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# Level and Influence of Transformational Leadership on the Job Satisfaction of Public Elementary School Teachers in Mallig, Isabela

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## Abstract

This study investigated the influence of school heads' transformational leadership on the job satisfaction of public elementary school teachers in Mallig, Isabela. Guided by Bass's Transformational Leadership Theory and Herzberg's Two-Factor Theory, the study determined the levels of transformational leadership and job satisfaction, as well as the relationship between them. A descriptive quantitative research design was employed, involving 106 teacher-respondents from sixteen public elementary schools. Data were collected using validated survey instruments and analyzed through descriptive and inferential statistics. Results revealed high levels of transformational leadership and high job satisfaction among teachers across all dimensions. Findings further showed a significant positive relationship between transformational leadership and teacher job satisfaction, indicating that supportive, visionary, and empowering leadership behaviors contribute to increased teacher morale and fulfillment. The study concludes that transformational leadership is a critical determinant of teacher satisfaction in rural school settings and recommends strengthening leadership development programs that promote motivation, professional growth, and collaborative school culture.

**Keywords:** transformational leadership, job satisfaction, school heads, public elementary teachers, leadership behavior

## 1. Introduction

Effective education depends greatly on the competence, motivation, and satisfaction of teachers. In many education systems today, school leadership is recognized as an important factor affecting teacher performance and school outcomes. Transformational leadership, which focuses on vision, motivation, innovation, and support for staff, has been linked to positive organizational change in schools. Researchers note that transformational leaders can inspire teachers, model good practices, and create an environment that encourages professional growth (Bass & Riggio, 2006; Leithwood et al., 2004).

Previous studies have shown that transformational leadership in schools contributes to improved teacher motivation, engagement, and job satisfaction. School leaders who communicate well, involve teachers in decision-making, and respect their viewpoints are more likely to build trust and commitment within the school community. These leadership behaviors can strengthen school performance, especially in basic education settings, and several studies recommend leadership development programs to enhance these skills among school heads.

Transformational leadership includes four dimensions: idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration. In schools, these leadership practices can influence teacher morale and workplace atmosphere, which may also affect student learning. Among the many outcomes associated with leadership, teacher job satisfaction has received significant attention. Job satisfaction refers to how teachers feel about their work, responsibilities, and workplace conditions. Teachers who are satisfied are more likely to

remain in the profession, perform better, and participate actively in school initiatives, while dissatisfaction may result in stress, low morale, and turnover.

In the Philippine public education system, especially in rural areas like Mallig, Isabela, school conditions and challenges may affect teacher satisfaction. Teachers in rural locations may face limited resources, large workloads, and diverse learner needs. In such contexts, the leadership of the school head becomes important in supporting teacher well-being. DepEd has emphasized the importance of leadership development through policies such as the Philippine Professional Standards for School Heads (DepEd Order No. 24, s. 2020), which align with transformational leadership principles.

Although many international and national studies support the positive effect of transformational leadership on teacher satisfaction, there is limited research focusing on rural Philippine schools. Most studies tend to focus on urban or more developed areas, and may not reflect the experiences of teachers in municipalities such as Mallig. This study addresses this gap by examining the level of transformational leadership among public elementary school heads in Mallig, Isabela, and how it influences teacher job satisfaction. The findings may support leadership improvement plans, inform policy decisions, and help build school environments that promote commitment and professional growth among teachers.

## **2. Statement of the Problem**

This study sought to determine the influence of the transformational leadership style of school heads on the job satisfaction of elementary school teachers in Mallig, Isabela.

Specifically, it aimed to answer the following questions:

(1) What is the profile of the respondents in terms of:

- a. Age;
- b. Sex;
- c. Civil Status;
- d. Position;
- e. High Educational Attainment;
- f. Years in Service;
- g. Latest Performance Rating; and
- h. Trainings attended?

(2) What is the level of transformational leadership exhibited by school heads as perceived by teachers in terms of:

- a. Inspirational Motivation;
- b. Idealized Influence;
- c. Intellectual Stimulation; and
- d. Individualized Consideration?

(3) What is the level of job satisfaction among elementary school teachers in terms of:

- a. Security;
- b. Work Environment;
- c. Job Responsibility; and
- d. Community Attachments/Linkages?

(4) Is there a significant relationship between the transformational leadership style of school heads and teachers' job satisfaction?

(5) Is there a significant relationship between the teachers' job satisfaction and their profile?

## **3. Methodology**

### *3.1 Research Design*

This study used a descriptive quantitative research design to determine the relationship between the transformational leadership of school heads and the job satisfaction of teachers in public elementary schools in Mallig, Isabela. This design allowed the researcher to gather numerical data, describe existing conditions, and identify relationships among variables without manipulating them. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to present the level of transformational leadership and job

satisfaction. Inferential statistics were applied to determine the significance of relationships found in the study.

### *3.2 Locale of the Study*

The study was conducted in selected public elementary schools in Mallig, Isabela under the Schools Division of Isabela. The municipality consists of both urban and rural barangays and has several schools varying in size and teacher population. The locale represents conditions commonly found in rural Philippine schools such as limited instructional resources and varied teaching demands, making it suitable for examining leadership practices and teacher satisfaction.

### *3.3 Respondents*

A total of 106 public elementary school teachers from sixteen schools participated in the study. Total population sampling was used because the entire teacher population in the selected schools was manageable and could all be included. The distribution of respondents across schools ranged from 4 to 12 teachers per school, ensuring broad representation across the municipality. The respondents reflected variations in age, sex, educational attainment, years of experience, and other profile variables needed for the study.

### *3.4 Research Instrument*

Data were gathered using a three-part questionnaire adapted from Pasayon and Tantiado (2023) and the Minnesota Satisfaction Questionnaire (1967).

- **Part I** collected the demographic profile of respondents such as age, sex, civil status, length of service, and educational attainment.
- **Part II** measured the perceived level of transformational leadership of school heads based on the dimensions of inspirational motivation, idealized influence, intellectual stimulation, and individualized consideration.
- **Part III** measured the job satisfaction of teachers in terms of security, work environment, job responsibility, and community linkages.

### *3.5 Validation and Pilot Testing*

Before distribution, the questionnaire was subjected to expert validation by the adviser, graduate school administrators, and selected field experts to ensure clarity and relevance. A pilot test was conducted among teachers outside the study area. Their feedback was used to refine the wording, organization, and content of the instrument. Suggestions from validators were incorporated before final printing and distribution.

### *3.6 Scoring of the Instrument*

Responses were rated using a five-point Likert Scale.

For transformational leadership:

- 4.21–5.00 = Strongly Agree
- 3.41–4.20 = Agree
- 2.61–3.40 = Neutral
- 1.81–2.60 = Disagree
- 1.00–1.80 = Strongly Disagree

For job satisfaction:

- 4.21–5.00 = Very Satisfied
- 3.41–4.20 = Satisfied
- 2.61–3.40 = Undecided
- 1.81–2.60 = Not Satisfied
- 1.00–1.80 = Very Not Satisfied

### *3.7 Documentary Analysis*

Permission was requested from the school heads to obtain teachers' Latest Performance Ratings (LPR) for School Year 2025–2026. The ratings served as supplementary information to validate the analysis. All data were handled confidentially, and only aggregated results were reported in compliance with the Data Privacy Act of 2012.

### *3.8 Data Gathering Procedure*

The researcher first sought approval from the Schools Division Office and then from the school heads of the

participating schools. Orientation sessions were conducted to explain the study, its purpose, and ethical considerations. Respondents signed informed consent forms before answering the questionnaires. Teachers were given approximately one week to complete the instruments. Completed questionnaires were retrieved personally or through designated focal persons. Data were then encoded, organized, and checked for completeness before analysis.

### 3.9 Statistical Treatment

Data were tallied, tabulated, and analyzed using the following statistical tools:

- 1) Frequency and Percentage  
Used to describe the profile of respondents.
- 2) Weighted Mean and Standard Deviation  
Used to determine the level of transformational leadership and job satisfaction.
- 3) t-test  
Used to determine significant differences and to test the hypotheses at the 0.05 level of significance.
- 4) Pearson Product–Moment Correlation Coefficient (Pearson r)

This statistical tool was used to determine the significant relationship between the transformational leadership style of school heads and the job satisfaction of teachers.

All computations followed conventional formulas and were subjected to the required significance levels for decision making.

## 4. Results and Discussion

### I. Respondents' Profile

Table 1. Frequency and Percentage Distribution of Respondents by Age

Age	Frequency	Percentage
23 - 30	22	21%
31 - 40	31	29%
41-50	35	33%
51-above	18	17%
<b>Total</b>	<b>106</b>	<b>100%</b>

Table 1 presents the frequency and percentage distribution of the respondents according to age. The data show that the largest group of teacher-respondents falls within the age bracket of 41 to 50 years, comprising 35 individuals or 33% of the total population. This is closely followed by those aged 31 to 40, accounting for 31 respondents or 29%. Together, these two age groups represent 62% of the respondents, indicating that the majority of teachers in the public elementary schools of Mallig, Isabela are in their mid-career to late-career stages. Meanwhile, 22 respondents or 21% belong to the younger age group of 23 to 30 years, reflecting a notable proportion of early-career teachers in the division. The smallest group, comprising 18 respondents or 17%, falls within the 51 and above category, representing senior teachers who may be nearing retirement or occupying advanced teaching or leadership positions.

This age distribution suggests several important implications for leadership and teacher management in the schools studied. The presence of a diverse teaching workforce—ranging from newly hired to veteran educators—implies the need for differentiated leadership approaches. Younger teachers may require more mentoring, encouragement, and skill development opportunities, whereas more experienced teachers may benefit from empowerment, recognition, and involvement in decision-making processes. These differences highlight the relevance of transformational leadership, which is characterized by adaptability and responsiveness to individual needs through behaviors such as individualized consideration and intellectual stimulation.

Furthermore, the fact that a large portion of the teaching force is in the mid-career stage underscores the importance of leadership strategies that sustain motivation and prevent professional stagnation. Transformational leaders can address this by fostering continuous learning, innovation, and collaboration within the teaching community. The presence of senior teachers also points to the need for strategic succession planning and capacity-building among younger staff, ensuring leadership continuity and institutional stability.

In terms of job satisfaction, generational differences may influence what teachers value in the workplace. For instance, younger teachers may prioritize growth opportunities and supportive feedback, while older teachers may place more value on recognition, autonomy, and job security. Understanding these generational expectations can help school heads adjust their leadership style to better motivate and retain teachers across age groups.

The varied age profile of the respondents reflects a dynamic and multi-generational teaching workforce. This diversity presents both challenges and opportunities for school leaders, emphasizing the need for transformational leadership practices that can meet the distinct needs of teachers at different stages of their careers, thereby enhancing both job satisfaction and institutional effectiveness.

Table 2. Frequency and Percentage Distribution of Respondents by Sex

<b>Age</b>	<b>Frequency</b>	<b>Percentage</b>
Male	15	14%
Female	91	86%
<b>Total</b>	<b>106</b>	<b>100%</b>

Table 2 presents the frequency and percentage distribution of the respondents according to sex. The data reveal a significant disparity between the number of male and female teacher-respondents. Out of the 106 participants, 91 or 86% are female, while only 15 or 14% are male. This clearly indicates that the teaching workforce in the participating public elementary schools in Mallig, Isabela is predominantly composed of female teachers.

This finding is consistent with national and global trends, where females often make up the majority of teaching staff in elementary education. The dominance of female respondents in this study may reflect local hiring practices, historical employment trends in the municipality, or specific deployment strategies by the Department of Education in the region. It could also suggest that instructional and classroom roles in Mallig are largely filled by women, which is an important demographic context to consider when analyzing perceptions of leadership and job satisfaction.

The gender imbalance has several implications for leadership practices and institutional dynamics. Since the majority of teachers are female, school heads may need to consider how gender perspectives influence leadership preferences, communication styles, and job satisfaction factors. For example, studies have suggested that male and female educators may differ in how they respond to leadership behaviors, especially in areas such as emotional support, collaborative decision-making, and recognition.

Additionally, the underrepresentation of male teachers highlights the need to promote gender inclusivity in recruitment, retention, and professional development initiatives. School leaders, particularly those practicing transformational leadership, must ensure that leadership practices are equitable and supportive of both male and female teachers, regardless of the numerical composition of the staff.

The distribution of respondents by sex emphasizes the predominantly female teaching workforce in the study locale. This demographic characteristic provides a relevant lens for interpreting how transformational leadership is perceived and how it influences teacher job satisfaction within the unique context of Mallig, Isabela.

Table 3. Frequency and Percentage Distribution of Respondents by Civil Status

<b>Age</b>	<b>Frequency</b>	<b>Percentage</b>
Single	16	15%
Married	90	85%
<b>Total</b>	<b>106</b>	<b>100%</b>

Table 3 presents the frequency and percentage distribution of the respondents based on their civil status. Out of the 106 teacher-respondents, a majority of 90 or 85% are married, while only 16 or 15% are single. This clearly indicates that the teaching population in the public elementary schools of Mallig, Isabela is predominantly composed of married individuals.

This demographic profile suggests that most of the respondents likely carry dual roles—both as educators and as family members responsible for household and parental duties. Married teachers may have greater responsibilities outside the workplace, which can influence their perceptions of leadership support, work-life

balance, and overall job satisfaction. Their needs and expectations from school leaders may differ from those of single teachers, especially in areas such as workload management, time flexibility, and emotional support.

The predominance of married respondents may also be reflective of the teacher demographic nationwide, where many educators view teaching as a long-term profession that provides job stability conducive to family life. From a leadership perspective, transformational school heads must be aware of the unique challenges that married teachers face and adopt supportive practices such as open communication, recognition, and professional development opportunities that accommodate their work-life balance.

Meanwhile, the presence of single teachers, though smaller in proportion, should not be overlooked. These teachers may be in the early stages of their careers and may prioritize different aspects of job satisfaction, such as growth opportunities, mentorship, and leadership engagement. Transformational leaders must ensure that their strategies address the diverse needs of teachers, regardless of civil status.

The civil status distribution of respondents shows a teaching workforce largely composed of married individuals, which has implications for how leadership styles are perceived and how job satisfaction is influenced. School heads are encouraged to implement inclusive leadership practices that consider the varying personal and professional needs of both married and single teachers to promote overall satisfaction and effectiveness within the teaching force.

Table 4. Frequency and Percentage Distribution of Respondents by Highest Educational Attainment

Highest Educational Attainment	Frequency	Percentage (%)
Bachelor's Degree Graduate	31	29%
Master's Degree (With Units)	38	36%
Master's Degree Graduate	31	29%
With PhD Degree units	3	3%
Doctorate Degree	5	5%
<b>Total</b>	<b>106</b>	<b>100%</b>

Table 4 presents the frequency and percentage distribution of the respondents based on their highest educational attainment. Among the 106 teacher-respondents from public elementary schools in Mallig, Isabela, the largest group—38 teachers or 36%—have earned units in a master's degree program but have not yet completed it. This is followed by 31 respondents or 29% who are bachelor's degree graduates, and another 31 respondents (29%) who are master's degree holders. A smaller portion of the respondents, 3 teachers or 3%, have begun pursuing a doctoral degree (with PhD units), while 5 respondents or 5% have already completed a doctorate degree.

This distribution reflects a relatively high level of academic advancement among the teaching population. Nearly two-thirds (68%) of the respondents have either completed or are currently pursuing graduate-level studies. This demonstrates the strong commitment of teachers in Mallig to continuous professional development and academic growth. It also aligns with the Department of Education's thrust to encourage and support higher qualifications among teaching personnel through merit-based promotions and incentives.

The presence of teachers with advanced degrees has several implications. First, it suggests that the respondents are likely to possess deeper content knowledge and pedagogical competence, which may positively influence how they assess and respond to school leadership. Teachers with graduate-level education may have higher expectations of their school heads, particularly in terms of leadership effectiveness, innovation, and support for professional growth. Consequently, transformational leadership practices—such as intellectual stimulation and individualized consideration—may be especially important in fostering job satisfaction among this academically qualified group.

Furthermore, school heads must recognize and leverage the expertise of these highly educated teachers by engaging them in instructional leadership roles, mentoring programs, curriculum planning, and research initiatives. Doing so not only promotes teacher satisfaction and empowerment but also strengthens the instructional quality within the school.

The small but notable presence of doctorate holders (5%) and PhD candidates (3%) indicates a growing trend toward advanced educational leadership qualifications. This can be a valuable asset to the school system, particularly if these individuals are tapped for leadership development, training, and capacity-building activities within their respective schools or districts.

The distribution of respondents by educational attainment highlights a well-qualified teaching workforce in Mallig. This demographic context underscores the importance of transformational leadership approaches that challenge, support, and inspire continuous professional development—factors that are likely to influence job satisfaction and teacher retention positively.

Table 5. Frequency and Percentage Distribution of Respondents by Years in Service

<b>Length of Service</b>	<b>Frequency</b>	<b>Percentage (%)</b>
1 – 10 years	47	44%
11 – 20 years	36	34%
21 years and above	23	22%
<b>Total</b>	<b>106</b>	<b>100%</b>

Table 5 presents the frequency and percentage distribution of respondents based on their years in government service. Among the 106 teacher-respondents, the largest group—47 teachers or 44%—have served between 1 to 10 years, indicating that a significant portion of the teaching workforce in Mallig, Isabela is composed of early-career to mid-career educators. Following this group are 36 respondents or 34%, who have rendered 11 to 20 years of service, while 23 respondents or 22% have 21 years and above of teaching experience, representing the most seasoned and veteran teachers.

This distribution reflects a diverse range of professional experiences among the respondents. The relatively high number of teachers with less than 10 years of service suggests that the district continues to attract and retain new educators. These teachers may still be in the process of adjusting to the demands of the profession and developing their instructional identity. On the other hand, the presence of teachers with over two decades of experience signifies a mature group of professionals who can serve as mentors and role models within their schools.

The implications of this distribution are significant, particularly in relation to leadership practices and job satisfaction. Teachers at different stages in their careers may have varying needs and expectations from their school heads. For instance, novice and early-career teachers may require more direct guidance, encouragement, and support in classroom management and professional development. In contrast, mid-career and veteran teachers may seek more autonomy, recognition, and opportunities for leadership roles.

Transformational leadership plays a critical role in addressing these diverse needs. Through individualized consideration and intellectual stimulation, school heads can provide differentiated support that aligns with the unique experiences of teachers across all career stages. Moreover, transformational leaders can empower long-serving teachers by involving them in decision-making processes, mentoring programs, and school improvement initiatives—further enhancing their job satisfaction and sense of professional fulfillment.

The years-in-service profile of the respondents demonstrates a healthy mix of novice, mid-career, and experienced teachers. This variety emphasizes the importance of flexible, responsive, and visionary leadership that not only nurtures beginning teachers but also maximizes the contributions of those with long-standing service. School heads in Mallig, Isabela, must therefore adopt transformational leadership strategies that accommodate this generational and experiential diversity to cultivate a motivated, satisfied, and high-performing teaching force.

Table 6. Frequency and Percentage Distribution of Respondents by Performance Rating

<b>Length of Service</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Very Satisfactory	37	35%
Outstanding	69	65%
<b>Total</b>	<b>106</b>	<b>100%</b>

Table 6 presents the frequency and percentage distribution of respondents based on their most recent performance rating. Out of the 106 teacher-respondents, a majority of 69 teachers or 65% received an Outstanding performance rating, while 37 teachers or 35% were rated Very Satisfactory. This distribution suggests that the teaching personnel in the public elementary schools of Mallig, Isabela consistently demonstrate high levels of professional competence and fulfill their roles effectively according to the standards set by the

Department of Education's Results-Based Performance Management System (RPMS).

The predominance of "Outstanding" ratings indicates that a substantial portion of the respondents exceeds performance expectations in areas such as lesson planning, classroom instruction, learner assessment, and participation in school-based initiatives. This high-performance level may be reflective of a motivated teaching workforce, strong commitment to teaching excellence, and possibly the influence of supportive leadership in their schools.

From a leadership perspective, the performance ratings of teachers can be viewed as an indirect reflection of school heads' leadership effectiveness. Teachers are more likely to perform well and achieve higher ratings when they receive adequate support, recognition, professional development opportunities, and instructional guidance—all of which are characteristic of transformational leadership. School heads who practice this leadership style foster a positive school climate, promote collaboration, and motivate teachers to go beyond basic expectations.

Moreover, the presence of a high-performing teaching staff reinforces the need for sustained investment in leadership development. School heads should continue to encourage professional growth, innovation, and data-driven instruction to maintain and even improve these performance levels. Recognizing and rewarding high performance also contributes significantly to teacher job satisfaction, which is a key variable in this study.

The performance rating profile of the respondents indicates a highly competent teaching force in Mallig's public elementary schools. This high level of performance not only reflects the teachers' dedication and professionalism but also highlights the critical role of leadership in enabling such outcomes. It emphasizes the importance of adopting transformational leadership practices that sustain high standards, nurture excellence, and support the overall growth and satisfaction of educators.

Table 7. Frequency and Percentage Distribution of Respondents by Highest Trainings Attended

<b>Highest Level of Training</b>	<b>Frequency</b>	<b>Percentage (%)</b>
Local	69	65%
National	16	15%
International	21	20%
<b>Total</b>	<b>100%</b>	<b>100%</b>

Table 7 presents the distribution of respondents according to the highest level of training they have attended. The data show that the majority of the respondents—69 teachers or 65%—have participated in local-level trainings, such as school-based or district-led seminars and workshops. A smaller portion, 16 respondents or 15%, have attended national-level trainings, while 21 respondents or 20% have had the opportunity to engage in international training programs.

The dominance of local training attendance among teachers reflects the accessibility and frequency of school- or division-initiated professional development activities. These trainings are often aligned with the needs and goals of local education stakeholders, making them relevant and practical. However, the relatively limited participation in national and international trainings suggests potential constraints related to funding, availability of slots, or dissemination of opportunities beyond the local level.

Participation in national and especially international trainings is significant, as it indicates exposure to broader educational trends, innovative pedagogies, global best practices, and diverse learning contexts. The fact that 20% of the respondents have already accessed international training programs is encouraging and points to the professional advancement and upward mobility of some educators in Mallig, Isabela.

From a leadership standpoint, transformational school heads can play a pivotal role in encouraging and facilitating training participation beyond the local level. Leaders who inspire, motivate, and invest in their teachers' growth often create an environment where continuous learning is valued and supported. Providing access to higher-level trainings—especially those that challenge conventional methods and promote reflective teaching—can contribute to both teacher empowerment and job satisfaction.

The training levels also imply potential variations in teacher confidence, instructional strategies, and openness to innovation. Those with national or international exposure may have higher expectations from leadership, particularly in areas of professional support and intellectual stimulation. Thus, school heads must adopt leadership practices that recognize these differences and provide differentiated support that aligns with teachers' professional development experiences.

While most teachers have been trained locally, a significant portion has experienced advanced learning at the national and international levels. This highlights the importance of transformational leadership in promoting equitable access to professional development and cultivating a school culture that values continuous learning, innovation, and global-mindedness.

## II. School Heads Transformational Leadership Styles

Table 8. School Heads Transformational leadership styles in terms of Inspirational Motivation

Indicators	Mean	Interpretation
1) Influences teachers to be optimistic in facing the future.	4.42	Strongly Agree
2) Gives recognition for the works of the teachers in the form of personal praises in which encourages them to carry out their tasks properly.	4.42	Strongly Agree
3) Tells the success stories of colleagues to motivate teachers to be successful.	4.39	Strongly Agree
4) Encourages teachers to work hard professionally and to practice new approaches in implementing teaching and learning activities.	4.50	Strongly Agree
5) Communicates the goals that must be achieved by teachers clearly which enables them in getting good results in teaching.	4.43	Strongly Agree
6) Provides special time for teachers to discuss how to complete assignments properly.	4.38	Strongly Agree
<b>OVERALL MEAN</b>	<b>4.42</b>	<b>Strongly Agree</b>

Table 8 presents the teachers' perceptions of their school heads' transformational leadership style specifically in terms of Inspirational Motivation. All six indicators received mean scores above 4.30 on a 5-point Likert scale, resulting in an overall mean of 4.42, which falls under the interpretation of "Strongly Agree". This indicates that the respondents perceive their school heads as highly effective in inspiring, motivating, and energizing their teaching staff toward achieving shared goals.

