracing the tenets of transformational leadership enables school or academic leaders to foster a positive and cooperative atmosphere that encourages innovation, creativity, and a sense of belonging. This, in turn, has a significant positive impact on teachers and contributes to the overall success of educational institutions (Hooper & Bernhardt, 2016).

Table 2*Summary of Higher Education Faculty's Cultural Intelligence Level*

Indicators	Mean	SD	Interpretation
Behavioral	4.55	0.484	Very High Cultural Intelligence
Cognitive	3.90	0.744	High Cultural Intelligence
Metacognitive	4.44	0.544	High Cultural Intelligence
Motivational	4.39	0.569	High Cultural Intelligence
Overall	4.31	0.464	High Cultural Intelligence

Table 2 presents a comprehensive overview of cultural intelligence within the higher education faculty, showcasing an overall calculated mean of 4.31 or high and a standard deviation of 0.464. This means higher education faculty possess the skills and attitudes necessary for navigating a culturally diverse academic environment. It implies a commitment to inclusivity, effective communication, and adaptability in teaching, and it suggests a positive impact on student success and the overall quality of the educational experience. According to Deady (2020) that teachers possessing a high level of cultural intelligence may use cultural references to teach information, skills, and attitudes while also empowering students politically, morally, and socially. Additionally, the research conducted by Kaya (2022) has shown that cultural intelligence is essential for teachers to interact effectively with students from diverse backgrounds, and it is positively correlated with global citizenship.

Table 3*Summary of Higher Education Faculty's Self-Efficacy*

Indicators	Mean	SD	Interpretation
Classroom Management	4.61	0.408	Very High Self-Efficacy
Instructional Strategies	4.62	0.385	Very High Self-Efficacy
Student Engagement	4.59	0.416	Very High Self-Efficacy
Overall Mean	4.60	0.357	Very High Self-Efficacy

The third statement of the problem measured the level of the higher education faculty's self-efficacy. The table revealed that higher education faculty were highly efficacious in all three dimensions of teachers' self-efficacy. The overall mean self-efficacy level among higher education faculty is 4.60, with a standard deviation of 0.357, reflecting a very high level of confidence in their instructional abilities. The finding suggests a strongly shared belief in their competence, contributing to

a cohesive and confident teaching environment within higher education.

According to Wettstein et al. (2021), teachers with high self-efficacy beliefs are more likely to persist when dealing with challenging students. Teachers with higher self-efficacy are more likely to manage the classroom effectively (Tschannen-Moran et al., 2001; Poulou et al., 2019), show higher instructional quality (Holzberger et al., 2013), use more differentiated instruction and constructivism (Suprayogi et al., 2017), develop challenging lessons (Deemer, 2004; Poulou et al., 2019), use classroom management and instructional methods to encourage student autonomy, and keep students on task (Chao et al., 2017; Miller et al., 2017).

Table 4
Summary of Level of Higher Education Faculty's Productivity

Indicators	Mean	SD	Interpretation
Professional Development	4.40	0.589	Productive
Producing Instructional Tools	4.56	0.452	Highly Productive
Research and Publication	3.42	1.012	Moderately Productive
Community Service	4.42	0.645	Productive
Overall Mean	4.20	0.548	Productive

The fourth statement of the problem investigated the level of productivity of higher education faculty. Overall, the higher education faculty exhibits a commendable level of productivity, as reflected in its overall mean score of 4.20. This value, interpreted as indicative of productivity, is accompanied by a standard deviation of 0.548. This implies that the faculty members are deemed to be effectively and efficiently engaged in their academic and professional activities.

Most higher education institutions have roles and obligations agreed upon in advance between their faculty members, which include teaching, research, and service responsibilities (Gibson et al., 2014). High productivity in these areas is essential for faculty members to meet these obligations and contribute positively to their institutions. The National Research Council (2012) suggests that improved productivity metrics in higher education may yield insights that might improve institutional or systemic ways of teaching. Accurate measurements can help institutions and policymakers identify areas for improvement and allocate resources more effectively. Moreover, Guraya and Chen (2019) underscored that faculty development programs have been shown to enhance faculty

vitality, teaching, assessment, research, and professional competence, ultimately improving the educational environment.