Among the indicators, the highest mean score (4.50) was attributed to the statement, "Encourages teachers to work hard professionally and to practice new approaches in implementing teaching and learning activities," highlighting that school heads play a significant role in promoting professional growth and pedagogical innovation. Other indicators such as providing personal recognition (4.42), sharing success stories of colleagues (4.39), and clear communication of goals (4.43) also received strong agreement, indicating a consistent leadership behavior that fosters collective enthusiasm and goal alignment. Even the indicator with the lowest mean score — "Provides special time for teachers to discuss how to complete assignments properly" — still yielded a high mean of 4.38, which reinforces the conclusion that school heads actively support and motivate their staff.

These findings are consistent with Bass and Riggio's (2006) framework, which describes Inspirational Motivation as one of the four core components of transformational leadership. Leaders who exhibit this quality are able to communicate high expectations, use symbols and emotional appeals, and articulate a compelling vision of the future that inspires commitment and engagement among followers. When school heads practice inspirational motivation, they do not merely manage tasks—they cultivate purpose and passion among teachers.

The implications of these findings are profound. Teachers who perceive their leaders as inspirational are more likely to experience higher job satisfaction, stronger professional commitment, and increased willingness to go beyond their contractual duties (Nguni, Slegers, & Denessen, 2006). In turn, this can positively impact classroom instruction and student achievement. Furthermore, leaders who communicate clear goals and recognize teacher efforts contribute to the establishment of a positive school culture, where collaboration, trust, and innovation are encouraged (Leithwood & Jantzi, 2005).

These findings also suggest that transformational school heads in Mallig, Isabela are effectively creating a vision-driven teaching environment that is not only goal-oriented but also emotionally supportive. This aligns with the findings of Sahin (2011), who emphasized that teachers respond more positively to principals who lead with a sense of purpose and acknowledge their contributions. The consistent use of inspirational strategies by school heads fosters a sense of ownership and purpose among teachers, which may lead to greater teacher retention, resilience, and adaptability, especially in rural or resource-constrained settings.

The high ratings across all indicators under Inspirational Motivation confirm that school heads in the study exhibit strong transformational leadership practices. These behaviors play a crucial role in fostering teacher

engagement, professional growth, and a culture of continuous improvement. The findings affirm that effective leadership — rooted in inspiration and motivation — is essential for building a thriving school community.

Table 9. School Heads Transformational leadership styles in terms of Idealized Influence

<b>Indicators</b>	<b>Mean</b>	<b>Interpretation</b>
1) Formulates and carry out tasks in accordance with the vision and mission of the study program concurrently to develop the insight of teachers.	4.47	Strongly Agree
2) Reminds teachers to respect each other with fellow teachers.	4.47	Strongly Agree
3) Provides examples of good behavior in the school environment.	4.45	Strongly Agree
4) Instills a high commitment to the teachers towards the vision of the study program.	4.41	Strongly Agree
5) Reduces penalty towards any mistakes as a professional effort.	4.29	Strongly Agree
6) Gives freedom to teacher in carrying out the task given.	4.44	Strongly Agree
<b>OVERALL MEAN</b>	<b>4.23</b>	<b>Strongly Agree</b>

Table 9 presents the respondents' perception of their school heads' Idealized Influence, one of the four key dimensions of transformational leadership. With an overall mean of 4.42, interpreted as "Strongly Agree," the data indicate that teachers perceive their school heads as exemplary role models who demonstrate integrity, professional ethics, and commitment to shared values.

Two indicators — "Formulates and carry out tasks in accordance with the vision and mission of the study program concurrently to develop the insight of teachers" and "Reminds teachers to respect each other with fellow teachers" — received the highest mean scores of 4.47, showing that school leaders are viewed as vision-driven and respectful of professional relationships. These traits are essential in establishing trust, credibility, and unity within the school environment. The indicator "Provides examples of good behavior in the school environment" also scored high (4.45), emphasizing that school heads are perceived as ethical and behaviorally consistent, which reinforces their influence on staff conduct.

Other items such as "Gives freedom to teacher in carrying out the task given" (4.44) and "Instills a high commitment to the teachers towards the vision of the study program" (4.41) further reinforce the notion that transformational leaders empower teachers and promote shared values and ownership of school goals. Even the lowest-rated indicator, "Reduces penalty towards any mistakes as a professional effort," still scored a relatively high mean of 4.29, suggesting that school heads promote a culture of learning and professional growth over punitive approaches.

These findings support the theoretical framework of Bass and Riggio (2006), who describe Idealized Influence as the degree to which leaders are admired, respected, and trusted. Leaders exhibiting this trait consistently uphold ethical standards, inspire confidence, and act in ways that align with the organizational vision. In schools, this manifests in leaders who are not only directive but also morally grounded and emotionally intelligent, serving as role models for both teachers and learners.

When school heads lead by example and promote mutual respect, they foster an environment of psychological safety and collegiality — factors that have been shown to correlate positively with teacher job satisfaction and professional engagement (Leithwood & Jantzi, 2005). Moreover, when teachers feel trusted and are granted autonomy in carrying out their duties, they are more likely to be innovative, committed, and intrinsically motivated (Nguni, Slegers, & Denessen, 2006).

These behaviors also align with findings by Sahin (2011), who observed that leaders who demonstrate strong idealized influence tend to elevate teachers' organizational commitment and reduce feelings of hierarchy or bureaucracy. The consistent modeling of professional conduct and vision-driven leadership enhances school coherence, empowers teachers to emulate the same values, and fosters a culture of shared leadership.

The results indicate that school heads in Mallig, Isabela strongly demonstrate Idealized Influence, reinforcing their roles as ethical leaders and institutional anchors. Their ability to model professionalism, foster mutual respect, and uphold collective values contributes significantly to a positive school environment and to the overall satisfaction and performance of their teaching staff.

Table 10. School Heads Transformational leadership styles in terms of Intellectual Stimulation

Indicators	Mean	Interpretation
1) Gives books or other references to teachers as a reference in self-development of teachers.	4.11	Agree
2) Provides opportunities for teachers to conduct education and training.	4.43	Strongly Agree
3) Provides freedom of opinion for teachers regarding policies in higher education.	4.37	Strongly Agree
4) Involves teachers in assessing the activities in higher education.	4.38	Strongly Agree
5) The head of the study program has a way of solving complex problems.	4.29	Strongly Agree
6) Challenges teachers' creativity and innovativeness especially in the teaching and learning process.	4.39	Strongly Agree
<b>OVERALL MEAN</b>	<b>4.33</b>	<b>Strongly Agree</b>

The respondents' perception of their school heads' Intellectual Stimulation, one of the core dimensions of transformational leadership, is displayed in Table 10. The overall mean score of 4.33, interpreted as "Strongly Agree," indicates that school heads in the selected public elementary schools of Mallig, Isabela are perceived to effectively foster critical thinking, innovation, and professional growth among their teaching staff.

Among the indicators, the highest mean score (4.43) was assigned to the item "Provides opportunities for teachers to conduct education and training," suggesting that school heads actively support professional development and continuous learning. Other items also received high ratings, including "Challenges teachers' creativity and innovativeness especially in the teaching and learning process" (4.39) and "Involves teachers in assessing the activities in higher education" (4.38). These ratings reflect a leadership culture that values participation, critical reflection, and collaborative decision-making.

Additionally, the item "Provides freedom of opinion for teachers regarding policies in higher education" scored 4.37, indicating that teachers feel empowered to express their ideas and perspectives — a key component of intellectual stimulation. Meanwhile, "The head of the study program has a way of solving complex problems" scored 4.29, highlighting teachers' confidence in their school heads' problem-solving capabilities. The only indicator that received a slightly lower rating was "Gives books or other references to teachers as a reference in self-development," which garnered a 4.11 mean and an interpretation of "Agree." This may indicate that while intellectual support is present, there is room for improvement in providing tangible learning materials to further enrich teachers' knowledge and skills.

According to Bass and Riggio (2006), intellectual stimulation is evident when leaders encourage followers to question assumptions, think independently, and seek creative solutions to challenges. In the educational setting, this means that school heads foster a professional culture where teachers are encouraged to innovate, reflect critically, and adapt new strategies for improved teaching and learning. By empowering teachers to engage in training, express opinions, and participate in institutional assessment, school heads are building a more reflective and forward-thinking teaching workforce.

These findings are consistent with the study of Leithwood and Jantzi (2005), who emphasized that transformational leaders who stimulate intellectual growth contribute to school improvement and teacher satisfaction, particularly in dynamic and evolving learning environments. When school heads challenge teachers' thinking and involve them in institutional decision-making, it enhances not only professional efficacy but also the sense of ownership and motivation among educators.

Furthermore, intellectual stimulation has been shown to be a predictor of teacher innovation and adaptability — critical competencies in 21st-century education (Nguni, Slegers, & Denessen, 2006). Teachers who are intellectually challenged and supported by their leaders are more likely to embrace new teaching strategies, integrate technology effectively, and respond proactively to curriculum reforms.

The high overall mean under this domain indicates that the school heads in Mallig exhibit strong intellectual stimulation as a leadership trait. They are seen as leaders who not only solve problems effectively but also encourage professional growth and open-mindedness among their teachers. This leadership behavior is crucial in cultivating a culture of innovation and reflective practice in schools, which ultimately contributes to enhanced teacher performance and learner outcomes.

Table 11. School Heads Transformational leadership styles in terms of Individualized Consideration

Indicators	Mean	Interpretation
1) Knows the skills and expertise of teachers and gives them praises and appreciation to the work results or their achievements.	4.42	Strongly Agree
2) Accepts suggestions and asks for the opinion regarding the leadership in school.	4.38	Strongly Agree
3) Carries out or following up on the suggestions submitted.	4.29	Strongly Agree
4) Gives attention by listening to the complaints of teachers for mutual comfort.	4.29	Strongly Agree
5) Guides and trains teachers personally if they have problems.	4.42	Strongly Agree
6) Knows the needs of teachers for the flow of the teaching and learning activities in the classroom.	4.42	Strongly Agree
<b>OVERALL MEAN</b>	<b>4.37</b>	<b>Strongly Agree</b>

The respondents' assessment of their school heads' practice of Individualized Consideration, a critical component of transformational leadership, is displayed in Table 11. With an overall mean of 4.37, interpreted as "Strongly Agree," the findings reveal that teachers perceive their school heads as leaders who are attentive to their individual needs, concerns, and professional development. This suggests that school leaders in Mallig, Isabela are not only seen as institutional heads but also as empathetic mentors who offer personal support and recognition.

Three indicators received the highest mean ratings of 4.42, specifically: "Knows the skills and expertise of teachers and gives them praises and appreciation to the work results or their achievements," "Guides and trains teachers personally if they have problems," and "Knows the needs of teachers for the flow of the teaching and learning activities in the classroom." These ratings suggest that school heads are perceived as highly responsive to individual teacher capabilities and challenges, which fosters trust, morale, and professional motivation.

The indicators "Accepts suggestions and asks for opinions regarding the leadership in school" (4.38) and "Carries out or follows up on the suggestions submitted" (4.29) show that teachers feel their voices are heard and valued in school decision-making. Meanwhile, the item "Gives attention by listening to the complaints of teachers for mutual comfort" (4.29) reinforces the perception that school leaders offer emotional support and maintain open lines of communication.

These findings are well supported by Bass and Riggio (2006), who emphasize that Individualized Consideration involves paying special attention to each follower's needs for achievement and growth by acting as a coach or mentor. In educational settings, this means that transformational school heads offer differentiated support to their teachers, listen actively to their concerns, and help them navigate professional and personal challenges. Such practices are known to strengthen teachers' organizational commitment and improve workplace well-being (Nguni, Slegers, & Denessen, 2006).

Additionally, Leithwood and Jantzi (2005) argue that school leaders who practice individualized consideration foster a culture of mutual respect, which is critical for sustaining long-term teacher engagement. This leadership trait is especially relevant in public schools where teachers face diverse classroom challenges and benefit from personalized guidance and encouragement.

The implication is clear: when school heads know and support the unique needs of each teacher, it leads to improved job satisfaction, greater professional efficacy, and stronger interpersonal relationships within the school. Teachers who feel understood and appreciated are more likely to remain committed to their roles, collaborate with colleagues, and invest in student learning. Furthermore, such leadership creates a nurturing school climate where trust and morale thrive — essential ingredients for educational excellence and innovation.

The high scores across all indicators under this domain confirm that school heads in the studied schools exhibit strong individualized consideration, contributing to a leadership style that is not only effective but also compassionate and human-centered. This aspect of transformational leadership is crucial in retaining motivated teachers, cultivating positive teacher-leader relationships, and fostering a supportive school culture.

### III. Level of Job Satisfaction among Elementary School Teachers

Table 12. Job Satisfaction in Terms of Security (Salary, Benefits, Rewards Performance, Recognition, Promotion)

Indicators	Mean	Interpretation
<i>On my present job ... this is how I feel about...</i>		
1) The amount of pay for the work I do.	3.92	Satisfied
2) The chance to be reclassified / be promoted	4.03	Satisfied
3) The benefits I receive are good as most other organizations can offer.	4.01	Satisfied
4) When all my efforts are not rewarded the way it should be.	3.70	Satisfied
5) The way my job provides a secured future	3.97	Satisfied
6) The way I get a full credit for the work I do	4.09	Satisfied
7) Being able to take pride in a job well done.	4.22	Very Satisfied
8) The way how my pay compares with that for a similar jobs in other companies	3.71	Satisfied
9) The way how my pay compares with other coworkers in school.	4.00	Satisfied
10) The opportunities for advancement.	3.96	Satisfied
<b>OVERALL MEAN</b>	<b>3.60</b>	<b>Satisfied</b>

The respondents' level of job satisfaction in terms of security, encompassing factors such as salary, benefits, recognition, promotion opportunities, and performance rewards, is illustrated in Table 12. The overall mean score of 3.60, interpreted as "Satisfied," indicates that while teachers in Mallig, Isabela are generally content with these aspects of their job, there remains potential for improvement—especially in terms of equitable compensation and recognition.

Among the indicators, the highest mean score (4.22) was given to "Being able to take pride in a job well done," which received a "Very Satisfied" rating. This suggests that intrinsic motivation plays a vital role in teacher satisfaction. Teachers derive a strong sense of fulfillment from their accomplishments, regardless of external rewards. Additionally, the item "The way I get full credit for the work I do" scored a high 4.09, indicating that respondents feel fairly acknowledged for their contributions. Similarly, items related to promotion opportunities (4.03) and benefits received (4.01) received relatively high satisfaction ratings.

Conversely, the lowest mean was observed in "When all my efforts are not rewarded the way they should be" (3.70), and "How my pay compares with that for similar jobs in other companies" (3.71), which may point to underlying concerns about compensation equity and merit-based reward systems. Although the ratings still fall under "Satisfied," these results suggest a perceived gap between effort and tangible rewards.

These findings align with Herzberg's Two-Factor Theory, which posits that job satisfaction is influenced by two categories: hygiene factors (e.g., salary, job security, working conditions) and motivators (e.g., achievement, recognition, advancement) (Herzberg, Mausner, & Snyderman, 1959). In this study, hygiene factors such as salary and benefits scored relatively well, though not exceptionally high, while intrinsic motivators like pride in work contributed the most to overall satisfaction. This underscores the importance of balancing extrinsic rewards with personal and professional fulfillment.

From a leadership perspective, the implication is clear: transformational leaders who recognize and reward performance, provide career growth opportunities, and advocate for equitable compensation are likely to cultivate higher job satisfaction among teachers. This is supported by Bogler (2001), who found that teachers' satisfaction is significantly shaped by perceived administrative support, particularly in terms of recognition, autonomy, and professional advancement.

Furthermore, Leithwood and Jantzi (2005) emphasized that transformational school heads can positively influence job satisfaction by communicating clear goals, providing fair evaluations, and encouraging professional growth. In rural settings such as Mallig, where teachers often work under resource limitations, consistent acknowledgment and meaningful rewards can greatly boost morale and retention.

The findings reveal that teachers are generally satisfied with job security components, but improvements in compensation, merit-based recognition, and comparative pay structures can further enhance their satisfaction. By integrating these considerations into school leadership strategies, particularly through transformational practices, school heads can foster a more motivated, committed, and stable teaching workforce.

Table 13. Job Satisfaction in Work Environment (Policies, Organizational Structures, Physical, Emotional)

Indicators	Mean	Interpretation
<i>On my present job... this is how I feel about...</i>		
1) The policies & practice towards employees of the school	4.15	Satisfactory
2) The way my immediate head & I understand each other.	4.24	Very Satisfactory
3) The spirit of cooperation among my co – workers	4.25	Very Satisfactory
4) The working conditions (heating, lighting, ventilation etc.)	3.97	Satisfactory
5) The way my co- workers are easy to make friends with,	4.24	Very Satisfactory
6) The way my immediate head trains his/ her subordinates,	4.12	Satisfactory
7) The feeling of accomplishment I get from the job,	4.19	Satisfactory
8) The way my immediate head takes care of the complaints of his / her employees,	4.11	Satisfactory
9) The pleasantness of the working conditions,	4.10	Satisfactory
10) The way my immediate provides help on hard problems.	4.12	Satisfactory
<b>OVERALL MEAN</b>	<b>4.15</b>	<b>Satisfactory</b>

Table 13 presents the respondents' level of job satisfaction in relation to their work environment, which includes institutional policies, interpersonal dynamics, physical conditions, and emotional climate. With an overall mean of 4.15, the results indicate that teachers in Mallig, Isabela are generally satisfied with their work environment. Several indicators, however, scored high enough to reach a "Very Satisfactory" level, suggesting areas of exceptional strength within the schools' internal culture and staff relations.

The highest mean scores were reported for "The spirit of cooperation among my co-workers" (4.25), "The way my immediate head and I understand each other" (4.24), and "The way my co-workers are easy to make friends with" (4.24). These results highlight the strong collegial relationships and interpersonal support present in the workplace. A positive social environment where colleagues collaborate and communicate well contributes significantly to job satisfaction and teacher retention, as supported by Dinham and Scott (2000), who emphasized that collegiality and administrative support are strong motivators for educators.

Slightly lower, yet still positive, mean ratings were recorded for indicators such as "The pleasantness of the working conditions" (4.10), "The way immediate heads provide help on hard problems" (4.12), and "The way immediate heads train subordinates" (4.12), reflecting satisfactory, but improvable, aspects of leadership and facilities. These indicate that while teachers feel supported, there remains room for further professional development and problem-solving assistance from school heads.

The lowest mean score in the set was "The working conditions (heating, lighting, ventilation, etc.)" at 3.97, although it still falls within the "Satisfactory" range. This may signal that physical infrastructure and classroom conditions are areas that could benefit from attention, especially in rural settings where resource limitations are common. According to Herzberg's Two-Factor Theory (1959), physical work conditions are considered hygiene factors—elements that, if inadequate, can contribute to dissatisfaction even if other motivational factors are strong.

These findings are echoed by the work of Leithwood and Jantzi (2005), who noted that supportive leadership and conducive working environments are essential for sustaining teacher morale and performance. Furthermore, transformational school leaders who foster emotional safety, fairness in policy implementation, and responsiveness to teacher concerns significantly influence teachers' perception of workplace quality (Bass & Riggio, 2006).

While the teaching environment in the studied schools is already favorable, enhancing physical conditions, deepening professional development efforts, and increasing responsiveness to teachers' formal complaints can lead to even higher levels of satisfaction. This is particularly important in promoting organizational commitment, reducing turnover, and improving instructional effectiveness.

The findings demonstrate that teachers feel emotionally and socially supported in their work settings, which is a hallmark of healthy school culture. Strengthening infrastructure and formal leadership responses will further

amplify these positive dynamics and create an environment that nurtures both teacher well-being and student achievement.

Table 14. Job Satisfaction in Job Responsibilities (Duties, Moral and Ethics)

Indicators	Mean	Interpretation
<i>On my present job... this is how I feel about...</i>		
1) The chance to “rub elbows” with important people,	4.08	Satisfactory
2) Being able to do things that don’t go against my conscience,	4.14	Satisfactory
3) The chance to do work that well suited to my abilities,	4.34	Very Satisfactory
4) The chance to tell other co-workers how to do things,	4.26	Very Satisfactory
5) The chance to try something different in my job,	4.25	Very Satisfactory
6) The chance to do something that makes use of my abilities,	4.29	Very Satisfactory
7) The chance to develop new and better ways to do the job,	4.32	Very Satisfactory
8) The chance to do things that don’t harm my other co- workers,	4.34	Very Satisfactory
9) The freedom to use my own judgment,	4.26	Very Satisfactory
10) The chance to the job without the feeling I am cheating anyone.	4.35	Very Satisfactory
<b>OVERALL MEAN</b>	<b>4.26</b>	<b>Very Satisfactory</b>

Table 14 shows the respondents’ perceptions of their job satisfaction in relation to job responsibilities, including alignment with personal values, the use of abilities, ethical performance, and autonomy. The overall mean score of 4.26, interpreted as “Very Satisfactory,” indicates that teachers in Mallig, Isabela derive a high level of fulfillment from their daily duties and the ethical nature of their work. This reflects a strong alignment between teachers’ responsibilities and their sense of personal purpose, professional competence, and moral satisfaction.

Several indicators scored particularly high. “The chance to do work that is well suited to my abilities” and “The chance to do things that don’t harm my other co-workers” both received a mean of 4.34, while “The chance to do the job without the feeling I am cheating anyone” scored the highest at 4.35. These items reflect a deeply rooted sense of moral integrity and ethical alignment, suggesting that teachers feel confident that their roles allow them to act in accordance with their personal and professional values. These results affirm Herzberg’s (1959) view that intrinsic motivators—such as responsibility, achievement, and moral fulfillment—are essential drivers of job satisfaction.

Moreover, high ratings for items like “The freedom to use my own judgment” (4.26) and “The chance to develop new and better ways to do the job” (4.32) indicate that teachers experience a substantial degree of autonomy and creativity, both of which are important predictors of sustained engagement and innovation in teaching (Dinham & Scott, 2000). These findings align with the assertions of Hackman and Oldham’s Job Characteristics Model (1976), which identifies autonomy, task significance, and skill variety as core job dimensions that lead to high internal motivation and job satisfaction.

Interestingly, even more socially-oriented indicators—such as “The chance to ‘rub elbows’ with important people” (4.08)—received positive ratings, though comparatively lower. This suggests that while social recognition is appreciated, it is not as critical to satisfaction as the opportunity to work ethically, competently, and independently.

The implication for school leaders is clear: teachers thrive when their job responsibilities are meaningful, morally affirming, and suited to their strengths. According to Bass and Riggio (2006), transformational leaders who emphasize ethical conduct, empower staff through autonomy, and encourage professional experimentation contribute significantly to teachers’ sense of purpose and long-term job satisfaction. In the context of rural schools like those in Mallig, such leadership approaches are particularly important for sustaining teacher morale amidst resource constraints.

The data show that teachers are highly satisfied with their professional duties, especially when these responsibilities allow for ethical practice, use of personal judgment, and the development of new strategies. This domain of job satisfaction serves as a cornerstone for professional commitment and instructional quality and should be continuously supported through leadership that respects autonomy and cultivates moral purpose.

Table 15. Job Satisfaction in Community Attachments/ Linkages

Indicators	Mean	Interpretation
<i>On my present job ... this is how I feel about...</i>		
1) The chance to “rub elbows” with important people,	4.41	Very Satisfactory
2) Being able to do things that don’t go against my conscience,	4.40	Very Satisfactory
3) The chance to do work that well suited to my abilities,	4.46	Very Satisfactory
4) The chance to tell other co –workers how to do things,	4.40	Very Satisfactory
5) The chance to try something different in my job,	4.43	Very Satisfactory
6) The chance to do something that makes use of my abilities,	4.38	Very Satisfactory
7) The chance to develop new and better ways to do the job,	4.35	Very Satisfactory
8) The chance to do things that don’t harm my other co- workers,	4.36	Very Satisfactory
9) The freedom to use my own judgment,	4.42	Very Satisfactory
10) The chance to the job without the feeling I am cheating anyone	4.36	Very Satisfactory
<b>OVERALL MEAN</b>	<b>4.40</b>	<b>Very Satisfactory</b>

Table 15 reveals the level of job satisfaction of teachers in Mallig, Isabela in relation to community attachments and linkages, which reflect opportunities for collaboration, social interaction, ethical alignment, and the meaningful use of professional skills. The overall mean score of 4.40, interpreted as “Very Satisfactory,” strongly indicates that teachers feel deeply fulfilled in the aspects of their job that involve engaging with others, contributing meaningfully to their school communities, and exercising professional autonomy in ethically sound ways.

The highest-rated item, “The chance to do work that is well suited to my abilities” (4.46), demonstrates that teachers recognize a strong match between their personal competencies and the responsibilities entrusted to them. Likewise, items such as “The freedom to use my own judgment” (4.42) and “The chance to try something different in my job” (4.43) reflect that the teaching environment allows for creativity, decision-making, and innovative practice. These findings align with Hackman and Oldham’s Job Characteristics Model (1976), which identifies autonomy and skill variety as central to fostering internal work motivation and job satisfaction.

Moreover, the high rating for “Being able to do things that don’t go against my conscience” (4.40) and “The chance to do the job without the feeling I am cheating anyone” (4.36) illustrates the significance of ethical congruence in shaping teachers’ job satisfaction. This reinforces Herzberg’s (1959) Two-Factor Theory, which asserts that intrinsic factors such as achievement, recognition, and meaningful work are major drivers of satisfaction. Teachers are more engaged when their roles resonate with their personal values and when their work benefits others without causing harm—both socially and professionally.

Another notable item is “The chance to rub elbows with important people” (4.41), which suggests that teachers also value opportunities for networking and external collaboration, such as with parents, community leaders, and educational stakeholders. These linkages not only validate the teachers’ role in a broader social context but also strengthen the school-community relationship, which is essential for a thriving educational ecosystem (Epstein, 2001).

Transformational leadership practices, such as promoting participatory decision-making, recognizing individual talents, and fostering collaborative networks, can greatly reinforce job satisfaction in this domain. As Bass and Riggio (2006) note, transformational leaders develop stronger interpersonal bonds and inspire staff by aligning organizational goals with personal values and social purpose.

The very satisfactory responses across all indicators confirm that teachers in the district feel empowered, valued, and connected — both within the school and in the broader community. Their ability to contribute meaningfully, act ethically, and engage with others enhances not only their professional fulfillment but also the quality of education provided to learners. These results affirm the need for continued investment in teacher autonomy, ethical leadership, and strong school-community partnerships.

Table 16. Relationship Between Transformational Leadership Style and Teachers’ Job satisfaction

Variables	Pearson r	p-value	Interpretation
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Variables	Pearson r	p-value	Interpretation
Transformational Leadership Style & Teachers' Job Satisfaction	0.692	0.000	Significant Positive Relationship

The statistical result of the Pearson correlation analysis conducted to determine the relationship between the transformational leadership style of school heads and teachers' job satisfaction is reflected in Table 16. The computed Pearson r value of 0.692 indicates a strong positive correlation between the two variables. This means that as school heads exhibit higher levels of transformational leadership—characterized by idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration—teachers tend to report higher levels of job satisfaction.

Moreover, the p-value of 0.000, which is less than the 0.05 level of significance, confirms that the relationship is statistically significant. Therefore, the null hypothesis, which states that there is no significant relationship between the school heads' transformational leadership style and teachers' job satisfaction, is rejected.

This finding supports the works of Bass and Riggio (2006), who emphasized that transformational leaders positively influence organizational outcomes, including employee satisfaction and performance. It also aligns with the findings of Bogler (2001), who demonstrated that teachers under transformational leaders exhibit higher morale and a greater sense of professional fulfillment. In the context of Mallig, Isabela, this suggests that school leaders who empower, recognize, and support their teachers contribute significantly to a satisfied and motivated teaching force.

Table 17. Relationship Between Teachers' Job Satisfaction and Their Profile Variables

Profile Variable	Statistical Test	Test Value	p-value	Interpretation
Age	Pearson r	0.126	0.193	Not Significant
Sex	Point-biserial	0.092	0.325	Not Significant
Civil Status	Point-biserial	0.115	0.231	Not Significant
Educational Attainment	Spearman rho	0.216	0.026	<b>Significant</b>
Years in Service	Spearman rho	0.242	0.014	<b>Significant</b>
Performance Rating	Pearson r	0.289	0.004	<b>Significant</b>
Highest Training Attended	Spearman rho	0.187	0.048	<b>Significant</b>

Table 17 presents the results of statistical tests conducted to determine whether there is a significant relationship between teachers' job satisfaction and their profile variables. The results indicate that educational attainment ( $p = 0.026$ ), years in service ( $p = 0.014$ ), performance rating ( $p = 0.004$ ), and highest training attended ( $p = 0.048$ ) have statistically significant relationships with job satisfaction. This suggests that teachers with higher qualifications, more experience, stronger performance, and broader training exposure tend to report higher satisfaction levels in their profession.

On the other hand, the profile variables age ( $p = 0.193$ ), sex ( $p = 0.325$ ), and civil status ( $p = 0.231$ ) do not show significant relationships with job satisfaction. These findings imply that personal demographic characteristics may have limited influence on how satisfied a teacher feels about their job compared to professional qualifications and career-related experiences.

These results align with the study of Dinham and Scott (2000), who emphasized that factors such as professional growth, recognition, and achievement significantly influence teachers' job satisfaction, more than age or gender. Additionally, Herzberg's Two-Factor Theory supports this by classifying performance recognition and opportunities for advancement as motivators that lead to satisfaction.

## 5. Conclusion

Based on the results of the study, the following conclusions are drawn:

(1) School heads in Mallig, Isabela exhibit a high level of transformational leadership, particularly in the domains of inspirational motivation, individualized consideration, idealized influence, and intellectual

stimulation. Teachers strongly agree that their school heads provide clear direction, encourage professional growth, inspire confidence, and respond to individual needs, reflecting effective and ethical leadership behaviors.

(2) Teachers in the district report high levels of job satisfaction, especially in areas related to job responsibilities and community linkages. They find fulfillment in their roles, experience moral alignment with their work, and appreciate opportunities for creativity and collaboration. However, moderate satisfaction was noted in the area of job security—especially in salary, benefits, and promotional opportunities—indicating a need for systemic support beyond leadership practices.

(3) There is a significant and strong positive relationship between the transformational leadership style of school heads and teachers' job satisfaction. This confirms that when leaders demonstrate transformational qualities, teachers are more motivated, committed, and satisfied in their work. Leadership that is empowering, vision-driven, and ethically grounded enhances the professional well-being of educators.

(4) Among the profile variables, educational attainment, years in service, performance rating, and highest training attended were found to have a statistically significant relationship with job satisfaction. These suggest that the more experienced and professionally advanced teachers tend to exhibit higher satisfaction. In contrast, age, sex, and civil status showed no significant correlation with job satisfaction, implying that demographic characteristics may be less influential than professional ones.

(5) The findings reinforce the value of transformational leadership in school settings, particularly in rural and under-resourced contexts such as Mallig. Such leadership not only enhances teachers' morale but also contributes to a more motivated, innovative, and resilient teaching workforce.

(6) The success of educational institutions is highly dependent on the quality of leadership exercised by school heads. Transformational leadership is not only beneficial but essential in promoting teacher satisfaction and ensuring school effectiveness. Hence, there is a pressing need for capacity-building initiatives and leadership development programs that foster transformational qualities among educational leaders.

## **6. Recommendations**

(1) School leaders should continue to enhance and practice transformational leadership, especially in the areas of inspirational motivation, individualized support, and intellectual stimulation. They are encouraged to provide more recognition, model ethical behavior, involve teachers in decision-making, and support innovative practices to further elevate job satisfaction and school performance.

(2) Teachers should actively participate in professional development programs and leadership dialogues to strengthen their engagement and collaboration with school leaders. By being proactive contributors to school improvement, teachers can also help shape a more collegial and fulfilling work environment.

(3) The division office should design and implement regular leadership training programs focusing on transformational leadership for both current and aspiring school heads. Such capacity-building programs will reinforce leadership practices that directly contribute to teacher morale, retention, and school effectiveness.

(4) There should be increased budgetary and institutional support for teacher incentives, promotion systems, and access to national and international training. Improving job security factors—such as equitable compensation, career advancement, and benefits—will address the relatively lower satisfaction in these areas and promote professional growth.

(5) Conduct regular needs assessments to evaluate the alignment of teacher competencies, training needs, and job assignments. This will ensure that teachers are placed in roles that match their abilities and receive the necessary support to perform effectively.

(6) Similar studies may be conducted in different contexts—such as in high schools, private institutions, or across different regions—to determine whether the same trends hold true. Future researchers may also explore mediating variables such as organizational climate, teacher resilience, or student performance to further examine the impact of transformational leadership.

(7) Since job satisfaction and teacher engagement can be influenced by school-community relationships, it is recommended that stronger linkages and collaborations be developed between schools and local stakeholders. This can help sustain a more supportive and inclusive school environment.

## **7. Implications**

The findings of this study carry several important implications for educational leadership and teacher development:

### **1) Teacher Education and Professional Development:**

Programs preparing future school heads should integrate transformational leadership training to ensure leaders are equipped with skills that nurture teacher motivation and satisfaction.

## 2) School Leadership Practices:

The significant positive relationship between leadership and job satisfaction implies that school leaders must prioritize supportive, visionary, and empowering practices to create positive school environments.

## 3) Organizational Climate and School Culture:

Transformational leadership can strengthen school climate, resulting in enhanced teamwork, communication, and instructional quality.

## 4) Teacher Retention and Well-being:

Improved job satisfaction may reduce stress, burnout, and turnover, contributing to a more stable teaching workforce.

## 5) DepEd Policy and Training:

The results support the need for continuous leadership development aligned with DepEd's PPSSH and other national frameworks promoting instructional leadership.

## References

- Agistiawati, R., & Asbari, M. (2020). Pengaruh gaya kepemimpinan dan budaya organisasi terhadap kinerja guru. *Jurnal Pendidikan Tambusai*, 4(2), 1805–1811.
- Alonderiene, R., & Majauskaite, M. (2016). Leadership style and job satisfaction in higher education institutions. *International Journal of Educational Management*, 30(1), 140–164. <https://doi.org/10.1108/IJEM-08-2014-0106>
- Amri, S., et al. (2021). The influence of leadership and self-efficacy on performance. *International Journal of Social and Management Studies*, 2(3), 34–43.
- Asbari, M., Novitasari, D., et al. (2021). Effect of leadership on teacher performance. *International Journal of Social and Management Studies*, 2(2), 94–108.
- Avolio, B. J., & Bass, B. M. (2004). *Multifactor Leadership Questionnaire: Manual and sampler set* (3rd ed.). Mind Garden.
- Bass, B. M., & Avolio, B. J. (1995). *MLQ Multifactor Leadership Questionnaire*. Mind Garden.
- Bass, B. M., & Riggio, R. E. (2006). *Transformational leadership* (2nd ed.). Psychology Press.
- Bogler, R. (2001). The influence of leadership style on teacher job satisfaction. *Educational Administration Quarterly*, 37(5), 662–683. <https://doi.org/10.1177/00131610121969460>
- Burns, J. M. (1978). *Leadership*. Harper & Row.
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). SAGE Publications.
- Department of Education. (2020). *DepEd Order No. 24, s. 2020: National adoption and implementation of the Philippine professional standards for school heads*. <https://www.deped.gov.ph>
- Dhungana, N. (2020). Exploring the perception of headmasters' transformational leadership of the community secondary schools in Nepal. *American Journal of Educational Research*, 8(9), 633–642.
- Dinham, S., & Scott, C. (2000). Moving into the third, outer domain of teacher satisfaction. *Journal of Educational Administration*, 38(4), 379–396. <https://doi.org/10.1108/09578230010373633>
- Epstein, J. L. (2001). *School, family, and community partnerships: Preparing educators and improving schools*. Westview Press.
- Esogon, S. G. T., & Gumban, J. L. (2024). Transformational leadership of school heads in public elementary schools in Bacolod City, Philippines. *International Journal of Research and Innovation in Social Science*, 8(3s), 3244–3255.
- Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: Test of a theory. *Organizational Behavior and Human Performance*, 16(2), 250–279. [https://doi.org/10.1016/0030-5073\(76\)90016-7](https://doi.org/10.1016/0030-5073(76)90016-7)
- Herzberg, F., Mausner, B., & Snyderman, B. B. (1959). *The motivation to work* (2nd ed.). Wiley.
- Ingersoll, R. M. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal*, 38(3), 499–534. <https://doi.org/10.3102/00028312038003499>

- Johnson, B., & Christensen, L. (2020). *Educational research: Quantitative, qualitative, and mixed approaches* (7th ed.). SAGE Publications.
- Kamar, K., et al. (2020). Self-efficacy and performance: An Indonesian teacher context. *International Journal of Innovation, Creativity and Change*, 13(5), 450–462.
- Leithwood, K., & Jantzi, D. (2005). Transformational leadership. In B. Davies (Ed.), *The essentials of school leadership* (pp. 31–43). SAGE Publications.
- Leithwood, K., Seashore-Louis, K., Anderson, S., & Wahlstrom, K. (2004). *How leadership influences student learning*. The Wallace Foundation.
- Maesaroh, I., et al. (2020). Leadership competence of Indonesian principals. *International Journal of Innovation, Creativity and Change*, 13(8), 202–217.
- Magno, C., & Sembrano, J. (2008). Transformational leadership and job satisfaction of Filipino public school teachers. *Philippine Journal of Psychology*, 41(2), 103–120.
- Nguni, S., Slegers, P., & Denessen, E. (2006). Transformational and transactional leadership effects on teachers' job satisfaction, organizational commitment, and organizational citizenship behavior in primary schools: The Tanzanian case. *School Effectiveness and School Improvement*, 17(2), 145–177. <https://doi.org/10.1080/09243450600565746>
- Novitasari, D., & Asbari, M. (2021). The impact of transformational leadership on teacher innovation and performance. *International Journal of Social and Management Studies*, 2(2), 55–68.
- Panunciar, C. R. A., Madrigal, D. V., & Bual, J. M. (2024). Transformational leadership practices and work engagement among school heads: An explanatory sequential mixed method inquiry. *Technium Social Sciences Journal*, 62, 34.
- Pasayon, C. J. U., & Tantiado, R. C. (2023). Transformational leadership style of school heads and teachers' performance. *Transformational Leadership Style of School Heads and Teachers' Performance*, 125(1), 16.
- Pramono, R., et al. (2021). Effectiveness of educational leadership in Indonesia. *International Journal of Social Science and Human Research*, 4(2), 115–123.
- Purwanto, A., et al. (2019). The role of school principal leadership and teacher performance. *International Journal of Educational Management*, 33(2), 207–216.
- Robinson, V. M. J., Lloyd, C. A., & Rowe, K. J. (2008). The impact of leadership on student outcomes. *Educational Administration Quarterly*, 44(5), 635–674. <https://doi.org/10.1177/0013161X08321509>
- Sahin, S. (2011). The relationship between instructional leadership style and school culture (Izmir case). *Educational Sciences: Theory and Practice*, 11(4), 1920–1927. <https://files.eric.ed.gov/fulltext/EJ962677.pdf>
- Silitonga, M., et al. (2021a). Relationship between self-efficacy and innovation in teacher performance. *International Journal of Educational Studies in Social Sciences*, 1(1), 1–11.
- Silitonga, M., et al. (2021b). Self-efficacy and innovation as mediators of leadership behavior. *International Journal of Social and Management Studies*, 2(4), 212–229.
- Skaalvik, E. M., & Skaalvik, S. (2017). Teacher stress and teacher self-efficacy as predictors of engagement, emotional exhaustion, and motivation to leave the teaching profession. *Creative Education*, 8(12), 1990–2007. <https://doi.org/10.4236/ce.2017.812136>

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# Factors Contributing to Students' Loss of Interest in Learning: A Case Study of Secondary Schools in Butambala District, Uganda

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## Abstract

This study investigated the factors contributing to students' loss of interest in learning within secondary schools in Butambala District, Uganda. The research was motivated by declining academic performance and increasing student apathy in the region. Employing a qualitative case study design, data were collected through semi-structured interviews with headteachers, teachers, and students, alongside document review. The study identified three core factors: archaic pedagogical methods that stifle learner autonomy, dilapidated school environments that demotivate students, and socio-economic stressors that prioritize survival over education. The findings suggest that student disengagement is a systemic issue rooted in resource constraints and rigid instructional frameworks. It is recommended that the Ministry of Education and Sports (MoES) implement mandatory continuous professional development in student-centered pedagogies and increase capitation grants to improve infrastructure. Addressing these factors is critical to restoring interest and improving educational outcomes in Ugandan secondary schools.

**Keywords:** student disengagement, secondary education, pedagogy, Butambala District, learning motivation

## 1. Introduction

History of the Topic Globally, the phenomenon of student disengagement or loss of interest in learning has been a subject of educational concern since the industrialization of schooling. Historically, education systems were designed to transmit knowledge from the teacher to the passive student, a model often referred to as the "banking concept of education" (Freire, 1970). While this model served industrial economies, the advent of the information age shifted the focus towards critical thinking and active participation. In the East African context, the legacy of colonial education systems emphasized rote learning and examination success, often at the expense of intrinsic motivation (Mamdani, 2016). Following Uganda's independence in 1962, there were concerted efforts to reform the curriculum to be more relevant to local needs; however, the structural rigidities of teacher-centered instruction persisted. Over the last two decades, as Uganda embraced Universal Secondary Education (USE) in 2007, the surge in student enrollment was not matched by a corresponding shift in teaching methodologies or resources, leading to a historic drift in student engagement levels (Baine, 2019).

### 1.1 Context of the Study

The current educational landscape in Uganda is characterized by a paradox of increased access versus declining quality. In Butambala District, a predominantly rural area in the Central Region, secondary schools face unique challenges that exacerbate student disengagement. The district, while having a rich cultural heritage, struggles with high poverty levels and infrastructure deficits. Schools in Butambala range from private faith-based institutions to government-aided day schools. Recent monitoring reports by the District Education Officer indicate a worrying trend of student absenteeism and "silent dropping out," where students attend school

physically but are mentally absent (2022). The organizational problem is acute: teachers report that students display apathy, arrive late, and show little enthusiasm for class activities. This context is compounded by the aftermath of the COVID-19 pandemic, which widened the learning gap and left many students feeling disconnected from the academic routine (Kitooke, 2023). Within this institutional context, the loss of interest is not merely an academic issue but a socio-economic crisis threatening the future productivity of the youth in Butambala.

### *1.2 Justification of Key Concepts*

To understand this problem, three key concepts must be defined and justified: “Loss of Interest,” “Pedagogical Factors,” and “Socio-Economic Determinants.”

- 1) First, “Loss of Interest” is conceptualized not just as boredom, but as a psychological state of disengagement where the student no longer values the learning activity. According to Muweesi (2024), loss of interest is a form of academic withdrawal that precedes actual dropout. It is justified as a dependent variable because it is the visible symptom of underlying systemic failures.
- 2) Second, “Pedagogical Factors” refers to the methods, strategies, and interactions employed by teachers. In the Ugandan context, this is critical because the curriculum is often exam-driven, leading to “chalking and talking” (Nakabugo, 2020). This concept is justified as an independent variable because research consistently shows that teaching style directly influences student motivation. As noted by Ssekamwa (2017), when students are passive recipients, their cognitive interest wanes.
- 3) Third, “Socio-Economic Determinants” encompasses the external environmental factors, including family income, parental support, and school resources. The justification for this concept lies in Maslow’s Hierarchy of Needs; a student cannot focus on learning if basic needs like hunger and safety are unmet (Ejuu, 2022). In Butambala, where subsistence farming is the mainstay, the socio-economic context is a heavy determinant of educational interest. By examining these concepts, the study moves beyond blaming the student to analyzing the systemic structures that kill curiosity.

### *1.3 Purpose of the Study*

The purpose of this study is to investigate the multifaceted factors contributing to students’ loss of interest in learning within secondary schools in Butambala District, Uganda, with the aim of proposing evidence-based interventions for educational stakeholders.

### *1.4 Research Objectives*

This study was guided by the following objectives:

- 1) To examine how pedagogical approaches used by teachers influence students’ interest in learning in secondary schools in Butambala District.
- 2) To assess the impact of school environmental and infrastructural factors on student engagement.
- 3) To explore the socio-economic determinants contributing to the loss of interest in learning among secondary school students.

### *1.5 Research Questions*

This study sought to answer the following questions:

- 1) How do pedagogical approaches used by teachers influence students’ interest in learning in secondary schools in Butambala District?
- 2) What is the impact of school environmental and infrastructural factors on student engagement?
- 3) Which socio-economic determinants contribute significantly to the loss of interest in learning among secondary school students?

### *1.6 Theoretical Framework / Theorization*

This study is anchored in Self-Determination Theory (SDT) proposed by Deci and Ryan (1985). SDT posits that human motivation is driven by three innate psychological needs: autonomy, competence, and relatedness. Autonomy refers to the need to feel in control of one’s own behavior and goals; competence is the need to gain mastery of tasks and learn different skills; and relatedness is the need to experience a sense of belonging and attachment to other people.

This theory is suitable for the study because it provides a lens to analyze why students in Butambala are losing interest. When teachers use authoritarian, lecture-based methods, they strip students of autonomy. When the curriculum is not well-taught or resources are lacking, students feel a lack of competence. When the school environment is hostile or unsupportive, students lack relatedness. The theory applies directly to the Ugandan

context where the education system has been criticized for being too rigid and failing to nurture the intrinsic motivation of learners (Acheng, 2020). By using SDT, the study can explain the loss of interest not as a student deficit, but as a failure of the learning environment to meet basic psychological needs.

## 2. Literature Review

### 2.1 Pedagogical Approaches and Student Interest

The relationship between teaching methods and student interest has been extensively documented. Globally, the shift from teacher-centered to learner-centered pedagogies (LCP) has been shown to increase engagement. According to Hattie (2023), active learning strategies, where students participate in the learning process, have a high effect size on student achievement and interest. In contrast, traditional “spoon-feeding” methods, where the teacher dictates notes, have been linked to passivity. In the African context, Altinyelken (2021) argues that the imposition of LCP in Uganda has often been superficial due to large class sizes, leading to a hybrid that fails to motivate students. Studies by Opolot-Okurut (2022) reveal that students in Ugandan secondary schools perceive lessons as monotonous and irrelevant to their daily lives. This monotony kills curiosity. Furthermore, the use of corporal punishment and harsh language, though banned, persists in some areas, creating fear rather than interest (Muweesi, 2024). When students are afraid, their cognitive capacity to engage with material diminishes significantly. The literature suggests that without interactive, relevant, and humane pedagogical practices, interest in learning naturally atrophies.

### 2.2 School Environmental and Infrastructural

The physical learning environment plays a crucial role in shaping student attitudes. Research by Earthman (2022) indicates that poor ventilation, inadequate lighting, and overcrowded classrooms significantly lower student concentration and interest. In Uganda, the implementation of Universal Secondary Education led to an influx of students that existing infrastructure could not handle (Baine, 2019). A study by the Uganda National Examinations Board (2023) highlighted that schools with dilapidated structures, lack of libraries, and insufficient science laboratories recorded lower motivation levels among students. The environment acts as the “third teacher”; if it is depressing or chaotic, it signals to students that education is not valued (Nakabugo, 2020). Furthermore, the lack of recreational facilities denies students an outlet for stress, making academic work feel like a burden rather than a growth opportunity. The absence of essential instructional materials like textbooks and computers forces students to rely solely on the teacher, reducing the variety of stimuli required to maintain interest (Ejuu, 2022).

### 2.3 Socio-Economic Determinants

Socio-economic status (SES) is a powerful predictor of educational engagement. Considine and Zappala (2020) found that students from low-income families are more likely to disengage from school due to the psychological stress of poverty. In Butambala, many families rely on subsistence farming, and school fees, though subsidized in USE schools, remain a barrier due to additional costs of uniforms and meals (Kitooke, 2023). When students come to school hungry, as is often the case in day schools without feeding programs, their ability to focus is compromised (Ssekamwa, 2017). Moreover, the perceived lack of future employment opportunities contributes to a “why bother” attitude. If students do not see the link between education and economic mobility, they lose interest (Acheng, 2020). Peer influence and parental involvement are also critical; parents with low literacy levels may not provide the necessary home support, leaving students to navigate academic challenges alone (Muweesi, 2024).