The fifth problem of this study explored the potential correlation between higher education faculty's productivity and the independent variables of transformational leadership, cultural intelligence, and self-efficacy. The findings reveal that thirteen constructs and subconstructs of the independent variables have a significant relationship with higher education faculty productivity.

Table 5

Correlation Analysis of Higher Education Faculty's Productivity and Transformational Leadership of Academic Heads, Cultural Intelligence, and Self-Efficacy

Variables	Correlation Coefficient	P-Value	Interpretation
Transformational Leadership	0.129**	0.004	Significant
Idealized influence	0.058	0.199	Not Significant
Individual Consideration	0.127**	0.004	Significant
Inspirational Motivation	0.135**	0.002	Significant
Intellectual Stimulation	0.158**	0.000	Significant
Cultural Intelligence	0.390**	0.000	Significant
Behavioral	0.175**	0.000	Significant
Cognitive	0.251**	0.000	Significant
Metacognitive	0.335**	0.000	Significant
Motivational	0.470**	0.000	Significant
Self-Efficacy	0.482**	0.000	Significant
Classroom Management	0.426**	0.000	Significant
Instructional Strategies	0.376**	0.000	Significant
Student Engagement	0.474**	0.000	Significant

**Correlation is significant at the 0.01 level (2-tailed).

The finding suggests a positive correlation between transformational leadership exhibited by academic heads and the productivity of higher education faculty. In other words, higher levels of transformational leadership among academic heads are associated with increased productivity among faculty members. Transformational leaders inspire their followers to have a shared vision of targeted goals and standards of performance defined by the organization and also facilitate them in achieving them (Anderson & Wilson, 2017; Khan et al., 2020). School

leaders with transformational leadership styles are helpful and dedicated leaders who encourage teachers through constructive criticism and guidance in both personal and professional life to drive them toward successful completion of tasks (Barnová et al., 2022; Kareem et al., 2023). Transformative leaders drive their followers to go above and beyond their self-interests for the organization's welfare; transformational leaders can transmit a deeper understanding and respect for each member's opinion (Rafique et al., 2022).

On the other hand, there was a positive relationship between academic heads' consideration and the productivity of higher education faculty. This only means that when academic leaders give significant attention to individual considerations, the productivity of faculty in higher education also increases. According to Vijian and Wahab (2020), individual consideration refers to the process of understanding each employee, sharing their problems, and addressing their individual needs. A study found that individualized consideration has a positive influence on employee performance, including recognition of employees to improve productivity (Chebon, 2019). Khalil and Sahibzadah (2017) stated that leaders possessing this individualized consideration leadership style foster a sense of belonging and engagement among employees, leading to improved job satisfaction, performance, and productivity.

Meanwhile, higher education faculty's productivity is significantly correlated with academic heads' inspirational motivation. Since the Pearson r value is positive, it means that when the inspirational motivation from academic heads increases, the productivity of higher education faculty is observed to increase as well. This suggests that the motivational support provided by academic heads has a positive impact on the productivity of faculty members in higher education. Inspirational motivation is the process through which leaders inspire and motivate their subordinates to improve their performance and attain organizational objectives (Rafique et al., 2022; Vijian & Wahab, 2020).

Moreover, the analysis of the correlation between the productivity of higher education faculty and the intellectual stimulation demonstrated by their academic heads yields noteworthy findings. This implies that higher levels of intellectual stimulation from academic heads are associated with increased productivity among faculty members, highlighting the importance of fostering an intellectually stimulating academic environment for enhanced professional output. Intellectual stimulation is the term used to characterize a leader's efforts to inspire and encourage his team members to be more adaptable and use new technological ways in light of changing circumstances. It could be beneficial to go over the signs and obstacles that arise at each stage (Bednall et al., 2018; Khan et al., 2020). Leaders who act as intellectual stimulators solicit ideas, opinions,

and feedback from their followers to promote originality, experimentation, and creativity (Rafique et al., 2022). Leaders of intellectual simulation promote problem-solving, alternative thinking, and critical thinking (Puni et al., 2018; Rafique et al., 2022).