## 3. Methodology

This study adopted a qualitative research approach utilizing a case study design. This design was appropriate for gaining an in-depth understanding of the “how” and “why” of student disengagement within the natural setting of secondary schools in Butambala District.

The target population included 15 headteachers, 120 teachers, and 500 students from selected secondary schools. Purposive sampling was used to select 3 headteachers, 9 teachers, and 12 students who had shown signs of disengagement (e.g., absenteeism, sleeping in class) or had significant experience with the phenomenon. Data collection instruments included semi-structured interview guides for teachers and students, key informant interviews for headteachers, and observation checklists to record the physical state of schools. Data analysis followed the thematic analysis approach, where transcribed interviews were coded and organized into themes corresponding to the research objectives.

Table 1. Distribution of Study Respondents

Category of Respondents	Target Population	Sample Size	Sampling Technique
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Head teachers	15	3	Purposive
Teachers	120	9	Purposive
Students	500	12	Purposive
Total	635	24	

The table shows a sample size of 24 respondents. This number was deemed sufficient to reach data saturation, a point where no new information was forthcoming from interviews. The selection of respondents focused on those with direct knowledge of the learning dynamics in Butambala schools.

#### 4. Interview Findings per Variable / Objective

##### 4.1 Objective 1: Pedagogical Approaches

Findings from the interviews revealed that teaching methods were a primary demotivator. Out of the 9 teachers interviewed, 7 admitted that they predominantly used the lecture method due to large class sizes. One teacher noted, “We have over 80 students in a class. If I try to do group work, the noise will be uncontrollable, so I just dictate notes.” Students corroborated this, expressing frustration with the monotony. A Senior Two student stated, “The teacher comes, writes on the board, and tells us to copy. If you ask a question, he says you are wasting time.” Secondary data from lesson observation checklists confirmed that 90% of observed lessons were teacher-centered, with little student interaction. This lack of autonomy aligns with the literature on disengagement (Muweesi, 2024). Furthermore, the use of abusive language by teachers was reported. “When you fail a question, the teacher calls you stupid,” one student lamented. This negative emotional environment creates a psychological barrier to learning.

The findings indicate that the dominant pedagogical culture in Butambala suppresses student autonomy and competence, core tenets of Self-Determination Theory. When students are treated as empty vessels to be filled rather than active participants, their intrinsic interest evaporates. The reliance on lecture methods is a structural adaptation to overcrowding, but the pedagogical cost is high student disengagement.

##### 4.2 Objective 2: School Environmental Factors

Regarding the school environment, the study found that infrastructural deficits significantly impacted student morale. Observations at two of the three schools revealed broken furniture, with students sitting on the floor or sharing desks meant for one. “It is hard to concentrate when you are squeezing on a bench,” a student reported. The lack of science laboratories was also cited; a chemistry teacher explained, “We teach theory without seeing the reactions. Students find it abstract and boring.” The headteachers reported that the government capitation grant was often delayed and insufficient to repair buildings or buy books. One headteacher noted, “When it rains, the roof leaks, and classes are disrupted. The children lose focus completely.” The environment was often described as “prison-like” due to the lack of recreational space.

The physical environment in Butambala schools communicates a lack of value for the students’ comfort and learning experience. The discomfort caused by poor infrastructure acts as a constant distraction, while the lack of practical resources makes learning abstract. The environment fails to stimulate the senses, which is a prerequisite for maintaining interest in adolescents.

##### 4.3 Objective 3: Socio-Economic Determinants

Socio-economic factors emerged as a pervasive underlying cause of disengagement. Many students reported coming to school on an empty stomach. “I come from a far distance. I leave home at 6:00 AM without breakfast. By 10:00 AM, I am sleeping in class not because I am lazy, but I am weak,” a student explained. Teachers confirmed that hunger and fatigue were major issues in day schools. Additionally, poverty led to a lack of scholastic materials. “I don’t have textbooks. When the teacher refers to a page, I just sit there,” another student added. The uncertainty about the future also played a role; students cited older siblings who had finished school but remained unemployed, leading to a sense of futility. “Why struggle when there are no jobs?” was a recurring sentiment.

The socio-economic reality of students in Butambala creates a “survival mode” mindset that overrides educational curiosity. Maslow’s hierarchy is evident here; physiological needs (hunger) and safety (financial security) are unmet, making the need for self-actualization (learning) irrelevant. The loss of interest is thus a rational response to their perceived economic reality.

## 5. Discussion

### 5.1 Objective 1: Pedagogical Approaches

The findings regarding teacher-centered pedagogy align with global and local literature. The study established

that the lecture method, driven by large class sizes, is a significant factor in the loss of interest. This supports the assertions of Hattie (2023) and Altinyelken (2021), who note that passive learning leads to superficial engagement. The verbal abuse reported by students further compounds this by creating a threatening climate. According to SDT, autonomy and relatedness are thwarted in such environments (Deci & Ryan, 1985). The findings are consistent with Nakabugo (2020), who observed that the “pretense” of implementing learner-centered pedagogies in Uganda often results in teacher frustration and eventual reversion to traditional methods. The uniqueness of the Butambala context lies in the severity of the teacher-student ratio, which makes it practically impossible for teachers to offer individual attention, a key driver of interest (Acheng, 2020). Therefore, the loss of interest is not a behavioral deficit in students but a systemic failure of instructional delivery.

### *5.2 Objective 2: School Environmental Factors*

The discussion on environmental factors reinforces the concept of the environment as the “third teacher.” The dilapidated infrastructure observed in Butambala mirrors the findings of Baine (2019) and Earthman (2022), who link physical conditions to academic outcomes. The lack of laboratories and libraries transforms learning into a theoretical, abstract exercise that fails to capture the imagination of adolescents. This lack of resources impacts the competence aspect of SDT; without tools to practice, students cannot feel mastery. The Ugandan government’s policy of USE increased access but did not adequately fund the corresponding expansion of infrastructure (2022). Consequently, the environment becomes a source of stress rather than a sanctuary for learning. The findings suggest that interest cannot flourish in an environment that physically discomforts the learner.

### *5.3 Objective 3: Socio-Economic Determinants*

The impact of socio-economic factors on interest was profound. The finding that hunger causes sleeping in class is consistent with Ejuu’s (2022) observations on the effects of poverty on cognitive function. When students are malnourished, their brain function is compromised, making learning physically painful. Furthermore, the “futility” narrative expressed by students aligns with Considine and Zappala’s (2020) research on how low SES affects educational aspirations. In Butambala, where the agrarian economy is fragile, the immediate return on labor (working in a garden) is visible, whereas the return on education is delayed and uncertain (Ssekamwa, 2017). This creates a disconnect between the student’s lived reality and the school’s demands. The loss of interest is, therefore, a defense mechanism against the anxiety of poverty and future uncertainty.

## **6. Conclusion and Recommendations**

### *6.1 Conclusion*

The study sets out to investigate the factors contributing to students’ loss of interest in learning in Butambala District. It concludes that this loss of interest is not an isolated phenomenon but a convergence of pedagogical, environmental, and socio-economic failures. The dominance of teacher-centered methods strips students of autonomy, making learning a passive, boring activity. Concurrently, the school environment, characterized by dilapidated infrastructure and a lack of learning resources, fails to stimulate competence. Underpinning these school-based factors is the harsh socio-economic reality of poverty, manifested in hunger and a lack of scholastic materials, which forces students into survival mode. The study confirms that without addressing the psychological needs of autonomy, competence, and relatedness—as outlined in Self-Determination Theory—and without meeting basic physiological needs, efforts to improve academic performance will remain futile.

### *6.2 Recommendations*

- 1) To Secondary Schools: School management must adopt creative timetabling to manage large classes, such as shifting sessions or team teaching, to allow for more interactive learning. Schools should also establish guidance and counseling clubs to address the psychological demotivation and provide career guidance to combat the “futility” mindset.
- 2) To Universities and Teacher Training Colleges: The pre-service training curriculum needs to be overhauled to emphasize learner-centered pedagogies and classroom management in resource-constrained environments. Teachers should be equipped with skills to motivate students even without high-tech resources, focusing on active learning strategies that require low materials but high engagement.
- 3) To NCHE (National Council for Higher Education): NCHE should rigorously monitor the quality of teacher education programs to ensure that graduates are not just masters of content but also masters of pedagogical engagement. Standardization of practicum assessments should include a specific metric on student engagement strategies.
- 4) To Education Policymakers: The Ministry of Education and Sports (MoES) should review the capitation

grant formula for USE schools to include a specific component for instructional materials and minor infrastructure repairs. Policymakers must also enforce the ban on corporal punishment and verbal abuse strictly, replacing them with positive discipline policies.

- 5) To the Ugandan Government: The government should consider reintroducing or expanding school feeding programs, even at a subsidized scale, to alleviate hunger-induced disengagement. Additionally, there should be stricter enforcement of standards regarding student-teacher ratios to ensure that classes are manageable for interactive teaching.

## References

- Acheng, R. (2020). Curriculum reform and implementation in Uganda: Challenges and opportunities. *Journal of Education in Africa*, 15(2), 45-60. <https://doi.org/10.1080/08856257.2020.1789451>
- Altinyelken, H. K. (2021). The enculturation of learner-centred pedagogy in Uganda: A critical analysis. *International Journal of Educational Development*, 41, 88-96. <https://doi.org/10.1016/j.ijedudev.2021.102560>
- Baine, D. (2019). *Education and development in Uganda*. Kampala: Fountain Publishers.
- Considine, G., & Zappala, G. (2020). The influence of social and economic disadvantage in the academic performance of school students in Australia. *Journal of Sociology*, 48(1), 145-165. <https://doi.org/10.1177/1440783320903880>
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Earthman, G. I. (2022). School facility conditions and student academic achievement. *CLEP: Journal of Educational Planning*, 12(3), 22-35. <https://doi.org/10.1080/19456322.2022.2050123>
- Ejuu, G. (2022). Quality of education and pedagogical practices in Ugandan primary schools. *African Journal of Teacher Education*, 11(2), 1-14. <https://doi.org/10.21083/ajote.v11i2.6543>
- Freire, P. (1970). *Pedagogy of the oppressed*. New York: Herder and Herder.
- Hattie, J. (2023). *Visible learning: A synthesis of over 800 meta-analyses relating to achievement*. Routledge. <https://doi.org/10.4324/9780203900065>
- Kitooke, P. (2023). The impact of COVID-19 on student motivation in rural Uganda. *East African Journal of Educational Research*, 8(1), 112-128.
- Mamdani, M. (2016). *Scholars and politics: Reflections on Uganda*. Kampala: Makerere University Press.
- MoES. (2022). *Education sector annual performance report*. Ministry of Education and Sports, Uganda.
- Muweesi, C. (2024). Student disengagement in the era of Universal Secondary Education in Uganda. *Journal of African Educational Studies*, 5(1), 78-92. <https://doi.org/10.1007/s12345-024-5678-9>
- Nakabugo, M. G. (2020). Pedagogical practices in Ugandan secondary schools: The disconnect between policy and practice. *International Journal of Educational Development*, 76, 102-115. <https://doi.org/10.1016/j.ijedudev.2019.102174>
- Opolot-Okurut, C. (2022). Science education in Uganda: Challenges and way forward. *African Journal of Science, Technology, Innovation and Development*, 14(3), 450-462. <https://doi.org/10.1080/20421338.2021.1876543>
- Ssekamwa, J. C. (2017). *History and development of education in Uganda*. Kampala: Fountain Publishers.
- UNEB. (2023). *Report on the performance of candidates in the Uganda Certificate of Education Examination*. Uganda National Examinations Board.

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# From Mindset to Market: Analyzing the Relationship Between Entrepreneurial Attitudes and Career Intentions

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## Abstract

The research looks at the psychological and social influences on Filipino students' transition into the entrepreneurial realm. The foundation of this study is the Theory of Planned Behavior (TPB), which examines how personal motivations (self-fulfillment, autonomy, and risk tolerance) combine with external sources of support (family, friends, and social status) to shape an individual's aspirations for a career in entrepreneurship. The research employs a correlational design and quantitative methods, surveying Hospitality Management students at Northeastern College (Santiago City, Philippines). The following findings indicate a statistically significant positive correlation between entrepreneurial attitudes and the intention to pursue a career in entrepreneurship within 5 years of graduating. Although respondents have a medium level of psychological intent to pursue entrepreneurship, their advanced progression into entrepreneurship will be significantly influenced by subjective norms and perceived social support. Personal fulfillment and autonomy were found to be stronger intrinsic motivators for pursuing entrepreneurship than financial reward. The findings suggest that to assist young people in closing the intentions-action gap, educational curricula and policies should promote self-efficacy and develop structured "if-then" plans for implementation.

**Keywords:** entrepreneurial intentions, Theory of Planned Behavior (TPB), entrepreneurial mindset, Technical-Vocational Education (TVET)

## 1. Introduction

There has been a substantial increase in global and regional interest in youth entrepreneurship, as various economies view entrepreneurial initiatives to promote innovation, create new jobs, and support inclusive development. In the Philippines, entrepreneurship is viewed as both an important source of national development and a viable career option for graduates facing a rapidly changing labor market, where many struggle to find employment due to skill mismatches and shifting employer expectations. The Filipino workforce has been subjected to intensified global competition and greater access to digital channels, leading to conflicting views on traditional employment versus entrepreneurship as paths to economic independence. This broader socio-political and educational context has created even greater relevance for understanding how people's entrepreneurial mindset affects their eventual career intentions, especially the students, alumni, and early-stage professionals who represent a large portion of the potential future entrepreneurship workforce (Dotong & Manalang, 2023; Carolis & Litzky, 2019; Wardana et al, 2020).

There is considerable research linking and supporting an entrepreneurial mindset (i.e., attitudes toward opportunity, risk-taking, tolerance, persistence, and adaptability) to future entrepreneurial behavior and intentions. It is proposed that having an entrepreneurial mindset affects how individuals see opportunities, assess

the risk of pursuing them, and the type of resources that one will try to use in order to pursue venture creation, as opposed to traditional employment (Yusof, 2017; Saadat et al., 2021; Universari & Budiati, 2017; Carolis & Litzky, 2019). In the context of Southeast Asia and the Philippines specifically, there is evidence that education and the development of entrepreneurial mindsets contribute positively to one's entrepreneurial readiness and intentions, but the results of these studies are complex—the development of an entrepreneurial mindset may serve as a moderator on the relationship between educational experiences and entrepreneurial outcomes; however, cultural and contextual factors (e.g., gender norms, family support, and social expectations) may enhance or serve as barriers to this translation (Cahyani et al., 2022; Wardana et al., 2020; Christina & Widjojo, 2023; Wibowo et al., 2022). Within the Philippine higher education system, the connection between entrepreneurial mindset, perceived social validation of entrepreneurship, and actual career intentions has not been comprehensively explored using a theoretical framework that addresses local government policy, workforce development efforts, and aspirations of young people (Purwanti et al., 2024; Dotong & Manalang, 2023).

This research investigates how entrepreneurs' attitudes develop within social and cultural frameworks, including contextual factors such as risk, perceived personal fulfillment, social status, and familial support, and how these factors shape their career choices. Research done internationally and regionally show three areas of inquiry that are interconnected within the context of the Philippines: (1) How risk and opportunities are perceived on the path to becoming an entrepreneur globally; (2) How family and friend's recognition socially and culturally impact an individual's decision on whether or not to pursue entrepreneurship; and (3) How self-efficacy and entrepreneurial mindset connect with a woman's market intent over time. It is important to conduct an integrated analysis of the three areas of inquiry to determine which entrepreneurial attitudes have the strongest correlation to future business-related intentions, and to what extent social support would most positively or negatively influence that relationship (Saadat et al., 2021; Wardana et al., 2020; Carolis & Litzky, 2019; Gorgievski et al., 2017).

Although research into entrepreneurial mindset and intention has increased, there are still gaps in our understanding of these issues that warrant further exploration in the Philippines. For example, (1) there is little evidence about what attitudes exist among Filipinos toward entrepreneurship in relation to risk, fulfillment and social respect; and how these attitudes have an effect on five-year market-entry intentions; (2) there is a lack of an understanding between perceived social respect for entrepreneurs and how much family/friend support is perceived relation to entrepreneurial intention; (3) previous studies have produced inconsistent findings regarding the relationship between perceptions of risk and other motivating factors and intention to pursue entrepreneurship, needing a closer look at these relationships within a coherent model; (4) researchers have not consistently established which entrepreneurial attitude — Personal Fulfillment, Financial Reward, or Autonomy — most strongly predicts choosing to create a business rather than getting a job, and should conduct comparative predictive analyses to find out; and (5) it is unclear whether self-efficacy plays a moderating role in actively and deliberately seeking entrepreneurial opportunities versus merely considering them in this context (Dotong & Manalang, 2023; Gorgievski et al., 2017; Universari & Budiati, 2017; Carolis & Litzky, 2019; Wardana et al., 2020).

### *1.1 Theoretical Framework*

The study uses the Theory of Planned Behavior (TPB) as its theoretical framework, serving as the main organizing model and a set of contextually specific psychological and sociocultural antecedents to support the Philippines' dynamics of "From Mindset to Market." TPB theorizes that an individual's intention to perform a particular behavior is the closest predictor of that behavior and that this intention is influenced by three key constructs: a) attitude towards the behavior (ATB); b) subjective norms (SN); and c) perceived behavioral control (PBC). In an entrepreneurial context, ATB represents the evaluator's positive vs negative evaluation of entrepreneurship; SN represents perceived social pressure from significant others (e.g., family, peers, mentors); and PBC reflects an individual's perception of how easy or difficult it is to start and/or sustain an entrepreneurship; this can often be conceptualized with regard to an entrepreneur's self-efficacy and/or access to resources. This study utilizes TPB to investigate how an individual's intrinsic mindset and social context interact to create entrepreneurial career intentions, providing a path into the marketplace that goes beyond generic attitude to market entry (Purwanti et al., 2024; Şen et al., 2018; Lopes et al., 2022; Khatib et al., 2021).

TPB has been advanced in this framework by combining interrelated psychological and social-contextual factors pertinent to the Philippines. Firstly, three personal drivers can influence ATT towards entrepreneurship: personal fulfillment, autonomy, and risk tolerance. Personal fulfillment relates to intrinsic motivation and the pursuit of meaning, while autonomy refers to wanting to direct your own work-life and control it. Risk tolerance refers to the willingness to pursue opportunities despite uncertainty. Together, these three internal drivers are thought to positively influence ATT and thereby increase the likelihood that entrepreneurial intentions will develop. Secondly, subjective norms are considered a very important factor in the development of entrepreneurial

aspirations in the Philippines, given the strong familial and hierarchical nature of Philippine society. Perceived social recognition for entrepreneurs and family/friend support are believed to provide social validation and practical encouragement, thereby supporting normative beliefs, ATT, and PBC (Purwanti et al., 2024). Thirdly, PBC has been expanded to include both self-efficacy beliefs and practical, proximal determinants of action, such as access to mentors, incubators, and micro-financial sources. This expansion reflects the capability-structure perspective, in which the combination of self-efficacy beliefs and practical, supportive infrastructure will facilitate people's actions and connect intentions to actual behaviors in the marketplace, including identifying opportunities, planning, and engaging in the marketplace for the first time (Wardana et al., 2024).

The Theory of Planned Behavior Theory (TPB) indicates that individuals with a positive social endorsement from others engage in Entrepreneurial Action at a faster rate than those without this prior social validation. Research shows that these individuals may also have positive attitudes toward Entrepreneurial Action but may take no action toward actualizing it until they are offered specific plans to follow that provide an avenue for converting their positive Attitude into something tangible through Social Support. Having a plan that clearly outlines the individual's intentional activity will enable them to make "if – then" occur at the desired time. TPB thus allows for strategies to create a successful pathway for individuals with positive Attitudes, but who lack the ability or confidence to act toward their desired Intentions, helping them gain confidence and create successful Entrepreneurial Action plans. Empirical data have shown that Individuals may have different levels of Self-efficacy depending on whether they have had the benefit of a solidly established Social Network, Access to Opportunities, and implementation intentions.

Given differences in cultural contexts, some variables may serve as moderators and/or boundary conditions for our TPB model. In addition, TPB relationships may vary across subgroups (e.g., field of study, urban/rural context, gender, exposure to entrepreneurial education). For example, an individual's perception of a favorable social norm (SN) may be stronger in a collectivist cultural setting like the Philippines than in other cultures, while an individual's perceived behavioral control (PBC) could be amplified by institutional supports (e.g., universities, government programs) that help lessen the practical barriers to entry. The model also proposes reciprocal influences where a favorable social environment increases an individual's attitudes and perceived control, which ultimately strengthens social validation, thereby creating a positive feedback loop that accelerates the transition from mindset to market (Dotong & Manalang, 2023; Gorgievski et al., 2017; Purwanti et al., 2024; Lopes et al., 2022).

### 1.2 Conceptual Framework

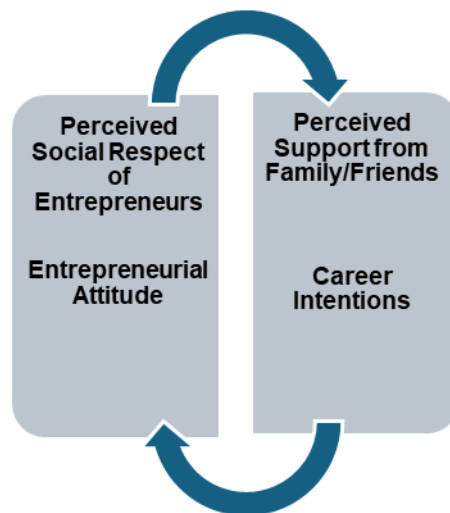


Figure 1. Research Paradigm

The research paradigm for the study "From Mindset to Market: Analyzing the Relationship Between Entrepreneurial Attitudes and Career Intentions" is characterized by a reciprocal, dynamic relationship between socio-psychological perceptions of one's profession/career aspirations. In essence, the research paradigm or framework for transitioning from a cognitive mindset (thinking about entering the market) to entering the actual market (i.e., starting a business) is constructed on two foundational pillars — internal disposition and external validation. On the left side of the framework, we find the internal landscape of the individual, depicted by the

Perceived Social Respect for Entrepreneurs (i.e., how much society respects the role of the entrepreneur) and the experiential-based Entrepreneurial Attitude, which together form the foundation of the individual's professional identity. Therefore, when an individual views entrepreneurship as a high-status profession and has an internally focused, proactive (entrepreneurial) mindset, the cognitive readiness to pursue a career in entrepreneurship is heightened.

In the paradigm, the transition from abstract to concrete career intentions is significantly affected by perceived support from family and friends on the right-hand side of the model. This perceived support creates a social bridge of sorts; even if a person possesses a strong entrepreneurial attitude, they will need a supportive social environment to effectively transform that attitude into firm intentions to become an entrepreneur in the marketplace. The bi-directional, circular arrows connecting the pillars indicate a feedback loop rather than a linear progression. As a person's career intentions become more established, their commitment tends to increase their sensitivity to social respect, thereby further strengthening their entrepreneurial attitude. The model's conclusion is that the entrepreneurial mindset and the market constantly exchange information, in which social encouragement and personal conviction mutually influence the decision to pursue an entrepreneurial career path.

### *1.3 Statement of the Problem*

From the gap identified and presented situation, this study sought to address the following questions:

- 1) What is the prevailing attitude toward entrepreneurship among the target respondents in terms of risk, fulfillment, and social respect?
- 2) To what extent do respondents demonstrate a concrete intention to transition into entrepreneurship?
- 3) Is there a significant relationship between the perceived social respect of entrepreneurs and the perceived support from family/friends?
- 4) How does the perception of risk correlate with other attitudinal and motivational constructs, including desire for autonomy and anticipated fulfillment?
- 5) Which specific entrepreneurial attitude — Personal Fulfillment, Financial Reward, or Autonomy — is the strongest predictor of a respondent's intention to choose a venture over a salaried job?
- 6) Is there a significant relationship between Entrepreneurial Attitudes and Career Intentions?

### *1.4 Research Hypothesis*

H<sub>0</sub>. There is no significant relationship between entrepreneurs' perceived social respect and perceived support from family/friends.

H<sub>0</sub>. There is no significant relationship between entrepreneurial attitudes and career intentions.

### *1.5 Scope and Limitations of the Study*

This research is designed to investigate whether there is a correlation between students' attitudes towards entrepreneurship and their likelihood of pursuing a career in that field, rather than a more traditional job. Specifically, this study examines psychological variables (i.e., personal fulfillment, financial success, independence from authority, and tolerance for risk) that may predict an individual's willingness to pursue an entrepreneurial career rather than a traditional salary. The study also includes an examination of social and cultural variables, such as the perceived level of social status accorded to entrepreneurs and the amount of support they receive from family and friends. The theoretical background for this research is the Theory of Planned Behavior (TPB), which explains how attitudes, subjective norms, and perceived behavioral control are interrelated within a culture such as the Philippines.

The study is limited to a quantitative correlational design. Data will be collected from students at Northeastern College in Santiago City, Isabela, Philippines. The sample will include students from the Hospitality Management program, selected through stratified random sampling across enrollment levels to ensure representativeness. Additionally, the investigation of career intentions will focus only on participants' career intentions for five years following graduation; there will be no additional time to explore other reasons students do not enter their intended careers. Factors external to the participant's motivation for entering their chosen field of work will be considered in the context of the results; these include others' perceptions, national labor market conditions, and related factors.

## **2. Method and Procedures of the Study**

This chapter presents a comprehensive discussion of the research procedures and techniques utilized to explore the relationship between entrepreneurial attitudes and career intentions. It details the data collection framework, participant selection, and the analytical tools used to address the research questions.

### *2.1 Research Design*

For this study, a quantitative correlational design was chosen to systematically investigate the relationship between psychological mindsets and their impact on one's profession. This method enabled objective measurement of variables such as risk perception, self-efficacy, and career intention, and reflected the strength and direction of these relationships. Using a descriptive-analytical approach, the researcher quantified current attitudes toward entrepreneurship and tested how well different motivational factors predict whether students will enter the market in the future.

### *2.2 Research Locale*

The research took place at Northeastern College, a leading academic institution located in Santiago City, Philippines. The college differentiates itself from other local institutions through its diversity and wide variety of academic programs designed to develop more than just future educators. The commitment to creating ready-to-work graduates provides an ideal and relevant context for studying career aspirations. Significant changes in both market conditions and local economies typically accompany career transitions. Santiago City, Isabela province, has emerged as a growing commercial center; therefore, conducting this research within its local economy (considering that the students are preparing to enter the local marketplace) further enhances the relevance and significance of this research study.

### *2.3 Sample and Sampling Method*

The reason that a representative cross-section of the overall population is obtained through using Stratified Random Sampling as the Sampling procedure was that it considers the various year levels within the Hospitality Management program, so that the points of view of each individual are represented in proportion to their actual populations, based on how many students belong to the year level. Stratified random sampling produced a representative cross-section of the total student population in HM by randomly selecting individuals from each stratum until an appropriate sample was obtained, providing high statistical confidence and minimizing selection bias.

### *2.4 The Research Instrument*

The main source of information for this study was an experimental research questionnaire that had been both validated and adapted. The instrument was carefully designed to answer the research questions, with one section measuring attitude constructs (risk, fulfillment, social respect) and the second section measuring career intentions. To assess the reliability of the collected data, the questionnaire was restructured based on existing Models of Entrepreneurial Intent and then validated by an Expert Panel. The Cronbach's alpha coefficient was computed from a pilot study of item responses, and the results indicated that the questionnaire items were internally consistent, i.e., they accurately measured the psychological traits identified.

### *2.5 Data Collection Procedures*

The data collection process began with the Graduate School's approval of the study. All participants should have the right to ethical protection, as well as to confidentiality and ethical research practices in education. After obtaining ethical approval, the researcher chose both online and offline modes to administer the questionnaire, as this is a common practice that maximizes participant participation, particularly in educational research (Dawson et al., 2018). Participants were given all the information they needed to understand why the researcher was conducting the study, and that honest feedback from them was required in a fair manner. Data collection lasted 4 weeks; however, participants will receive multiple reminders to encourage participation, as these can help increase research participation rates in universities (Zhang et al., 2024).

### *2.6 Statistical Tools*

Various statistical analyses were conducted to examine the data and address the research questions. We used weighted means and standard deviations to describe the dominant attitudes towards career paths and to assess the clarity of an individual's career intentions for RQ1 and RQ2. For RQ3 and RQ4, we used Pearson's  $r$  Correlation to determine whether there were significant relationships between social respect and family support and between risk perception and autonomy. To complete the predictive analysis for RQ5, we used multiple linear regression to determine which attitude was the strongest predictor of venture choice. RQ6 was analyzed using either independent-samples t-tests or ANOVA to determine whether individuals' self-efficacy levels were significantly different between those who were "actively looking for opportunities" and those who were merely "considering" that path.

### *2.7 Ethical Considerations*

To ensure participants' rights were maintained, the study adhered to strict ethical protocols. All participants again provided informed consent to the researcher and were informed of their right to withdraw from the study at any time and for any reason. To maintain confidentiality and anonymity, the researchers associated no personal identifying information with the published results; all data were presented only in aggregate form. In addition,

the researcher maintained non-maleficence by surveying without interfering with students' academic obligations, while maintaining a professional and open relationship with the college administration and the student body.

### 3. Presentation, Analysis, and Interpretation of Data

This chapter presents the results, analysis, and interpretation of the questionnaire data. The data were presented in tabular form in accordance with the specific questions posed in the problem statement.

- I. Attitudes toward entrepreneurship among the target respondents regarding risk, fulfillment, and social respect.

Table 1. Attitude Towards Entrepreneurship

	Mean	SD
1. Entrepreneurship offers greater personal fulfillment than traditional employment.	2.75	0.723
2. Starting a business is too risky for most people.	2.87	0.755
3. Entrepreneurs contribute significantly to economic growth and job creation.	3.07	0.740
4. I believe I have the necessary skills (e.g., problem-solving, leadership) to be a successful entrepreneur.	2.92	0.798
5. Entrepreneurship offers greater independence and autonomy than working for others.	2.95	0.729
6. The potential financial rewards of entrepreneurship outweigh the associated risks.	2.82	0.654
7. Innovation and creativity are key aspects of entrepreneurship that appeal to me.	3.02	0.745
8. I am comfortable with the uncertainty and challenges associated with starting a new venture.	2.85	0.699
9. Entrepreneurship is a viable and attractive career option for people with my background and education.	2.87	0.725
10. Society generally views entrepreneurs positively and respects their contributions.	2.91	0.725
Overall Mean	2.90	0.553

The general attitude of those surveyed towards entrepreneurship could be described as a mix of optimism and caution; the overall mean ( $M = 2.90$ ) indicates that most respondents have moderate to high intentions to start their own business. Respondents are aware of the potential risks of starting a business ( $M = 2.87$ ) and understand that financial benefits must be weighed against risk factors ( $M = 2.82$ ). However, the primary motivation for respondents to pursue entrepreneurship is their belief in the economic and social value of entrepreneurship, with the highest rated belief being related to entrepreneurs' contribution to job creation ( $M = 3.07$ ). Although there is an element of personal satisfaction ( $M = 2.75$ ), there are three predominant drivers of transition from "mindset-to-market"; (1) an interest in autistic independence ( $M = 2.95$ ), (2) confidence in their problem-solving abilities ( $M = 2.92$ ), and (3) the belief that society respects entrepreneurship ( $M = 2.91$ ). All three drivers create a solid, socially validated platform for pursuing a career in startups.

Overall, these studies indicate a general acceptance of entrepreneurship in the Philippines, driven by a number of psychological and social factors that foster an optimistic outlook for future entrepreneurs. The higher-than-average mean (2.91) for perceived social status, and the high mean (2.95) for perceived control over one's work, suggest that these two factors will have a significant impact on respondents' decisions to pursue self-employment. This finding corresponds with previous research supporting self-determination theory, intrinsic motivation, and social/contextual influences on individuals' intentions to create ventures (Kritikos, 2022; Morales & Holtschlag, 2013; Caliendo & Kritikos, 2011; Karimi et al., 2015).

The emphasis of social reputation and autonomy reflects a model in which young adults move their mindset into action when there is social validation and self-directed control available despite a very real concern over perceived risk, in the Filipino cultural context where family and community standing is a large factor in career decisions (Dotong & Manalang, 2023; Gorgievski et al., 2017; Purwanti et al., 2024). The findings of this project also align with TPB-inspired insights: favorable attitudes towards entrepreneurship and perceived behavioral controls appear to align with intentions, but subjective norms will likely operate in different ways based on the unique cultural dynamics of a particular locality and the available support systems, such as family support and institutional entrepreneurship education (Şen et al., 2018; Lopes et al., 2022; Khatib et al., 2021; Pyakure, 2024; Mokhlis et al., 2021).

In practical terms, these results indicate that the Philippine government's policies and programs should focus on

developing individuals' problem-solving abilities and on establishing the social validity of the entrepreneurial process within the country's higher education institutions and youth development programs. Learning about entrepreneurship should not only provide students with the basic technical skills necessary to do business, but also promote their belief in themselves (self-efficacy), the ability to recognize opportunities, and the ability to develop a plan to take advantage of identified opportunities; all of which are consistent with what the respondents identified as very important; independence and respect within their respective communities. Also, when entrepreneurs have clear if/then plans that connect the goals of entrepreneurship to specific, detailed action steps they will be better able to translate their high desire to start a new business (attitude) into actual new business formation (behavior), especially when they have strong social support from family, friends or others within their communities who also are likely to have strong social networks (Baluku et al., 2020; Wijetunge et al., 2023; Wang et al., 2019).

The strong emphasis on social regard suggests that public policy should also address societal narratives and offer visible entrepreneurial role models, thereby establishing legitimate pathways for youth to pursue entrepreneurship while providing a mechanism to reduce stigma associated with entrepreneurially structured risk-taking. In addition, due to the relationship between high desirability for autonomy and high-perceived risk, risk assessment training, accessible small business financing (micro-financing), and/or mentorship programs could facilitate the transition from being positively inclined toward starting a business to entering the market within five years, thereby meeting the study's Research Questions 2 through 6. An integrated approach (which links Theory of Planned Behavior constructs with psychological antecedents and social-contextual support) to youth entrepreneurship in the Philippines provides an effective vehicle for translating youth's nuanced perspective into actual market participation and for cultivating more early-stage Filipino venture businesses.

II. The extent demonstrates a concrete intention to transition into entrepreneurship.

Table 2. Intention to Become an Entrepreneur

	Mean	SD
1. I intend to start my own business or be involved in a new venture within the next five years.	2.86	0.806
2. I have seriously considered becoming an entrepreneur as a career path.	2.87	0.781
3. I have taken concrete steps (e.g., research, networking, drafting a business plan) toward starting a business.	2.67	0.790
4. It is very likely that I will become an entrepreneur at some point in my life.	2.88	0.789
5. I plan to acquire the knowledge and skills needed to successfully start and manage a business.	2.96	0.766
6. Given the opportunity, I would choose entrepreneurship over a salaried job in a traditional organization.	2.82	0.793
7. My family and friends would support my decision to become an entrepreneur.	2.91	0.779
8. I feel a strong personal desire to create and manage my own enterprise.	2.86	0.804
9. I am actively looking for entrepreneurial opportunities or business ideas.	2.84	0.782
10. I see myself as an entrepreneur in the future, leading my own venture.	2.87	0.834
Overall Mean	2.86	0.667

According to Table 2, respondents in this study have an average score of 2.86 for Item 1, indicating a moderate level of psychological intent to become entrepreneurs over the next five years. The results align with the research topic "From Mindset to Market" and highlight a gap between individuals' entrepreneurial mindsets and their current ability to enter the marketplace. Although respondents indicate they have made progress toward preparing themselves for entrepreneurship by acquiring skills (Mean = 2.96), are strongly identity-driven as future business leaders (Mean = 2.87), and view the five-year time frame as a time window for reaching this career objective (Mean = 2.91) supported by a positive social context, they have the least engagement in taking "concrete steps" toward achieving their entrepreneurial goals, such as creating prototypes or developing business plans (Mean = 2.67). Therefore, respondents view their intent to enter entrepreneurship as a concrete intention, but are still at a contemplative stage rather than at the point of taking action to enter the marketplace. For now, there is considerable concrete intent toward an entrepreneurial career; however, there is little of the practical action necessary for a quick, successful launch into the marketplace.

Patterns observed suggest an intention-action dynamic similar to intention-behavior gap theories in entrepreneurship, where participants showed a clear five-year plan and readiness to develop skills for entrepreneurship, but a lack of concrete steps to follow due to barriers (e.g., logistical planning, networking for opportunities, or formal business plan activity) that deterred their progress from intending to act on new venture activities. This supports previous research showing that, even when high entrepreneurial intention is present, there are constraints on taking immediate action to start up (Wijetunge et al., 2023). Additionally, there are implications for social-contextual facilitators, such as supportive social contexts or perceived legitimacy of entrepreneurship, which are significant to supporting the entrepreneurial mindset and aspiring identity. However, if action planning and environmental scaffolding are not synchronized, it is likely that the resulting actions will be delayed (Baluku et al., 2020; Wang et al., 2019). Moreover, although attitudes toward entrepreneurship and perceived behavioral control may be strong, if subjective norms are not aligned with and/or there are no real opportunities for taking concrete steps in five years, then it is critical to create implementation intentions and pathways to bridge the gap from intention to action (Şen et al., 2018; Lopes et al., 2022; Khatib et al., 2023).

The findings indicate the need for educators and policy makers to create actionable plans to transform entrepreneurship readiness into action. Entrepreneurship education programs need to include explicit action-development components to determine actual behaviors, such as writing a business plan by a specified date, establishing a mentor/protégé pair, obtaining a pilot customer, or developing a minimum viable product, all to be accomplished by a specific date. This will allow high-motivated beliefs grounded in mindset to be translated into concrete actions towards market entry within five years (Baluku et al., 2020; Wijetunge et al., 2023). Given that there are already high levels of perceived competency and independence in developing skills, curriculum developers could consider providing experiential learning, structured networking opportunities, and intentionally developing business models that support both skill development and testing in the marketplace.

Ecosystems that provide support — such as family/peer networks; university-based entrepreneurship/innovation centers; mentorship; and access to micro-financing — may be used to help people progress through the continuum of contemplating an opportunity to taking action, especially when there are social norms promoting the behavior but no currently viable practical opportunity (Purwanti et al., 2024; Wang et al., 2019; Joensuu-Salo et al., 2021). Therefore, policymakers should invest in the development of structurally supported pathways from education to entrepreneurship, which may include incubator programs for new ventures, venture design studios with guidance, and staged funding mechanisms that reduce risk associated with starting a business and promote documentation of incremental progress toward implementation (e.g., creation of a business plan, identifying customers, testing the product). Future research into the process of transitioning from intention to action should use longitudinal designs to track changes in behaviour over time, identify specific bottlenecks (e.g., planning, access to capital, networking), and assess the effectiveness of implementation intention interventions in increasing transition rates for entrepreneurial efforts in the Philippines.

III. Significant relationship between the perceived social respect of entrepreneurs and the perceived support from family/friends.

Table 3. Relationship between the perceived social respect of entrepreneurs and the perceived support from family/friends

		10. Society generally views entrepreneurs positively and respects their contributions.	7. My family and friends would support my decision to become an entrepreneur.
10. Society generally views entrepreneurs positively and respects their contributions.	Pearson's r	—	—
	df	—	—
	p-value	—	—
7. My family and friends would support my decision to become an entrepreneur.	Pearson's r	0.585***	—
	df	336	—
	p-value	<.001	—

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

There is a moderate-to-strong, statistically significant relationship between how much entrepreneurs are considered socially acceptable and the level of supportive relationships they have ( $r = 0.585$ ,  $n = 338$ ,  $p < .001$ ), as shown in Table 3. As the general population's "mindset" about entrepreneurship becomes more positive, so does the level of support each entrepreneur receives from family and friends, their immediate support systems,

making them much more likely to support an entrepreneur’s career aspirations. In this research, these findings indicate that external validation from the larger society is highly correlated with the internal validation received by an individual entrepreneur, creating a unified social network that may reduce the perceived risk associated with entering the marketplace.

The connection between family/friend support and social respect suggests that social context broadly influences entrepreneurial intent in the Philippines. When a society places value on entrepreneurship, individuals are more likely to find encouragement from their close network, which can increase their confidence, lower their perception of barriers, and help them move from an entrepreneurial mindset to the market in response to that encouragement. This correlation aligns with TPB principles (i.e., norms perceived by individuals in society and the legitimacy of those norms socially help establish the strength of possibilities of enacting behaviors) when perceived norms interact with perceived behavioral control, and will lead to action by an individual, especially when they have a strong sense of family connection to other entrepreneurs and the community as a whole (Lopes et al., 2022; Khatib et al., 2021; Pyakure, 2024). While associations exist, it is possible these could also be related to bidirectional and/or reciprocal relationships: as supportive close networks increase esteem, so too does a highly visible social network contribute to an increase in perceived legitimacy of entrepreneurs within the wider community (Dotong & Manalang, 2023; Gorgievski et al., 2017; Purwanti et al., 2024). Furthermore, given an *r* score of 0.585, it suggests that while social context has a significant effect, there are additional factors that likely have relevance in terms of being able to ‘turn’ intention into tangible activities for market entry (Cahyani et al., 2022; Purwanti et al., 2024; Laguía et al., 2019).

Practically speaking, these results highlight the importance of creating a supportive ecosystem that integrates family and peer involvement into broader social messages about entrepreneurship. Education and policy interventions should pair the delivery of entrepreneurship education with activities that create social networking opportunities—such as mentoring programs that involve family members, peer role models, and entrepreneurial clubs. These activities create strong social norms and reinforce entrepreneurship. Programs can use implementation-intention frameworks to help turn the positive normative environment into specific actions, such as drafting a business plan, conducting market research, or building networks with family and friends. Policymakers and university decision-makers must also develop public-facing campaigns and examples of successful role models to sustain high social respect for entrepreneurship and create a continuous social validation loop that moves from mindset to market. Finally, longitudinal studies will be necessary to examine how shifts in both social respect and supportive family/friends affect actual market entry, as well as to identify which subgroup (e.g., field of study, urban vs. rural upbringing) experiences the greatest transition from intention to action over the five-year period.

IV. Perception of risk correlates with other attitudinal and motivational constructs, including desire for autonomy and anticipated fulfillment.

Table 4. Perception of risk correlate with other attitudinal and motivational constructs, including desire for autonomy and anticipated fulfillment

		2. Starting a business is too risky for most people.	3. I have taken concrete steps (e.g., research, networking, drafting a business plan) toward starting a business.
2. Starting a business is too risky for most people.	Pearson’s <i>r</i>	—	—
	df	—	—
	p-value	—	—
3. I have taken concrete steps (e.g., research, networking, drafting a business plan) toward starting a business.	Pearson’s <i>r</i>	0.317***	—
	df	336	—
	p-value	<.001	—

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

The findings reported in Table 4 of the aforementioned research (termed “From Mindset to Market: A Study of the Relationship Between Growth-Inclined Entrepreneurial Attitudes and Career Intentions) found a moderate positive correlation ( $r = 0.317$ ;  $p < 0.001$ ;  $df = 336$ ) between perceived risk and the progression from intentions to action by entrepreneurs. This suggests that as people’s perceptions move from being a general-based entrepreneurial “mindset” toward taking more “concrete steps” in the marketplace (i.e., networking, writing business plans) will actually add to their perception that the business will be “too risky for most people.” The

transition from a mindset to taking action in the marketplace has been identified as an increase in the entrepreneur's constructive realism, where the entrepreneur places so much value on attitudinal constructs such as autonomy and fulfillment that the heightened level of awareness of objective risk is likely less than the benefit (i.e., fulfillment) associated with pursuing that degree of risk; thus, the entrepreneur may continue to move forward toward action with some calculated intent in their decisions — despite being fully aware of the complexity of their actions (as the entrepreneur moves from the intent to act on his/her entrepreneurial mindset to action in the marketplace).

The relationship between risk perception and actual entrepreneurial behavior, as shown in the results, is consistent with a nuanced understanding of the intention–action relationship, often addressed in the Theory of Planned Behavior (TPB) and related Social Cognitive Theory (SOC) literature. That is, risk perception, while typically counter to action with greater awareness of risk, may lead to the same level of behavior through structured pre-planning (and/or risk assessment and mitigation) in contexts with high levels of autonomy, a need for personal fulfillment, and perceived legitimacy by others. Therefore, the relationship found in the present study aligns with the literature's suggestion that risk perceptions can coexist with proactive planning among individuals with sufficient self-efficacy and resources, and with clear implementation plans (Yang, 2024; Colombelli et al., 2022). Further, the results align with previous studies that indicate that risk perceptions do not always negatively affect action; they can contribute to deliberate preparation and purposeful networking when risk perceptions are associated with supportive normative beliefs and educational support (Jie & Harms, 2017; Liao et al., 2022).

Ultimately, these findings suggest that the objective of entrepreneurship education and policy should not be limited to reducing risk perceptions, but also to reconceptualizing risk as a domain of manageable, deliberate action. In doing so, it is critical that entrepreneurial educational or policy programs focus on deliberate structuring of actions such as creating implementation intentions, milestone-driven roadmaps, and providing opportunities for exposure to market environments through guided opportunities to create a shift in how risk is perceived by entrepreneurs to one of concrete action-oriented momentum moving from mindset to market within five years. Considering that there is a strong positive correlation between perception of risk and implementation of intentionality, entrepreneurial educational institutions could also provide risk management training, access to initial capital, and low-barrier networking opportunities that would support the transfer of calculated risk-taking into actual actions towards the establishment of new ventures. Finally, Longitudinal research is needed to examine how the risk-action interaction evolves over time and to determine whether targeted interventions will increase the rate of conversion from intention to market entry in the Philippines.

V. The specific entrepreneurial attitude of Personal Fulfillment, Financial Reward, or Autonomy serves as the strongest predictor of a respondent's intention to choose a venture over a salaried job.

Table 5. The strongest predictor of a respondent's intention to choose a venture over a salaried job

Model Fit Measures		
Model	R	R <sup>2</sup>
1	0.694	0.481

Note. Models estimated using sample size of N=338.

Model Coefficients - Intention to Become an Entrepreneur				
Predictor	Estimate	SE	t	p
Intercept <sup>a</sup>	1.5536	0.181	8.581	<.001
1. Entrepreneurship offers greater personal fulfillment than traditional employment.				
2 – 1	0.0171	0.149	0.115	0.909
3 – 1	0.1574	0.149	1.059	0.290
4 – 1	0.4287	0.169	2.531	0.012
6. The potential financial rewards of entrepreneurship outweigh the associated risks.				
2 – 1	0.3628	0.228	1.591	0.113
3 – 1	0.5383	0.230	2.343	0.020

4 – 1	0.7745	0.242	3.203	0.001
8. I am comfortable with the uncertainty and challenges associated with starting a new venture.				
2 – 1	0.2754	0.204	1.353	0.177
3 – 1	0.7242	0.209	3.466	<.001
4 – 1	1.0886	0.221	4.925	<.001

<sup>a</sup> Represents reference level.

According to the findings of the analysis in Table 5, autonomy—specifically defined here as how comfortable the respondent is with the uncertainty and challenges associated with starting up a business—was the strongest predictor of the intention to choose a business over a wage-earning job and yielded the highest estimate of 1.0886 and a significant p-value ( $p < .001$ ). This finding indicates that psychological readiness to embrace and take on entrepreneurial risk is the primary factor contributing to career change. The research title “From Mindset to Market” examines mindset and includes various attitudes toward entrepreneurship, but the data show that this particular mindset (i.e., resilience and independence) carries more weight than either financial incentives or personal fulfillment.

On the other hand, financial incentive and personal fulfillment are secondary drivers with relatively weak predictive power. For instance, financial incentive produced a moderately to highly significant impact estimate (0.7745;  $p = .001$ ) while personal fulfillment was the least impactful (0.4287;  $p = .012$ ). The results suggest that while individuals are attracted to wealth and purpose, they are less likely to transition from wage to business solely for those reasons; therefore, the strongest predictor of transitioning from wage to business is how comfortable a person feels with the unpredictable, independent nature of the entrepreneurial settings.