The observed correlation between higher education faculty's productivity and cultural intelligence is significant at the level of significance of 0.05. This means that faculty members with higher levels of cultural intelligence tend to exhibit increased productivity. The study of Gistituati et al. (2020) examined various factors that influence teacher work productivity, including cultural intelligence. The results showed that cultural intelligence was one of the factors that positively influenced teacher productivity. According to research by Alifuddin and Widodo (2022), teachers who possess greater levels of cultural intelligence may exhibit improved interpersonal and work-related behaviors, which may have an impact on their productivity.

The observed correlation between higher education faculty's productivity and behavioral cultural intelligence is significant at the level of significance of 0.05. This means that faculty members with higher levels of behavioral and cultural intelligence tend to exhibit increased productivity. Behavioral cultural intelligence refers to the capacity to use knowledge and exhibit a wide variety of verbal and nonverbal behaviors that are appropriate for a given culture (Van Dyne et al., 2012; Pogosyan, 2022). A study conducted by Panahi (2015) found a significant correlation between the behavior of cultural intelligence and teachers' effectiveness, emphasizing the importance of teacher education in enhancing their capabilities and, consequently, improving teacher effectiveness.

The correlation between the productivity of higher education faculty and their cognitive cultural intelligence is notably substantial, reaching statistical significance at 0.05. This finding signifies a clear and strong connection, indicating that as cognitive cultural intelligence rises, so does the productivity of higher education faculty. Cognitive cultural intelligence describes the wide scope of general knowledge individuals hold about cultures (Van Dyne et al., 2012; Pogosyan, 2022). According to Ang et al. (2007), teachers with greater cognitive cultural intelligence demonstrated higher cultural adaptability, resulting in improved student outcomes.

Additionally, there is a statistically significant correlation between the productivity of higher education faculty and their metacognitive cultural intelligence. The positive result of the Pearson r value indicates a direct relationship, signifying that as metacognitive cultural intelligence experiences increase, faculty productivity also exhibits a corresponding increase. Metacognitive CQ refers to a person's mental capability to acquire and evaluate cultural knowledge. Higher

metacognitive CQ individuals are more self-conscious, aware of others, and aware of their surroundings. They also monitor and modify their interpretations and judgments in response to information obtained from cross-cultural encounters (Van Dyne et al., 2012; Pogosyan, 2022). A study by Ang et al. (2020) found that metacognitive cultural intelligence is one of the four aspects of cultural intelligence that is positively correlated with teachers' interpersonal communication, psychological capital, and organizational citizenship behavior.

The correlation analysis reveals a substantial and statistically significant relationship between the productivity of higher education faculty and motivational cultural intelligence, suggesting that as motivational cultural intelligence improves, faculty productivity tends to rise. Motivational Cultural Intelligence, as defined by Hartini et al. (2019), pertains to an individual's inclination, assurance, and enthusiasm to adapt to a culturally diverse setting. Motivational cultural intelligence serves as a catalyst, prompting individuals to invest effort and energy into understanding different cultures and navigating unfamiliar cultural environments (Ang & Van Dyne, 2008; Hartini et al., 2019).

The table reveals that there is a significant connection between the productivity of higher education faculty and their self-efficacy, as supported by a statistically significant correlation. The positive nature of the Pearson r value suggests a direct relationship, indicating that as the level of self-efficacy increases among faculty members, there is a corresponding and proportional increase in their productivity. An important factor in achieving productivity is self-efficacy (Hidayat et al., 2018). A study conducted by Türkoğlu et al. (2017) found that teacher self-efficacy in student engagement, instructional strategies, and classroom management correlated positively with job quality, opportunities for development and promotion, working conditions, and interpersonal relationships.

The reported positive relationship between self-efficacy in classroom management and the productivity of higher education faculty signifies a meaningful connection. This means that as the level of continuance self-efficacy in classroom management rises, there is a corresponding increase in the productivity of faculty members. High teacher self-efficacy in classroom management is associated with teacher perseverance in challenging tasks, and it is important to determine which classroom management practices are ultimately used by teachers with high self-efficacy (Mitchell, 2019).