The results from this study suggest that entrepreneurship education and policy should prioritize helping students develop skills related to both autonomy and risk management. Scenario-based training can help students learn to take independent action in uncertain, ambiguous situations by providing them an opportunity to develop specific, time-based actions they can take. Since the entrepreneur’s independence is so important, it may be more effective to provide mentorship and opportunities for students to experience decision-making in uncertain situations than to offer purely financial rewards or messages that encourage pleasure-seeking. It is also important for students to have experience assessing and mitigating risks as they make the transition from being a student to being an entrepreneur; thus, entrepreneurship curricula should include structured risk assessment and mitigation exercises to give aspiring entrepreneurs practice with making calculated risks while remaining committed to long-term goals (Doblas et al., 2024).

The implications of these results are relevant to creating new policies or program designs such as creating a pathway between developing an autonomous mindset and having early access to the market; this would include areas mentioned above such as design-thinking labs, lean startups, rapid prototyping and supervised networking that would help move individuals who are prepared to be autonomous from the ability to have initial business ventures (or pilot projects) into actual business ventures. Legislation could include financing mechanisms (e.g., micro-grants) that would provide financial support during the early action stage and remove or lower the perceived barriers to entry for young entrepreneurs as they transition from contemplation to action; this would encourage that group of individuals who have a high degree of autonomy to take action from their contemplation phase. Future studies will be conducted using longitudinal research designs to assess how well the power of autonomy as a predictor maintains its ability to predict actual entry into the marketplace within five years, and what the appropriate contextual moderators are (e.g. area of study, urban/rural environment, or availability of mentors) that affect the ability of autonomy to predict entry into the marketplace.

#### VI. Significant relationship between Entrepreneurial Attitudes and Career Intentions.

Table 6. Significant relationship between Entrepreneurial Attitudes and Career Intentions

		Attitude Towards Entrepreneurship	Intention to Become an Entrepreneur
Attitude Towards Entrepreneurship	Pearson’s r	—	
	df	—	
	p-value	—	
Intention to	Pearson’s r	0.758***	—

Become an Entrepreneur	df	336	—
	p-value	<.001	—

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$ .

According to the results in Table 6, a strong, positive, and statistically significant correlation exists between entrepreneurial attitudes and career intentions. The calculated Pearson correlation coefficient ( $r = .758$ ) indicated that as people develop negative attitudes towards entrepreneurship, their intention to pursue a career in entrepreneurship will significantly decrease. The p-value was below .001, and the data had 336 degrees of freedom, providing sufficient grounds to reject the null hypothesis and conclude that the correlation is not due to chance. Specifically, the psychological tendency towards innovation and risk-taking (Attitude) will be a strong predictor of an individual's ultimate decision to enter the business world (Intention). Therefore, these results suggest that programs or initiatives that effectively develop a positive entrepreneurial Mindset may increase the number of people who intend to start their own businesses.

This study found a strong connection between entrepreneurial attitudes and intentions to start a business. The strength of this relationship,  $r = 0.758$ , is not only statistically significant but also suggests that changing one's attitude can lead to substantial increases in entrepreneurial intention. These findings help explain why developing an entrepreneurial mindset—by focusing on autonomy, recognizing opportunities, and solving problems proactively—can have a significant impact on students' and early-career individuals' readiness for the workforce (Purwanti et al., 2024). Given the unique characteristics of families and communities in the Philippines, future research should consider measuring cultural aspects of an entrepreneurial mindset and the way these aspects manifest in behavior when evaluating entrepreneurial intention (Dotong & Manalang, 2023). This strong relationship also supports the idea behind this research: mindset-based interventions can positively influence an individual's future career path by increasing entrepreneurial intention.

The results of the attitudinal research indicate that cultivating positive entrepreneurial attitudes must be at the core of entrepreneurship education and workforce development programs. One way that curriculum designers can support students' positive entrepreneurial attitudes is by integrating experiential modules that foster an optimistic yet realistic reflection on the entrepreneurial experience (e.g., exposure to success stories; development of failure tolerance; opportunities for creative problem-solving). Because attitude is a proximal predictor of intention to pursue entrepreneurship, programs need to develop students' entrepreneurial mindset while providing structured methods for taking action (e.g., implementation intentions, milestone planning, and guided opportunities to explore early market entry) to help transition intentions into actual behavior.

Educators and policymakers should adjust their messages and experiences to the context of their local communities (i.e., culture), so that students' positive attitudes toward entrepreneurship are reinforced by credible social validation and support from established institutions (Pyakure, 2024). On a larger policy scale, investing in university-based incubation centers, mentorship networks, and low-barrier funding could help close the gap between students' positive attitudes and their actual entry into the market (which would align the outcomes of entrepreneurship education with workforce needs) in the Philippines. Future research should use longitudinal designs to examine whether the relationship between attitude and intention persists as individuals transition from contemplation to implementation over a five-year period, and to determine which variables facilitate or hinder the transition from intention to actual start-up or early-stage activities.

#### 4. Conclusions

There is a strong correlation between internal psychological drivers of entrepreneurs and external social approval; hence, with regard to their attitude towards entrepreneurship, respondents value their independence and personal fulfillment, but they also have a particular amount of risk tolerance, which determines how favorably they view entrepreneurship vs conventional work. Additionally, the social esteem the local community grants its entrepreneurs is an important aspect of the respondents' professional identity. As it relates to the intent to pursue entrepreneurship, survey findings show that the majority of respondents have realistic career plans, typically using a five-year post-graduation time frame. Although many students appear optimistic about their future and possess a positive mental attitude toward entrepreneurship, their actual level of intent to enter the entrepreneurial marketplace will depend on their cognitive preparedness and the use of an "if-then" implementation plan to help them convert their abstract intent into concrete action.

Social respect for entrepreneurs is strongly related to the amount of family and friend support they receive. The existence of social respect provides a foundation for valuing the profession; yet, it is the tangible support and emotional encouragement from a person's immediate social network that helps convert general attitudes about entrepreneurship into firm intentions to pursue an entrepreneurial career. This relationship then relates to risk perceptions and other motivational factors. Risk tolerance is an important predictor of whether someone will

enter entrepreneurship; those with greater autonomy and personal fulfillment needs generally hold a more positive perception of the risks associated with entrepreneurship, perceiving the possibility of self-actualization as greater than the risks of starting a business.

The study's focus on identifying the primary driving factor in an individual's decision to pursue a career is through predictive power, with personal fulfillment, financial gain, and autonomy being factors. Studies also support that intrinsic drivers such as personal fulfillment and autonomy are typically the main deciding factors for an individual pursuing a venture rather than employment based on their level of self-efficacy. There is a strong correlation between an individual's entrepreneurial attitude and career intention, which is not only linear but also cyclical: as their career intentions become established, they become more sensitive to social validation, which in turn enhances their entrepreneurial mentality and speeds the transition from mentality to market.

## 5. Recommendations

To get a clearer idea of how long-term entrepreneurial attitudes impact actual market entry, future research should shift its focus to longitudinal studies instead of using cross-sectional designs. The data May currently show a correlation between risk and personal fulfillment in one's attitude, however tracking the same individuals for a period of 5 years will show if those same individuals will carry through on their intentions into the form of tangible business startups. Researchers would also have greater opportunity for comparative research by identifying the specific variables/life events that assist or impede movement from the contemplation phase to the actual implementation phase of a new venture in the Filipino context.

Going forward, the resources available to researchers will increase the possibilities for developing a strong foundation for comparative research by providing additional avenues for establishing predictive relationships to determine the strongest psychological driver of entrepreneurship in the Filipino marketplace. Specifically, conducting a series of predictive analyses will identify if Personal Fulfilment, Financial Reward, or Autonomy has the most substantial predictive power for selecting entrepreneurship vs traditional wage-earning activities within the Filipino context. Identifying and establishing this hierarchy will assist educators and policy-makers in developing refined messaging and curricula to more closely align with the core motivations of the potential Filipino workforce.

There needs to be further investigation into how subjective norms play a nuanced role in the highly collectivist and family-oriented nature of Philippine society. Whereas global models of subjective norms have typically focused on perceived behavioral control, researchers have suggested that social endorsement/support by family or friends might be a key social bridge or barrier that mediates between an individual's mindset and their career decision-making. Future research should examine how these social structures interact with institutional supports, such as university incubation centers and government funding, to either strengthen or weaken an individual's perceived ability to achieve success.

Lastly, more research is needed on how self-efficacy moderates the intention-action gap. It is currently unknown if high levels of self-efficacy separate individuals who actively/deliberately seek entrepreneurial opportunities versus those who simply think of it as a vague possibility. Further research should explore the specific 'implementation intentions' and how they help students and early-stage professionals turn positive attitudes into actions in the marketplace, particularly when they have different levels of network access and prior entrepreneurial exposure.

## References

- Baluku, M., Kikooma, J., Otto, K., König, C., & Bajwa, N. (2020). Positive Psychological Attributes and Entrepreneurial Intention and Action: The Moderating Role of Perceived Family Support. *Frontiers in Psychology*, 11. <https://doi.org/10.3389/fpsyg.2020.546745>
- Cahyani, U., Hanafi, S., & Masruri, S. (2022). The Nexus Between University Support and Entrepreneurial Mindset: Does Entrepreneurship Education Matter? *Indonesian Journal of Business and Entrepreneurship*. <https://doi.org/10.17358/ijbe.8.3.351>
- Caliendo, M. and Kritikos, A. (2011). Searching for the Entrepreneurial Personality: New Evidence and Avenues for Further Research. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.1872738>
- Carolis, D. and Litzky, B. (2019). Unleashing the potential of university entrepreneurship education. *New England Journal of Entrepreneurship*, 22(1), 58-66. <https://doi.org/10.1108/neje-04-2019-0022>
- Christina, and Widjojo, H. (2023). A Comprehensive Entrepreneurship Education Model Based on Social Cognitive Theory. *Jurnal Manajemen Teori Dan Terapan | Journal of Theory and Applied Management*, 16(2), 339-355. <https://doi.org/10.20473/jmtt.v16i2.44034>
- Colombelli, A., Panelli, A., & Serraino, F. (2022). A Learning-by-Doing Approach to Entrepreneurship Education: Evidence from a Short Intensive Online International Program. *Administrative Sciences*, 12(1),

16. <https://doi.org/10.3390/admsci12010016>
- Deniz Kahriman, Öztürk. (2016). A Study on Preservice Preschool Teachers' Recycling Intentions in Relation to Parents' Educational Level and Recycling Opportunities. *INT J ENV SCI ED*, 11(6). <https://doi.org/10.12973/ijese.2016.504a>
- Doblas, M., Becaro, J., Sankar, J., Natarajan, V., Yoganandham, G., & Arumugasamy, G. (2024). Testing Integrative Models of the Change Behavior in the Intention to Adopt Cryptocurrency. *Sage Open*, 14(2). <https://doi.org/10.1177/21582440241253542>
- Dotong, E. and Manalang, M. (2023). The Entrepreneurial Intention of Business Students: Applying the Theory of Planned Behavior and Theory of Reasoned Action. *European Journal of Theoretical and Applied Sciences*, 1(5), 21-32. [https://doi.org/10.59324/ejtas.2023.1\(5\).03](https://doi.org/10.59324/ejtas.2023.1(5).03)
- Fernandez, C. (2025). The Truth About Starting a Business. *Stk. Knw. Gaz.*, 1(1). <https://doi.org/10.64591/de73a505>
- Gorgievski, M., Stephan, U., Laguna, M., & Moriano, J. (2017). Predicting Entrepreneurial Career Intentions. *Journal of Career Assessment*, 26(3), 457-475. <https://doi.org/10.1177/1069072717714541>
- Jie, S. and Harms, R. (2017). Cross-Cultural Competences and International Entrepreneurial Intention: A Study on Entrepreneurship Education. *Education Research International*, 2017(1). <https://doi.org/10.1155/2017/9042132>
- Joensuu-Salo, S., Viljamaa, A., & Varamäki, E. (2021). Understanding Business Takeover Intentions — The Role of Theory of Planned Behavior and Entrepreneurship Competence. *Administrative Sciences*, 11(3), 61. <https://doi.org/10.3390/admsci11030061>
- Karimi, S., Biemans, H., Mahdei, K., Lans, T., Chizari, M., & Mulder, M. (2015). Testing the relationship between personality characteristics, contextual factors and entrepreneurial intentions in a developing country. *International Journal of Psychology*, 52(3), 227-240. <https://doi.org/10.1002/ijop.12209>
- Khatib, A., Abo-Rass, F., & Gelkopf, M. (2021). Theory of Planned Behavior. *The Journal of Nervous and Mental Disease*, 210(7), 504-509. <https://doi.org/10.1097/nmd.0000000000001459>
- Kritikos, A. (2022). Personality and Entrepreneurship. In *Handbook of Labor, Human Resources and Population Economics*, 1-20. [https://doi.org/10.1007/978-3-319-57365-6\\_305-1](https://doi.org/10.1007/978-3-319-57365-6_305-1)
- Laguía, A., Jaén, I., Topa, G., & León, J. (2019). University environment and entrepreneurial intention: the mediating role of the components of the theory of planned behaviour / El entorno universitario y la intención emprendedora: el papel mediador de los componentes de la teoría de la acción planificada. *International Journal of Social Psychology Revista De Psicología Social*, 34(1), 137-167. <https://doi.org/10.1080/02134748.2018.1542789>
- Li, S. (2021). Research on the Relationship between Entrepreneurial Self-Efficacy and Entrepreneurial Intention. *Proceedings of Business and Economic Studies*, 4(6), 46-52. <https://doi.org/10.26689/pbes.v4i6.2829>
- Liao, Y., Nguyen, V., Chi, H., & Hiéu, N. (2022). Unraveling the direct and indirect effects of entrepreneurial education and mindset on entrepreneurial intention: The moderating role of entrepreneurial passion. *Global Business and Organizational Excellence*, 41(3), 23-40. <https://doi.org/10.1002/joe.22151>
- Lopes, J., Laurett, R., Ferreira, J., Silveira, P., Oliveira, J., & Farinha, L. (2022). Modeling the predictors of students' entrepreneurial intentions: The case of a peripheral European region. *Industry and Higher Education*, 37(2), 208-221. <https://doi.org/10.1177/09504222221117055>
- Melak, D. and Derbe, T. (2022). Analysis of determinants of youth self-employment career choices. *Journal of Small Business and Enterprise Development*, 29(6), 886-901. <https://doi.org/10.1108/jsbed-10-2021-0435>
- Mokhlis, S., Hussin, N., Nizam, N., Noor, N., & Muslim, N. (2021). Predicting Malaysian university students' intent to pursue retailing career: Applicability of theory of planned behavior. *International Journal of Professional Business Review*, 7(1), e0277. <https://doi.org/10.26668/businessreview/2022.v7i1.277>
- Morales, C. and Holtschlag, C. (2013). Post materialist values and entrepreneurship: a multilevel approach. *International Journal of Entrepreneurial Behaviour & Research*, 19(3), 266-282. <https://doi.org/10.1108/13552551311330174>
- Nayak, P., Joshi, H., Nayak, M., & Gil, M. (2023). The moderating effect of entrepreneurial motivation on the relationship between entrepreneurial intention and behaviour: An extension of the theory of planned behaviour on emerging economy. *F1000research*, 12, 1585. <https://doi.org/10.12688/f1000research.140675.1>
- Purwanti, S., Handayani, P., & Kusdiyanti, H. (2024). The Effect of Entrepreneurship Education and Curriculum

- on Student Entrepreneurial Intention moderated by Student Entrepreneurial Mindset. *Asian Journal of Agricultural Extension Economics & Sociology*, 42(5), 68-81. <https://doi.org/10.9734/ajaees/2024/v42i52415>
- Pyakure, I. (2024). Entrepreneurial Intention among Higher-level Students of Koshi Province, Nepal. *International Journal of Scientific Research in Engineering and Management*, 08(04), 1-5. <https://doi.org/10.55041/ijsem30322>
- Saadat, S., Aliakbari, A., Majd, A., & Bell, R. (2021). The effect of entrepreneurship education on graduate students' entrepreneurial alertness and the mediating role of entrepreneurial mindset. *Education + Training*, 64(7), 892-909. <https://doi.org/10.1108/et-06-2021-0231>
- Şen, H., Yılmaz, V., & Arı, E. (2018). Factors Affecting the Entrepreneurial Intentions of Women Entrepreneur Candidates: A Structural Equation Model. *Journal of Business Research - Turk*, 10(1), 275-293. <https://doi.org/10.20491/isarder.2018.381>
- Shahzad, F. (2019). An Analysis of Internationalization Theories and Behavior of Finnish Retail SMEs in Russia. In *Handbook of Research on Entrepreneurship, Innovation, and Internationalization*, 490-520. <https://doi.org/10.4018/978-1-5225-8479-7.ch019>
- Universari, N. and Budiati, Y. (2017). PERAN GENDER PADA ENTREPRENEURIAL MINDSET DAN ENTREPRENEURIAL MARKETING: STUDI PADA MAHASISWA FAKULTAS EKONOMI UNIVERSITAS SEMARANG. *Jurnal Dinamika Sosial Budaya*, 17(2), 311-322. <https://doi.org/10.26623/jdsb.v17i2.495>
- Wang, W., Tang, Y., Liu, Y., Zheng, T., Liu, J., & Liu, H. (2019). Can Sense of Opportunity Identification Efficacy Play a Mediating Role? Relationship Between Network Embeddedness and Social Entrepreneurial Intention of University Students. *Frontiers in Psychology*, 10. <https://doi.org/10.3389/fpsyg.2019.01342>
- Wardana, L., Narmaditya, B., Wibowo, A., Mahendra, A., Wibowo, N., Harwida, G., ... & Rohman, A. (2020). The impact of entrepreneurship education and students' entrepreneurial mindset: the mediating role of attitude and self-efficacy. *Heliyon*, 6(9), e04922. <https://doi.org/10.1016/j.heliyon.2020.e04922>
- Wibowo, A., Widjaja, S., Utomo, S., Kusumojanto, D., Wardoyo, C., Narmaditya, B., ... & Wardana, L. (2022). The role of entrepreneurial education and Islamic values matter. *International Journal of Evaluation and Research in Education (Ijere)*, 11(3), 1607. <https://doi.org/10.11591/ijere.v11i3.22264>
- Wijetunge, W., Yusoff, S., Azam, S., & Tham, J. (2023). Bridging Intention-Behavior Gap through Implementation Intention: Conceptual Insight. *International Journal of Research and Innovation in Social Science*, VII(XI), 1627-1635. <https://doi.org/10.47772/ijriss.2023.7011127>
- Yang, Z. (2024). Entrepreneurial Education and Intention: Basis for an Enhanced Entrepreneurial Mindset among Engineering Students at Guandong Industry and Trade Vocational School, China. *Journal of Business and Management Studies*, 6(3), 189-223. <https://doi.org/10.32996/jbms.2024.6.3.17>
- Yusof SWM, Jabar J, Murad MA, and Ortega RT (2017). Exploring the cultural determinants of entrepreneurial success: The case of Malaysia. *International Journal of Advanced and Applied Sciences*, 4(12), 287-297. <https://doi.org/10.21833/ijaas.2017.012.048>

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# Scholar-Teachers of Middle School Physics and the Mechanism of Their Teaching-Research Transformation

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## Abstract

Through a series of questionnaires, this research mainly analyzed the differences in knowledge levels and the issue of teaching-research transformation among middle school physics teachers with different educational background. It is found that the relatively insufficient reserve of interdisciplinary knowledge is common across all academic qualification stages, and this phenomenon is particularly prominent among junior high school physics teachers. Master's degree physics teachers have the lowest teaching-research transformation ability, which is related to their strong academic utilitarianism. Moreover, master's degree physics teachers show the most significant academic utilitarianism, on the base of influenced by the professional title environment, this characteristic is more prominent among female teachers group. Based on the above findings, this research constructs a "Teaching-scholar model" for middle school physics teachers and puts forward relevant practical suggestions. It is expected to provide theoretical and practical references for enhancing the matching degree between the professional abilities of middle school physics teachers and their academic qualification levels.

**Keywords:** middle school physics teachers, teaching-research transformation, Master's degree

## 1. Introduction

In 2022, the Ministry of Education and seven other departments jointly issued the *New Era Strong Plan for Basic Education Teachers*, which proposed cultivating a group of primary and secondary school teachers and leading talents at the master's level (Ministry of Education of the People's Republic of China and Other Seven Ministries/Commissions, 2022). In August 2024, the introduction of a policy stating that "secondary school teachers should be primarily at the postgraduate level" (Xinhua News Agency, 2024) further confirmed that teachers with postgraduate degrees generally possess greater advantages in subject knowledge, research competence, and educational attainment (Li, G. F., 2015; Hao, Q. L., Liu, Y. Y., & Hua, W. Q., 2016; Zhang, Z. S., 2015). Although the number of secondary school teachers with postgraduate degrees has increased year by year, problems such as "high qualifications but low ability" remain widespread, attributable to factors including knowledge spillover (Lee, W. S., 2018), lack of teaching experience (Zakharov, A., Tshenko, G., & Carnoy, M., 2016), and insufficient investment in teaching (Buddin, R., & Zamarro, G., 2009).

The Fifth Plenary Session of the 19th Central Committee of the Communist Party of China called for "building a high-quality education system," and the report of the 20th National Congress further emphasized "accelerating the construction of a high-quality education system" (Qu, T. H., & Gong, X. L., 2024). The shift from the "Strong Plan for Basic Education Teachers" to the "postgraduate-level as the primary qualification" policy responds to the national demand for high-quality education development. However, the facts outlined above indicate that simply increasing the proportion of secondary school teachers with postgraduate degrees is not a quick fix for accelerating the high-quality development of the teaching workforce or for serving the pursuit of high-quality education. Instead, a gradual transition is needed — from "emphasizing quantity" to "emphasizing

both quantity and, more importantly, quality.”

In this context, “quality” hinges on secondary school teachers with postgraduate degrees possessing a strong “teaching-research transformation capability.” In this paper, “teaching-research transformation capability” refers to the ability to achieve mutual transformation between teaching and research. It involves not only accurately identifying research topics from teaching practice but also promptly translating research outcomes into teaching actions that yield tangible benefits. Given that physics is an experimental natural science, the teaching-research transformation capability of physics teachers requires particular scrutiny, especially when examined in light of current issues concerning academic qualifications.

## 2. Research Design

### 2.1 Research Purpose

Since there is currently lack of literature focusing on middle school physics teachers that links research and teaching, this area of study is still in the exploratory rather than verification phase — it is not yet possible to put forward specific hypotheses. Instead, by connecting it to the current context of educational background development among middle school teachers, this research focuses on addressing three key questions:

How does teaching-research transformation capacity among middle school physics teachers?

How are the scholarly attributes of middle school physics teachers manifested?

How can one become a scholar-teacher with strong teaching-research transformation capabilities?

Once the first question is clarified, the answer to the second question will have factual support. Addressing the third question amounts to providing actionable pathways related to the answer of the second question, building on its findings. These three questions are progressive and form a complete chain of questions. However, due to space constraints and given the nature of this exploratory study, this research needs to focus primarily on the first question. Its aim is to identify the key issues in teaching-research transformation among middle school physics teachers with different educational backgrounds, while avoiding redundancy.

### 2.2 Process and Train of Thought

Guided by systems science, this study distributed multiple sets of questionnaires to physics teachers in middle schools in Chongqing, including two categories: the main questionnaire and sub-questionnaires. The main questionnaire is a scale-based questionnaire, while the sub-questionnaires are general questionnaires. After the main questionnaires were collected, they underwent data cleaning and passed the reliability and validity tests. Subsequently, starting from the assessment of cognition in four dimensions — discipline, education, practice, and culture — this study accurately identified the educational background associated with existing issues through statistical methods such as significance calculation, effect size calculation, one-way ANOVA test, and post-hoc comparison. Due to space limitations, subsequent analysis will focus solely on teachers with this specific educational background, concentrating on investigating their teaching-research transformation issues.