Furthermore, the study demonstrates a meaningful correlation between the productivity of higher education faculty and their self-efficacy in instructional strategies. This implies that there exists a positive and statistically significant correlation between productivity and self-efficacy in instructional strategies among higher education faculty, suggesting that fostering confidence in instructional

approaches can contribute to enhanced productivity in this academic context. The study conducted by Türkoğlu et al. (2017) found that teachers' self-efficacy in instructional strategies correlated positively with job quality, opportunities for development and promotion, working conditions, interpersonal relationships, and organizational setting.

The correlation analysis reveals a remarkable connection between the productivity of higher education faculty and their self-efficacy in student engagement. This finding implies that as faculty members' self-efficacy in student engagement rises, there is a concurrent increase in their overall productivity. Shahzad and Naureen (2017) observed a strong positive correlation between academic achievement and teacher self-efficacy in their study, indicating that teachers who have greater levels of self-efficacy are more likely to support their students' success. Focusing on building teachers' self-efficacy in student engagement can help improve the overall learning experience for students and lead to higher levels of achievement (Lu & Mustafa, 2021).

Lastly, there is no association between the productivity of higher education faculty and academic heads' idealized influence. Despite existing evidence suggesting a statistically significant relationship between these variables, the result aligns with the findings of Ogola et al. (2017), which also found no correlation between idealized influence and employee performance and productivity. This implies that while idealized influence may serve to inspire and motivate teachers within Philippine higher education institutions, it may not necessarily translate into increased productivity. As such, it is essential for academic leaders and administrators in these institutions to recognize that other factors beyond idealized influence may play a more significant role in enhancing faculty productivity. Consequently, efforts to improve productivity should encompass a holistic approach that considers various aspects of organizational culture, support mechanisms, and resource allocation tailored to the specific context of higher education in the Philippines.

Table 6
The Variables that Best Predict Higher Education Faculty's Productivity

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig	
	B	Std. Error	Beta			
(Constant)	.550	.254		2.166	.031	
Motivational Intelligence	Cultural	.293	.040	.305	7.242	.000
Efficacy in Engagement	Student	.294	.069	.223	4.275	.000
Efficacy in Classroom Management		.220	.067	.164	3.300	.001
R=0.565 ^c		R ² =0.319	R ² Adjusted: 0.315	f value=77.479		
p-value=.000 ^d						

Equation:

$$Y = 0.550 + 0.293X_1 + 0.294X_2 + 0.220X_3$$

Where:

- Y' = Productivity
- X₁ = Motivational Cultural Intelligence
- X₂ = Efficacy in Student Engagement
- X₃ = Efficacy in Classroom Management

On the sixth problem, multiple linear regression was used to establish that various factors strongly and significantly influence higher education faculty productivity. The model had three predictors of faculty productivity.

Based on the regression model, motivational cultural intelligence positively predicts higher education faculty productivity. The capacity to focus attention and energy on understanding and navigating cross-cultural circumstances is known as motivational cross-cultural intelligence (CQ). People with high motivational CQ are typically drawn to cross-cultural encounters and possess the self-assurance necessary to handle them well (Van Dyne et al., 2012; Pogosyan, 2022). When someone has a high motivational CQ, they are confident in their capacity to perform well in a variety of contexts (Badru, 2022; Singelis et al., 1995; Van Dyne & Raver, 2012). Studies have indicated that those with high motivational CQ have excelled in contexts with a diverse global population (Badru, 2022; Osman-Gani & Hassan, 2018).