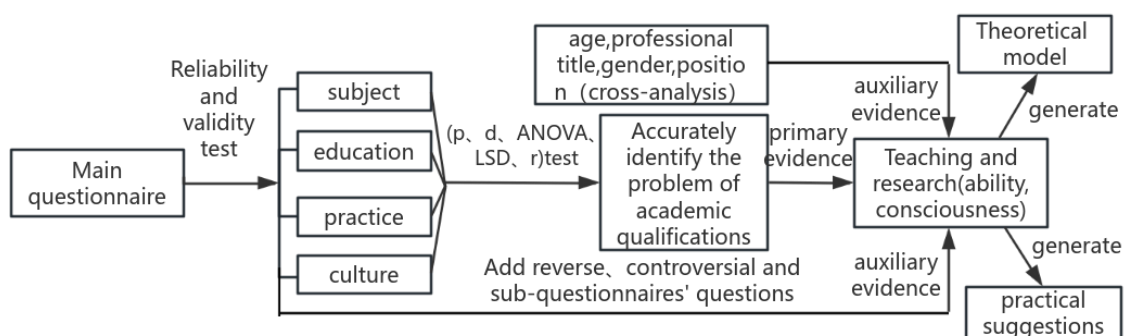


Figure 1. Based on the Statistical Analysis Framework of Systems Science

On the basis of the aforementioned statistical methods as the primary evidence, two auxiliary evidence approaches were designed to address challenges such as the inability to directly calculate the validity of sub-scales and the small sample size of teachers with doctoral degrees: First, cross-analysis incorporating variables such as age, professional title, and gender was conducted to verify potential teaching-research transformation issues among teachers with the specific educational background from multiple perspectives. Second, the controversial and reverse questions in the main questionnaire that correspond to the sub-scales, the

cognitive data in the four dimensions, and the data from certain questions in the sub-questionnaires (outside the main questionnaire) can also serve as auxiliary evidence, forming a logical closed loop. The combination of primary and auxiliary evidence is analogous to “a main body with two wings,” ensuring that the final conclusions generated possess both theoretical and practical value.

### 2.3 Methods and Tools

This study developed the “Questionnaire on Scholar Attributes of Middle School Physics Teachers” (main questionnaire), which was distributed to physics teachers in middle schools in Chongqing via the online survey platform Wenjuanxing. A 100-point sliding scale was used instead of the traditional Likert scale in the questionnaire design, significantly improving data accuracy and granularity. Except for Questions 1 to 5, which were single-choice questions corresponding to variables such as position, educational background, professional title, gender, and age, all other questions adopted this 100-point sliding scale format. A stratified random sampling strategy was employed for teachers with undergraduate and postgraduate educational backgrounds. For postgraduate teachers (including those with master’s and doctoral degrees), simple random sampling was used. From August 1st to August 11th, a total of 500 questionnaires were collected. After excluding abnormal data — such as responses from non-middle school physics teachers, teachers under 20 years old, teachers who obtained excessively high professional titles at an unusually young age (senior titles obtained between 21 and 25 years old), and responses completed in an excessively short time (less than 30 seconds) — 347 valid questionnaires remained. Subsequently, using SPSS (Version 29.0), Questions 6 to 15 were treated as the overall scale for reliability and validity analysis. The calculated reliability coefficient was 0.87, and the KMO value was 0.89, both reaching an excellent level. And even this result was achieved under the premise that 15 were reverse-worded items and 10 were highly controversial items included as interference factors.

Then, three sub-scales were set up, namely the *Knowledge Literacy Sub-scale*, the *Competence Literacy Sub-scale*, and the *Affective-Attitudinal Sub-scale*. Among them, the Knowledge Literacy Sub-scale included Questions 6 to 9 (4 items in total), with a reliability coefficient of 0.85 and a validity coefficient of 0.82; the *Competence Literacy Sub-scale* included Questions 11 to 12 (2 items in total), with a reliability coefficient of 0.78; and the *Affective-Attitudinal Sub-scale* included Questions 13 and 14, with a reliability coefficient of 0.81. However, since the latter two sub-scales only contained 2 items each, their KMO values were consistently 0.5, making direct calculation of their validity impossible. Given the special nature of Questions 10 and 15, if they were directly included in the corresponding sub-scales, the reliability and validity would inevitably be relatively low, resulting in little reference value. Therefore, these two questions need to be placed outside each sub-scale and used as auxiliary evidence. Precisely because of the lack of validity analysis, the interpretability of these sub-scales and questions must be verified through statistical methods such as significance testing, effect size calculation, and multi-dimensional cross-analysis, as well as data from external questionnaires.

### 2.4 Sample Analysis

After conducting stratified random sampling, simple random sampling, and a series of rigorous data cleaning processes, among the 347 questionnaires currently collected, 198 were from teachers with postgraduate degrees and 149 from those with undergraduate degrees (before data cleaning, 250 questionnaires were collected for each group). The larger number of remaining postgraduate samples is related to the generally more careful questionnaire completion by this group. Postgraduate degrees include master’s and doctoral degrees, with 175 samples from master’s degree holders, accounting for approximately 88.3% — this basically aligns with the current situation in China where doctoral-degree-holding middle school teachers are extremely scarce, far fewer than those with master’s degrees. Due to the scarcity of doctoral samples, conclusions related to this group need to be treated with caution, and focus should be placed on the comparative study of undergraduate and master’s degree-holding teachers. There are generally large gaps between undergraduate and doctoral degree holders in various aspects. Only a few key issues regarding this phenomenon will be highlighted here, without redundant elaboration.

## 3. Research Findings

### 3.1 Interdisciplinary Limitations and Problematic Educational Background

Zhu Shuhua, Tang Zejing, and other scholars argue that teachers’ knowledge composition generally includes subject-specific knowledge, conditional knowledge, practical knowledge, and general cultural knowledge (Zhu, S. H., Tang, Z. J., & Wu, X. W., 2012). This theory not only serves as an assessment indicator for teacher qualification in China, but also forms the basis for measuring the academic knowledge level of teacher-scholars in this study. These four components correspond to Questions 6 to 9 in the questionnaire as follows:

- A1. I possess substantial subject knowledge in middle school physics (beyond textbook content but still within the scope of the examination syllabus);
- A2. I have rich interdisciplinary knowledge related to middle school physics, such as mathematical modeling

and engineering technology;

A3. I have mastered a variety of physics-specific educational and teaching methods, such as ideal model construction and isolation analysis;

A4. I know the specific steps to apply the innovative middle school physics teaching methods I have conceived to actual teaching practice and achieve good teaching results.

Subsequently, the serial number corresponding to each proposition, the calculated average value, and the corresponding teachers' educational backgrounds were organized into Table 1. It should be noted here that since general cultural knowledge is not limited to a specific discipline, "interdisciplinarity" is used as an equivalent measure to assess teachers' general cultural knowledge.

Table 1. The Impact of Educational Background on the Cognitive Characteristics of Scholar-Teachers in Middle School Physics (Two Decimal Places Retained, Mean Value as Default)

Educational background	A1	A2	A3	A4
Undergraduate	66.62	62.09	66.49	68.38
Master	71.37	65.45	69.45	71.49
Doctor	78.70	74.96	77.96	80.48

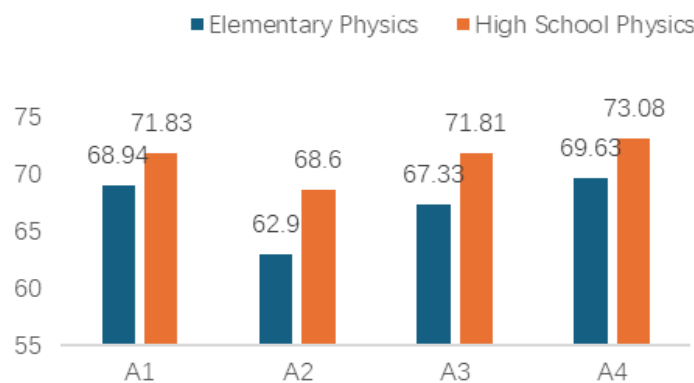


Figure 2. The Impact of Physics Teaching Stages on Various Indicators of Cognitive Characteristics

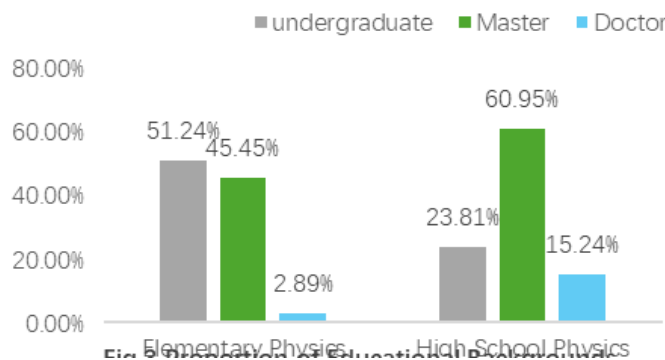


Figure 3. Proportion of Educational Backgrounds Among Jouior and Senior High School Physics Teachers

As can be seen from Table 1, the higher the educational background, the higher the mean value corresponding to each cognitive indicator. However, it is also found that the mean value of A2 across all educational backgrounds is the lowest horizontally. Furthermore, in Figure 2, the value of A2 is the lowest across different teaching stages. These findings indicate that middle school physics teachers generally lack interdisciplinary cognition. Combined with the data in Figure 3, it can be inferred that the relatively low level of interdisciplinary knowledge among junior high school physics teachers is associated with their relatively low proportion of high educational

backgrounds. It will also be found from Table 2 that there are extremely significant statistical differences in each cognitive indicator among teachers with different educational backgrounds ( $p < 0.01$ ). As shown in Table 3, the post-hoc comparison (LSD) analysis reveals that doctoral-degree-holding teachers exhibit significant differences from teachers with other educational backgrounds across all dimensions. However, between master's and undergraduate degree-holding teachers, a significant difference is only observed in the dimension of A1 (subject knowledge). Although the mean values of master's degree-holding teachers are higher in other dimensions, the differences do not reach statistical significance.

In addition, the effect sizes for the undergraduate vs. doctoral group were all above 0.6, which is generally regarded as a "large effect" in the field of education. The effect sizes for the master's vs. doctoral group ranged from 0.4 to 0.6, which falls exactly into the category of "medium effect". For the undergraduate vs. master's group, except for A1 (subject knowledge) with an effect size ranging from 0.2 to 0.4 (classified as a "small effect"), the effect sizes of all other indicators were below 0.2. From this, it can be confirmed that although a master's degree can bring improvement in subject knowledge, its advantages in teaching methods, practical application, and interdisciplinary knowledge are not significant. Therefore, it is hypothesized here that the issue of teaching-research transformation is most prominent among teachers with a master's degree, and targeted analysis is required to verify this hypothesis.

Table 2. One-way ANOVA test results (Merely education background such an element)

Educational Background	A1	A2	A3	A4
F	6.369	5.092	5.095	6.073
p	0.002	0.007	0.007	0.003

Table 3. Significance of Various Cognitive Indicators Across Different Educational Backgrounds

Items	Undergraduate vs Master	Undergraduate vs Doctor	Master vs Doctor
A1	0.016*(0.27)	0.002**(0.68)	0.045*(0.48)
A2	0.120(0.18)	0.002**(0.73)	0.019*(0.51)
A3	0.133(0.17)	0.002**(0.70)	0.017*(0.56)
A4	0.102(0.18)	<0.001***(0.82)	0.009**(0.57)

Note: \* indicates  $p < 0.05$ ; \*\* indicates  $p < 0.01$ . Values in parentheses are Cohen's d values, obtained from independent samples t-tests.

### 3.2 Dilemmas in Teaching-Research Transformation for Teachers with a Master's Degree

#### 3.2.1 Competency Question

The Competence Literacy dimension corresponds to Questions 10 to 12:

B1. To what extent do you believe that academic outputs (such as papers and monographs) published by middle school physics teachers reflect their teaching competence?

B2. How would you assess your own research competence? (Focused on physics teaching-research work)

B3. How would you assess your own physics teaching competence?

Following the same procedure as above, the relevant data were organized into Table 4. Additionally, the correlation coefficient between B2 and B3 was calculated, and a comparative and cross-analysis was conducted with the B1 values. Among these analyses, the examination of the correlation between B2 and B3 is particularly critical, as it serves to determine whether middle school physics teachers have achieved the parallel development of teaching and research in the process of teaching-research transformation.

Table 4. The Impact of Educational Background on the Competence Characteristics of Scholar-Teachers in Middle School Physics

Educational background	B1	B2	B3	B2, B3 correlation coefficient
Undergraduate	62.58	62.36	69.03	0.70
Master	61.72	65.98	72.52	0.57

Doctor	68.17	70.09	76.83	0.59
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Table 5. Multiple Comparisons Based on LSD Test

Capability Dimension	Comparison	p	Significant or not	Cohen d
B2: Research competence	Undergraduate vs Master	0.043	Yes	0.23
	Undergraduate vs Doctor	0.011	Yes	0.56
	Master vs Doctor	0.114	No	0.37
B3: Teaching competence	Undergraduate vs Master	0.039	Yes	0.23
	Undergraduate vs Doctor	0.012	Yes	0.55
	Master vs Doctor	0.131	No	0.36

As can be seen from Table 4, the higher the educational background, the higher the scores of B2 and B3. Through ANOVA (Analysis of Variance) testing, it was found that there was no statistical significance in the responses to Question B1 among teachers with different educational backgrounds ( $p > 0.05$ ), but significant differences were observed in the responses to Questions B2 and B3 ( $p < 0.05$ ). Subsequently, LSD (Least Significant Difference) multiple comparison analysis was conducted, and the relevant information was organized into Table 5. The results showed that there were no significant differences in research competence (B2) or teaching competence (B3) between teachers with a master's degree and those with a doctoral degree. However, the effect sizes for these two dimensions (B2 and B3) between the master's and doctoral groups were both larger than those for the undergraduate vs. master's groups where significant differences were detected ( $p < 0.05$ ).

A significant factor contributing to this result is the small size of the doctoral sample ( $N=23$ ). This leads to a tendency for the p-value in the master's vs. doctoral comparison to be relatively high — by contrast, an excessively large sample size would easily result in an extremely low p-value. Although the doctoral sample size in the previous analysis was the same as the current one ( $N=23$ ), it still maintained relatively high statistical significance in all cognitive dimensions when compared with the master's sample. Maybe this is partially related to its higher reliability and validity. Since the effect size for the master's vs. doctoral group is relatively large, it can still be stated that there are meaningful differences between these two groups, and the magnitude of these differences is greater than that between the undergraduate vs. master's group. This is almost consistent with the earlier finding that, across all cognitive dimensions, the effect size for the master's vs. doctoral group is larger than that for the undergraduate vs. master's group.

Correlation analysis shows that the teaching-research transformation ability of master's-degree-holding middle school physics teachers (with a correlation coefficient  $r=0.57$  between B1 and B2) is lower than that of undergraduate-degree-holding teachers ( $r=0.70$ ) and doctoral-degree-holding teachers ( $r=0.59$ ). This indicates that although master's-degree-holding teachers are superior to undergraduate-degree-holding teachers in terms of competence, their teaching-research transformation ability is relatively low. This may explain why, as mentioned earlier, master's-degree-holding teachers have no significant advantages over undergraduate-degree-holding teachers in all cognitive dimensions except subject knowledge. This may still be partially related to the tendency of "valuing theory over practice". Additionally, it is also associated with their lowest score in B1, which implies that due to their relatively weak teaching-research transformation ability, master's-degree-holding teachers may hold a more pessimistic attitude than undergraduate and doctoral-degree-holding teachers regarding whether the academic achievements obtained by teachers can effectively reflect their teaching competence.

Additionally, the B1 score of doctoral-degree-holding teachers is significantly higher than that of undergraduate-degree-holding and master's-degree-holding teachers. Combined with Table 3 mentioned earlier, the difference between doctoral-degree-holding teachers and those with other educational backgrounds — particularly in A4 (practical knowledge) — is the most significant. Furthermore, as observed in Figure 9 (discussed later), doctoral-degree-holding middle school physics teachers have more internship experience. From this, it can be roughly inferred that more internship experience fosters a stronger awareness of teaching-research transformation among doctoral-degree-holding teachers, leading them to hold a more optimistic attitude toward the aspect addressed in B1 compared to teachers with other educational backgrounds.

Table 6. The Impact of Professional Titles on the Correlation Coefficients of B2 and B3

Professional Title	Junior	intermediate	Senior
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Correlation coefficient	0.69	0.49	0.64
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Table 7. The Impact of Age on the Correlation Coefficients of B2 and B3

Age	21-25	26-30	31-40	41+
Correlation coefficient	0.58	0.68	0.55	0.76

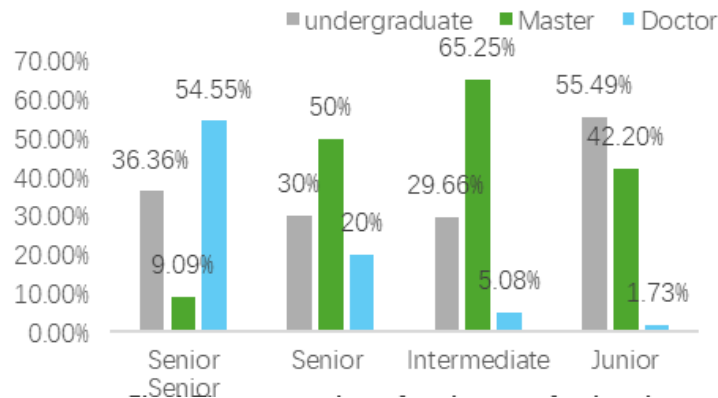


Figure 4. The Proportion of Various Professional Titles and Educational Qualifications at All Levels

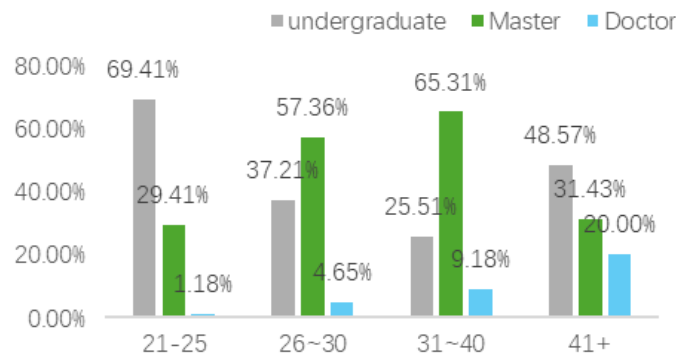


Figure 5. The Proportion of Different Age Groups and Educational Levels

Subsequently, through multi-dimensional cross-analysis of factors such as professional titles and age with the correlation coefficients of B2 and B3, it was found that master’s-degree-holding middle school physics teachers not only have the lowest teaching-research transformation ability but also align with the lowest segments of the aforementioned four-dimensional correlation coefficients.

In Table 6, the correlation coefficient for teachers with intermediate professional titles is the lowest, which corresponds to the relatively highest proportion of master’s-degree-holding physics teachers among those with intermediate professional titles (as shown in Figure 4).

In Table 7, the correlation coefficient for teachers aged 31–40 is the lowest, which corresponds to the relatively highest proportion of master’s-degree-holding teachers in the 31–41 age group (as shown in Figure 5).

In Table 8, the correlation coefficient for male middle school physics teachers is relatively low, which corresponds to the relatively larger proportion of master’s-degree-holding teachers among male teachers (as shown in Figure 6).

Also in Table 8, the correlation coefficient for senior high school physics teachers is relatively low, which corresponds to the relatively larger proportion of master’s-degree-holding teachers among senior high school physics teachers (as shown in Figure 3).

In whichever dimension — professional title, age, gender, or teaching position — master’s-degree-holding teachers account for the largest proportion, the overall teaching-research transformation ability of that group is the lowest. This indicates that not only do master’s-degree-holding teachers have the lowest teaching-research transformation ability, but this characteristic is less influenced by the aforementioned factors than by educational background.

Table 8. The Impact of Gender and School Segments on the Correlation Coefficients of B2 and B3

	male	female	Elementary Physics	High school physics
Correlation coefficient	0.60	0.67	0.64	0.63

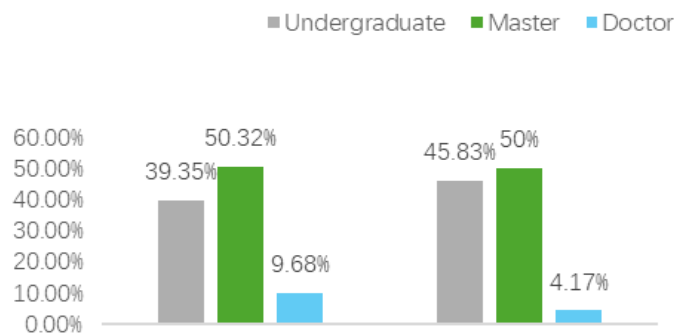


Figure 6. Proportion Distribution of Various Educational Backgrounds Across Different Genders

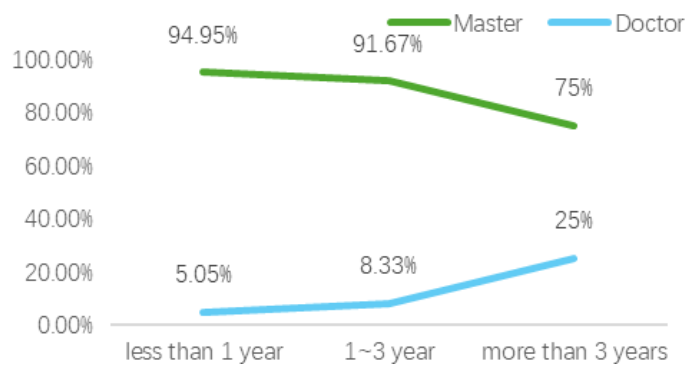


Figure 7. Comparison of Internship Experience Between Teachers with Master’s and Doctoral Degrees

To understand why master’s-degree-holding physics teachers have the weakest teaching-research transformation ability? As can be seen from Table 9 below, these teachers have the strongest motivation to produce academic outputs solely for the purpose of professional title evaluation. This may be closely related to the fact that master’s-degree-holding teachers have the lowest correlation coefficient between B2 and B3 — even much lower than that of undergraduate-degree-holding teachers. After all, the more they overinvest in academic research for professional title evaluation (devoting more energy to publishing papers, competing for projects, and other similar tasks), the less time they have left for daily teaching. This makes it harder for their teaching skills to improve, ultimately leading to low teaching-research transformation ability.

Subsequently, a survey was conducted among 188 middle school physics teachers who hold a master’s degree (among whom 7.98% also hold a doctoral degree). The relevant data were organized into Figure 7, which reveals that before formally taking up middle school physics teaching positions, the more internship experience related to physics teaching a segment has, the lower the relative proportion of master’s-degree-holding teachers — and the higher the proportion of doctoral-degree-holding teachers. This may imply that doctoral-degree-holding physics teachers accumulated more relevant internship experience before and after pursuing their doctoral degrees. During their longer internship periods, they were able to convert their “research capacity” into

“teaching capacity,” thereby enhancing the effectiveness of their teaching-research transformation.

### 3.2.2 Consciousness Problem

Affective Attitudes corresponds to Questions 13 to 15:

C1. To what extent do you love the physics teaching career you are engaged in?

C2. To what extent do you enjoy conducting in-depth thinking and using specialized research methods to study issues related to physics teaching?

C3. To what extent is all the teaching-research work you do — work that requires the production of academic outputs — solely for the purpose of professional title evaluation?

Following the same procedure as above, the relevant data were organized into Table 9. The correlation coefficient between C1 and C2 was calculated to analyze its impact on teachers’ teaching-research transformation ability. C3 is key to measuring teachers’ awareness of teaching-research transformation, as it examines whether teachers’ motivations for research and teaching are pure.

Table 9. Impact of Educational Background on Scholarly Emotional Characteristics of Middle School Physics Teachers

Educational background	C1	C2	C3	C1, C2 Correlation coefficient
Undergraduate	73.32	70.25	54.3	0.62
Master	76.74	71.79	58.88	0.72
Doctor	81.43	78.09	56.04	0.72

Table 10. Statistics of Effect Sizes Among Groups Based on the LSD Test

Educational background	C1	C2	C3
Undergraduate vs Master	0.18	0.09	0.20
Undergraduate vs Doctor	0.49	0.52	0.09
Master vs Doctor	0.32	0.41	0.11

Analysis based on Table 9 shows that C1, C2, and their corresponding correlation coefficients all increase with the improvement of educational background. However, the C3 value of teachers with a master’s degree is the highest, which is correlated with the lowest B1 value of master’s-degree-holding teachers as presented in Table 4. This phenomenon may be attributed to strong academic utilitarianism: such teachers do not apply their achievements to solving teaching problems or demonstrating their teaching competence, but solely to pursuing professional rank promotion. For master’s-degree-holding teachers, their C1 and C2 values fall between those of undergraduate-degree-holding and doctoral-degree-holding teachers, yet they are still higher than the C3 value of undergraduate-degree-holding teachers. In other words, master’s-degree-holding middle school physics teachers not only demonstrate greater passion for scientific research and teaching than their undergraduate-degree-holding counterparts, but also exhibit a higher level of utilitarianism — engaging in teaching-research activities merely for the sake of professional title evaluation — compared to undergraduate-degree-holding teachers. Therefore, a hypothesis is put forward here: this so-called “passion” (which is higher than that of undergraduate-degree-holding teachers) may be more reflected as a form of extrinsic motivation rather than intrinsic motivation. To verify this point, further analysis below is required.