Meanwhile, teachers' self-efficacy in student engagement contributes to increased productivity. This means that teachers who possess a strong belief in their ability to effectively engage students also exhibit higher levels of productivity. This implies teachers' confidence in their capacity to connect with and involve students in the learning process has a positive correlation with their overall productivity. Self-efficacy for instructional strategies reflects the perceived capability to use alternate methods in teaching and assessment (Tschannen-Moran & Hoy, 2001; Perera et al., 2019). Shahzad and Naureen (2017) observed a strong positive correlation between academic achievement and teacher self-efficacy in their study, indicating that teachers who have greater levels of self-efficacy are more likely to support their students' success. Focusing on building teachers' self-efficacy in student engagement can help improve the overall learning experience for students and lead to higher levels of achievement (Lu & Mustafa, 2021). Additionally, Hattie (2017) also performed a meta-analysis involving several studies. She concluded that teacher self-efficacy is relevant in predicting overall productivity since it significantly affects student results.

Finally, self-efficacy in terms of classroom management positively predicts productivity. This means that teachers who possess a high level of self-efficacy in terms of classroom management are likely to exhibit increased productivity. In essence, the confidence teachers have in their ability to effectively manage their classrooms is positively associated with their overall productivity. Research has shown that teachers with high self-efficacy are successful in student engagement, instructional strategies, and classroom management, which are all factors that can contribute to increased productivity (Türkoğlu et al., 2017). Furthermore, teachers' self-efficacy is an important indicator of how they perceive their ability to influence positive learning and behavior outcomes, which can directly impact productivity in the classroom (Mitchell, 2019).

The seventh and last statement of the problem identified the best model fit that explains higher education faculty's productivity. Through the application of structural equation modeling, five distinct models were hypothesized, rigorously tested, and validated to find the best-fitting model for the higher education faculty's productivity. Hence, in accordance with the acceptable indices and standard units, it can be confidently asserted that Model 5 surpasses others, standing out as the most suitable representation for higher education faculty's productivity. The best model fit that explains higher education faculty's productivity is Structural Model 5, which is anchored on transformational leadership, self-efficacy, and cultural intelligence. This model is called Apdian's Model of Productivity Among Faculty in State Universities.

Figure 1
Best Model for Higher Education Faculty's Productivity

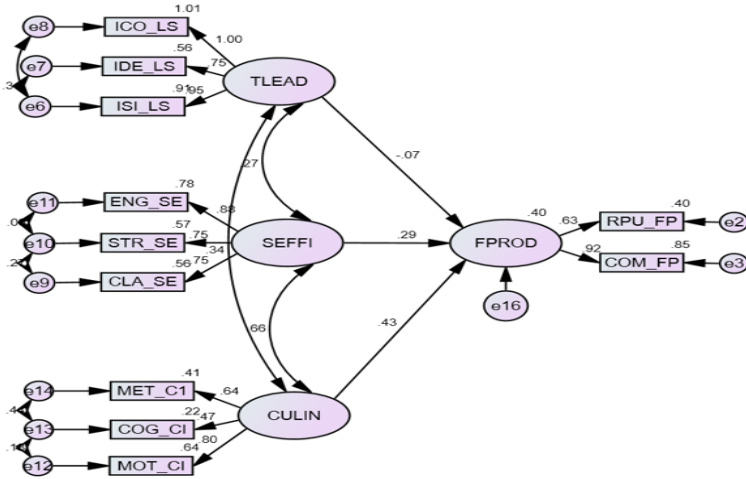


Figure 2
Apdian's Model of Productivity Among Faculty in State Universities

Legend:

- | | |
|---|--|
| TLEAD = Transformational Leadership | BEH_CI = Behavioral CQ |
| IDE_LS = Idealized Influence | COG_CI = Cognitive CQ |
| IMO_LS = Inspirational Motivation | MET_C1 = Metacognitive CQ |
| ISI_LS = Intellectual Simulation | MOT_CI = Motivational CQ |
| ICO_LS = Individual Consideration | FPROD = Faculty's Productivity |
| SEFFI = Self-Efficacy | PDE_FP = Professional Development |
| ENG_SE = Efficacy in Student Engagement | PIT_FP = Producing Instructional Tools |
| STR_SE = Efficacy in Instructional Strategies | RPU_FP = Research and Publication |
| CLA_SE = Efficacy in Classroom Management | COM_FP = Community Service |
| CULIN = Cultural Intelligence | |

Among the given theories, the Multicultural Competency Model by Derald Wing Sue (2003) and the Social Cognitive Theory developed by Albert Bandura (1986) are likely to support the claim that there is a positive connection between cultural intelligence and faculty productivity, specifically in the context of teachers. The Multicultural Competency Model emphasizes the importance of developing cultural competence, which includes awareness, knowledge, and skills to interact effectively with people from diverse cultural backgrounds. Teachers with higher cultural intelligence, as per this model, are more likely to create inclusive and supportive learning environments and connect with students and colleagues from various cultural backgrounds. The Social Cognitive Theory developed by Albert Bandura (1986) emphasizes the role of self-efficacy in motivating and regulating human behavior. Teachers with high levels of cultural intelligence are more likely to set challenging goals, remain resilient in the face of obstacles, and exert greater effort, all of which are conducive to increased productivity (Alibakhshi et al., 2020; Hamdan & Coloma, 2022).

CONCLUSIONS

The academic heads of state universities exhibit exemplary transformational leadership, showcasing an outstanding commitment to fostering positive change. This not only sets a high standard for leadership within educational institutions but also implies a potentially positive impact on the overall academic environment, encouraging innovation, collaboration, and adaptability. Meanwhile, the higher education faculty's demonstration of high levels of cultural intelligence and self-efficacy suggests a workforce that is well-equipped to navigate diverse and dynamic educational landscapes. This not only enhances the quality of teaching, research, and overall productivity but also implies an increased capacity to engage effectively with diverse student populations and address the evolving needs of a globalized education system.

Higher education faculty demonstrate high levels of productivity, particularly in producing instructional tools for effective teaching. Additionally, they exhibit significant engagement in professional development activities and contribute actively to community service initiatives. While their commitment to research and publication is notable, it is observed at a moderate level compared to their pronounced productivity in producing instructional tools, professional development, and community service. This emphasizes the multifaceted role of faculty members in not only advancing scholarly knowledge but also in enhancing the educational experience and fostering community connections.

Transformational leadership, individual consideration, inspirational

motivation, and intellectual stimulation exhibited by academic heads, along with the cultural intelligence (CQ) of faculty—comprising behavioral, cognitive, metacognitive, and motivational dimensions—were found to be significantly correlated with higher education faculty's productivity. Additionally, faculty's self-efficacy in various domains, including classroom management, instructional strategies, and student engagement, also demonstrated substantial correlations with faculty productivity.

Three key predictors significantly contribute to higher education faculty productivity. Among these factors is motivational cultural intelligence, which exhibits the strongest positive impact on the productivity of higher education faculty. Additionally, a positive correlation is observed between efficacy in student engagement and higher education faculty productivity. Lastly, efficacy in classroom management is identified as another influential factor positively affecting the productivity of higher education faculty. The importance of motivational cultural intelligence, efficacy in student engagement, and adept classroom management in fostering increased productivity among higher education faculty members.

The best model fit to explain higher education faculty productivity is Structural Model 5, which is anchored on transformational leadership, self-efficacy, and cultural intelligence. This model is referred to as Apdian's Model of Productivity Among Faculty in State Universities.

TRANSLATIONAL RESEARCH

The result of the study could be translated through various channels to ensure widespread dissemination and impact. The outcomes could be crafted into a scholarly journal article suitable for international publications. Additionally, they could be condensed into digestible formats for newsletters and shared on radio programs, social media platforms, and other media outlets to reach diverse audiences and inform them about the study's implications. Moreover, these findings could serve as a basis for revisiting and refining administrative and institutional policies within higher education settings. Both external stakeholders, such as policymakers and internal stakeholders, including faculty members and administrators, could collaborate to translate these insights into comprehensive administrative policies and intervention programs. Such initiatives could foster greater engagement among prospective internal stakeholders and professionals, thereby catalyzing interest in further research and development in the field. Furthermore, the research outcomes could be shared directly with current and aspiring academic leaders and faculty members to elucidate administrative policies and practices in the workplace. By doing so, the study's findings could contribute to enhancing organizational clarity and effectiveness within higher education institutions.

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