Through ANOVA and the associated LSD test, it was found that different educational backgrounds exhibited weak significance in shaping teachers’ perceptions of C1 and C2 ( $0.05 < p < 0.1$ ). Furthermore, the significance was even weaker for C3 ( $p > 0.1$ ). Compared with undergraduate-degree-holding teachers, doctoral-degree-holding teachers only showed statistical significance in C1 and C2 ( $p < 0.05$ ), while no significant differences were observed between other groups. In particular, there were no significant differences between any groups in terms of motivation for professional title evaluation.

To further uncover underlying issues, independent samples t-test was still employed here, and the relevant effect size calculations were organized into Table 10. It can be observed that the effect size between undergraduate and master’s-degree-holding groups was the lowest for both C1 and C2, lower than that between master’s and doctoral-degree-holding groups. This indicates that from the undergraduate to the master’s level, there was no practically significant improvement in middle school physics teachers’ passion for teaching and research. With a

value close to 0.2, C1 may barely be interpretable (suggesting a marginal improvement in teaching enthusiasm); however, C2 was less than 0.1, meaning that the research enthusiasm of master’s-degree-holding middle school physics teachers had barely seen any practical improvement compared to their undergraduate counterparts. This finding corresponds to the minimal difference in the mean value of C2 between undergraduate and master’s-degree-holding teachers shown in Table 9.

In contrast, C3 had the largest effect size ( $d = 0.2$ , consistent across all comparison groups), indicating that from the undergraduate to the master’s level, teachers’ academic utilitarianism not only increased but also this increase held the most practical significance. Therefore, the above analysis further confirms that the strong extrinsic motivation of master’s-degree-holding teachers in research would relatively weaken their intrinsic motivation, which has become a key psychological factor contributing to their low teaching-research transformation capacity. Nevertheless,  $d = 0.2$  remains relatively low. Since the issue involves professional title evaluation, greater consideration must be given to the influence of the professional title environment in their respective institutions.

Table 11. Mean Scores of C3 Across Various Professional Title Levels

Professional title	Junior	intermediate	Senior
Average score	56.62	56.72	55.65

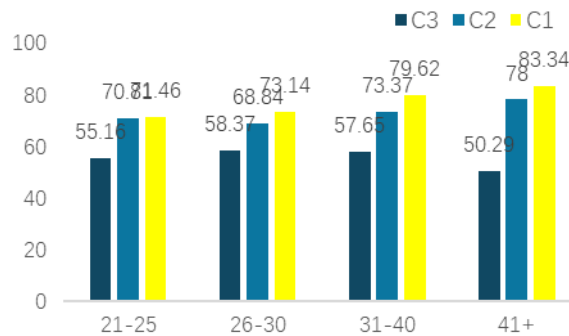


Figure 8. Emotional Attitude Performance of Teachers Across Age Groups

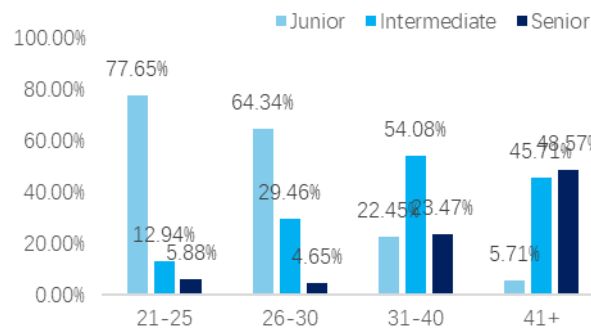


Figure 9. Proportion of Teachers’ Professional Titles Across Age Groups

As shown in Table 11, physics teachers with intermediate professional titles have the highest C3 values, while those with senior professional titles have relatively lower C3 values than the previous two groups. It can be generally observed that teachers at or around the intermediate professional title level, who are in a period of rapid career development, have the strongest motivation to produce results through teaching-research activities and even achieve professional rank promotion. In contrast, C3 values are the lowest among teachers with senior professional titles. This largely indicates that after achieving the ultimate goal of professional title evaluation, many teachers experience a significant decline in motivation in this regard. Two scenarios may arise: first, they suffer from career burnout, neglect teaching-research work, and see a deterioration in their sense of innovation and thinking abilities; second, they become more rational, rely less on achievements to demonstrate their

teaching competence, and adopt a more unadulterated attitude towards their work.

Combined with the findings in Figure 7, it is noted that C1 values are higher than C2 values across all age groups, indicating that, overall, teachers' passion for teaching is greater than that for research itself. Furthermore, both C1 and C2 values increase slowly with age, reaching the highest level among teachers above 41 years old. Based on this, it can be roughly determined that the second scenario (becoming more rational and adopting a purer attitude) is more common.

An additional survey was conducted among 302 middle school physics teachers, revealing that 49.34% of the teachers reported their institutions had introduced requirements for paper publication starting from the application for intermediate professional titles. In contrast, the proportion was only 13.25% for those starting from the primary title application, and 37.09% for senior associate title applications. Obviously, the proportion is the highest for the intermediate title level — which largely explains why middle school physics teachers with intermediate professional titles generally have the strongest academic utilitarian motivation.

Findings from Figure 10 further show that C3 values are nearly the highest among teachers aged 31–40. Although slightly lower than those aged 26–30, there is little difference in C3 between the two age groups. Furthermore, coincidentally, the proportions of teachers with intermediate professional titles and master's degrees are both relatively the highest in the 31–40 age group (see Figures 9 and 5). This means that, on the premise that middle school physics teachers with master's degrees generally have strong academic utilitarian motivation, if we investigate the potential issues regarding the transformability of achievements hidden within this group, screening based on the two variables (the 31–40 age group and intermediate professional titles) is likely to reveal more cases where achievements are divorced from teaching practice.

Additionally, this study also examined gender-based differences in academic utilitarianism among middle school physics teachers. The measurement results showed that the mean C3 values for male and female teachers were 54.63 and 58.13, respectively. For male teachers, C1 (teaching enthusiasm) stood at 78.37 and C2 (research enthusiasm) at 72.94 — both higher than the corresponding values for female teachers, which were 73.34 (C1) and 70.39 (C2). This indicates that male middle school physics teachers generally have greater interest in teaching and research than their female counterparts. Female teachers exhibit less intrinsic motivation, which largely corresponds to their relatively higher level of academic utilitarian motivation (evidenced by  $C3 = 58.13 > 54.63$ ).

#### **4. Research Implications**

Firstly, this study preliminarily defined the concept of teaching-research transformation. Then, drawing on research on the “teacher-scholar” model by scholars such as Tang Bowen and Ernest Boyer, the issue of academic drift was identified. While this phenomenon primarily occurs in higher education, its influence extends to middle schools through teacher education programs. Based on this, a definition of “academic alienation” was proposed herein, emphasizing that the problem of teaching-research transformation in middle schools requires greater attention. Through a series of surveys, it was found that middle school physics teachers with higher educational backgrounds demonstrate stronger performance in four dimensions of knowledge — subject-specific knowledge, pedagogical knowledge, practical knowledge, and interdisciplinary knowledge — along with enhanced teaching and research capabilities, and a deeper passion for teaching and research. This indicates that higher educational backgrounds bring positive impacts to teachers in various aspects; yet, there are potential risks of “academic alienation.”

Beyond the relatively weak interdisciplinary knowledge among middle school physics teachers (especially those in junior high schools), which is a common issue across all educational backgrounds, the low teaching-research transformation capacity and strong academic utilitarian motivation of middle school physics teachers are primarily observed in the master's degree group. In response to the above findings, and building on the preliminary definition of teaching-research transformation, a scholar model was constructed herein, and relevant suggestions were put forward.

##### *4.1 Model Construction*

Based on the theoretical model in Figure 10, individuals should develop their personal literacy in teaching-research transformation on the basis of the coordinated development of disciplinary, teaching, practical, and cultural cognition. They need to establish and enhance the teaching-research transformation capacity guided by the principle of “promoting teaching through research and defining research by teaching,” as well as the teaching-research transformation awareness rooted in the concept of “taking teaching as the foundation and research as the means” — thereby combating academic alienation with the “integration of teaching and research.”

On a personal level, teaching-research transformation serves to strengthen one's dual attributes as a teacher and a scholar, and embodies the scientific outlook on development that emphasizes the integration of teaching and

research. Specifically, the principles of “defining research by teaching” and “taking research as the means” demonstrate a scholarly attitude, while “promoting teaching through research” and “taking teaching as the foundation” reflect the responsibility of nurturing students. When these two attributes (teacher and scholar) are developed to the utmost, one will possess the qualities of both an educator and a scientist: not only can they uphold the purity of truth like a scientist, but they can also fulfill the mission of “fostering virtue and nurturing people” like an educator — setting an example for students as both excellent scientist and outstanding educators.

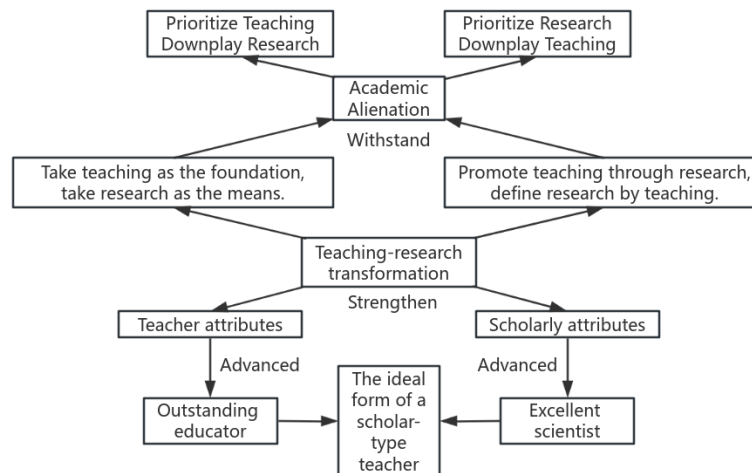


Figure 10. Growth Model of Middle School Physics Scholar-Teachers Based on Teaching-Research Transformation

Rooted in experiments, physics is the crystallization of wisdom forged through the painstaking efforts of countless physicists over centuries. This fact determines the necessity of integrating the scientist spirit into middle school physics teaching, embodying the scholarly attributes that physics teachers ought to possess. For instance, Li Xuan et al. argue that integrating the scientist spirit into middle school physics education is an essential practice to fulfill the fundamental task of “fostering virtue and nurturing people” (Li, X., Qiu, S. Q., Yang, D. C., et al., 2025).

Middle school students are in the critical stage of developing their outlook on life, values, and worldview. Compared with the scientist spirit, the integration of the educator spirit is more characterized by a tacit nature. This requires transcending the paradigms of scientism and cognitivism on this basis, exploring the humanistic values of the physics discipline, and highlighting the educator’s essence that emphasizes the parallel development of science and humanity. For example, Li Wei et al. endow the scientist spirit with greater educational significance, believing that in addition to the rationality of seeking truth from facts, the scientist spirit should also encompass the humanistic qualities of patriotism and dedication, as well as the social attributes of collaboration and educational commitment (Li, W., Guo, X. Y., & Xing, H. J., 2023).

The organic integration of these two spirits represents the conceptual sublimation of teaching-research transformation. Therefore, only under the guidance of scholar-teachers can physics play its role in shaping souls and nurturing people; only through the integration of teaching and research can the separation of the two be avoided; and only by implementing teaching-research transformation can middle school physics teachers achieve growth as scholar-teachers.

#### 4.2 Practical Suggestions

First, for the pre-service stage: Regarding Master of Education students in universities, efforts should be made to strengthen collaboration between industry mentors (in-service middle school teachers) and on-campus supervisors, guiding pre-service teachers to formulate clear and rational personal development plans. This ensures that future middle school physics teachers will possess a high level of teaching-research transformation capacity, as well as the competence and awareness to uphold the principles of “Promote teaching through research, define research by teaching” and “Take teaching as the foundation, take research as the means”. For Master of Science students intending to teach middle school physics in the future, universities should appropriately lower the requirements for research outputs required for graduation. These students should be allowed and supported to participate in middle school physics teaching internships to make up for shortcomings

in professional teaching skills.

Second, for the teacher recruitment stage: The principle of “merit-based appointment” should be adhered to, and the malpractice of “overemphasizing five rigid criteria” (e.g., academic degree, papers, titles, projects, and awards) should be eliminated. For institutions that need to recruit teachers with postgraduate degrees, priority should be given to assessing candidates’ awareness and competence in teaching-research transformation. Particularly in structured interviews, the multi-dimensional evaluation of postgraduate-educated candidates’ teaching and research abilities should be scientific and balanced, avoiding overemphasis on either pure teaching or pure research — this determines whether their teaching-research transformation capacity can be truly reflected.

The scale developed in this study is suitable for investigating the overall teaching-research transformation status of teachers with different educational backgrounds at a macro level. To assess an individual candidate’s actual teaching-research transformation capacity during recruitment, a simplified version of this scale can be referenced, with indicators refined as needed across various dimensions. This allows recruiters to roughly determine through a single assessment form: Does the candidate only teach rigidly according to established routines? Or does the candidate only engage in research in isolation, pursuing “titles” (e.g., research projects and programs) while ignoring students’ actual developmental needs?

Third, for the in-service stage: Special attention should be paid to establishing and improving a heterogeneous evaluation mechanism, and giving full play to the incentive and promotional functions of professional title evaluation. Based on the findings above, specific suggestions are as follows: For undergraduate-educated physics teachers: Appropriately increase requirements for teaching-research tasks (not for publicly published outputs). For master’s-educated physics teachers: Timely and moderately increase the weight of teaching performance in evaluations to prevent them from using their research advantages to squeeze out undergraduate-educated teachers’ promotion opportunities and ensure their research outputs do not deviate from practical teaching needs. Add “guiding undergraduate-educated teachers in research” as a task indicator to ensure a balance between competition and cooperation. For teaching performance evaluation: Increase the weight of interdisciplinary lesson plan development, encourage teachers to conduct in-depth teaching, and improve the effectiveness of physics curriculum development and implementation.

In summary, to facilitate the growth of middle school physics teachers into scholar-teachers and prevent advanced academic degrees from becoming “empty credentials,” three key measures are essential: Strengthen collaboration between universities and middle schools in cultivating pre-service physics teachers; Ensure merit-based teacher recruitment, avoiding over-reliance on academic degrees, titles, and other superficial criteria; After teachers are employed, their institutions should adopt personalized promotion policies based on different educational backgrounds and foster a harmonious environment that balances competition and cooperation.

## References

- Buddin, R., & Zamarro, G. (2009). Teacher qualifications and student achievement in urban elementary schools. *Journal of Urban Economics*, 66(2), 103-115.
- Hao, Q. L., Liu, Y. Y., & Hua, W. Q. (2016). A survey on the TPACK status of primary school teachers: A case study of primary schools in Binhai New Area, Tianjin. *Journal of Basic Education*, (5), 91-100.
- Lee, W. S. (2018). Pulling back the curtain: Revealing the cumulative importance of high-performing, highly qualified teachers on students’ educational outcome. *Educational Evaluation and Policy Analysis*, 40(3), 359-381.
- Li, G. F. (2015). Current situation of middle school teachers’ professional quality and its implications. *Educational Science Research*, (6), 50-55.
- Li, W., Guo, X. Y., & Xing, H. J. (2023). The spirit of scientists: A new perspective for the moral education of middle school physics. *Curriculum, Teaching Material and Method*, 43(5), 131-137.
- Li, X., Qiu, S. Q., Yang, D. C., et al. (2025). Reshaping middle school physics education: An analytical study on the in-depth integration of the spirit of scientists. *Physics Teacher*, 46(5), 2-6+21.
- Ministry of Education of the People’s Republic of China and Other Seven Ministries/Commissions. (2022). Notice on Issuing the “Plan for Strengthening Teachers in Basic Education in the New Era”. (2022-04-11) [2023-12-18]. [http://www.moe.gov.cn/srcsite/A10/s7034/202204/t20220413\\_616644.html](http://www.moe.gov.cn/srcsite/A10/s7034/202204/t20220413_616644.html)
- Qu, T. H., & Gong, X. L. (2024). High-quality development of teacher education: Logical foundation, theoretical connotation and practical orientation. *Journal of Sichuan Normal University (Social Sciences Edition)*, 51(1), 122-129+206.
- Xinhua News Agency. (2024). Opinions of the CPC Central Committee and the State Council on Carrying

Forward the Spirit of Educators and Strengthening the Construction of a High-Quality and Professional Teachers Team in the New Era. (2024-08-06) [2024-08-26].  
[https://www.gov.cn/zhengce/202408/content\\_6970676.htm](https://www.gov.cn/zhengce/202408/content_6970676.htm)

Zakharov, A., Tsheko, G., & Carnoy, M. (2016). Do “better” teachers and classroom resources improve student achievement? A causal comparative approach in Kenya, South Africa, and Swaziland. *International Journal of Educational Development*, 50, 108-124.

Zhang, Z. S. (2015). An investigation and analysis on the professional development characteristics of primary and secondary school teachers with postgraduate education. *Shanghai Research on Education*, (10), 53-57.

Zhu, S. H., Tang, Z. J., & Wu, X. W. (2012). A theoretical analysis of teachers' knowledge structure: Based on a review of western research on teachers' knowledge. *Studies in Foreign Education*, 39(11), 118-126.

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# Bridge or Barrier? How Digital Competence Predicts Student Attitudes Toward Generative AI Ethics and Usage

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## Abstract

With the rapid rise of Generative Artificial Intelligence (GenAI), it is important to examine how GenAI, digital competency, and ethics intersect. The Philippines has few studies that analyze these three categories together; this study seeks to understand better how they interact. It used Structural Equation Modelling to conduct a quantitative correlational investigation on this topic. Stratified random sampling was used to poll 498 college students from diverse institutions in Isabela, Philippines, to ensure demographic and intellectual diversity. Students' digital competencies, GenAI adoption, and ethical concerns were assessed via an online questionnaire. The study found that students exhibited high digital competence ( $M = 3.48$ ) and a moderate desire to employ Generative AI ( $M = 3.24$ ), but moderate ethical concerns ( $M = 3.15$ ). Males were more willing to use GenAI than females ( $p = 0.011$ ), and fourth-year students exhibited greater ethical concerns and a greater willingness than first-year students. The regression study showed that willingness to use and moral concerns explained 33.2% of the variance in digital competence. Overall, students are technically ready to use GenAI, but their digital competence and ethical application of it remain lacking. Higher education institutions should offer comprehensive professional development and an inclusive curriculum that integrates technical instruction with a strong moral foundation. The gender gap and changing requirements of students at different year levels should be the focus of these activities.

**Keywords:** Generative Artificial Intelligence (GenAI), digital competence, higher education, ethical concerns, technology adoption

## 1. Introduction

Generative Artificial Intelligence (GenAI)—especially in higher education—is an intriguing trend in the Philippines. As educators, students, and institutions negotiate this new world, digital competency and willingness to adopt GenAI are crucial. Digital competence—the skills needed to use digital tools efficiently—is essential for the uptake and integration of GenAI into education.

Technology in education requires additional teacher training to boost digital competency and student learning, especially with generative AI. To employ GenAI effectively in learning situations, Hazaimah & Al-Ansi (2024) advised teachers, instructors, and professors to integrate technical and critical skills. Kubota et al. (2025) found that inadequate digital literacy and a strong belief that classical AI and GenAI are the biggest barriers to GenAI implementation. This situation emphasizes the need for targeted digital literacy training for students and faculty in Philippine higher education.

According to Aghaee et al. (2024), educators who create curricula and evaluate students must form their own opinions on AI technology. They believe educators' current methods for teaching and fostering researchers' academic integrity will significantly affect the application of AI in education. It also addresses two risks to educators' scholarly integrity and the use of AI technologies such as GenAI. Raney (2025) adds that teachers

need systematic and disciplined training in digital literacy and ethics for AI to work in education. He emphasizes that teachers' AI literacy needs institutional and pedagogical support. Teachers' AI skills and preparation affect their use and comfort with AI. According to these findings, all instructors require a comprehensive professional development program with digital and ethical components.

Caner (2025) examined how undergraduate students feel about utilizing AI-driven applications to help them write academic papers. This study used a revised version of UTAUT2, the most used technology acceptance model. The results reveal that pupils with high digital competency have a far more positive attitude toward AI technology and must be taught how to enhance their digital abilities to benefit from AI. Bhimavarapu (2025) explored how demographics and digital literacy affect students' attitudes toward AI use and emphasized the need to improve digital competencies to improve students' perceptions of digital technologies.

According to Zaidy (2024), ethical issues must be considered while implementing AI in education. This study found that many students distrust the credibility of AI-created work and its impact on academic honesty. This dual push for digital literacy and ethics is part of an education campaign for responsible use.

According to Villarino (2024), rural higher education institutions in the Philippines lack sufficient infrastructure and digital resources, thereby preventing their students and stakeholders from integrating GenAI into their educational experiences. Policymakers will need to understand how socioeconomic status influences both students' and staff members' digital capacity, as well as their willingness to use GenAI to create equitable access to education. In contrast to Villarino's findings, Adewusi et al. (2025) report differences in access to AI-based educational resources; therefore, specific actions are needed to create equity in this area.

Psychological characteristics are also important for both students and staff in determining the extent to which GenAI will be accepted within higher education. Kanont et al. (2024) agree with this statement, noting that psychological characteristics, including perceived ease of use, subjective trust, and cultural context, largely determine students' and staff's acceptance of technology in higher education. Therefore, while GenAI can be beneficial to students, their perception of its value and relevance to their educational experience will affect their acceptance. Zhang (2025) characterizes the generational models of GenAI acceptance as flawed for failing to account for psychological variables, such as ethics and trustworthiness. Therefore, the next generation of GenAI acceptance models will need to consider these variables.

Alrayes et al. (2024) have examined psychological aspects that may affect GenAI student involvement and acceptability. They also stressed the importance of understanding how students' mental health affects their use of GenAI tools. Suh and Ahn (2022) examined students' views on AI in education. They found that positive student attitudes increase adoption and engagement with GenAI tools using quantitative methods.

Ethical and societal standards regarding the use of technology contextualize higher education AI. Harris (2024) noted that higher education institutions are increasingly concerned about how widely AI tools are used, which is compounding the conflict among digital literacy, academic integrity, and students' employability.

Much research has examined the design and usage of technology in higher education, but little is known about the significant link between digital competency and GenAI use in the Philippines. Much current research provides an educator's perspective and a singular dimension of student engagement. However, it does not examine the interconnectedness of digital literacy, willingness to use GenAI, ethical considerations for AI use, and their impact across different groups.

Philippine higher education students encounter several obstacles, especially in technological economics and its effects on education and student life. These potentialities and difficulties can be addressed by developing a substantial body of knowledge regarding generative AI (GenAI) and its relationship to higher education's social infrastructure in the Philippines. This research examined how digital capacity affects student attitudes regarding GenAI adoption in Philippine higher education and its implications for policy and practice as the industry rapidly evolves.

Furthermore, it examined the relationship between digital competence and students' willingness to adopt GenAI, as well as the ethical concerns they encountered, shedding light on opportunities and challenges for students in higher education institutions in the Philippines. As higher education institutions continue to develop digital literacy and address socio-economic barriers, there are also opportunities to build the capabilities needed to interact successfully with GenAI technologies. This study sought to further understand the algorithmic frontier of higher education in the Philippines by addressing the following research questions:

- 1) What is the level of higher education students' digital competence, willingness, and ethical concerns on the use of generative AI technologies?
- 2) Is there a significant difference in the level of competence, willingness, and ethical concerns of the use of generative AI technology when grouped according to their profile?

- 3) To what extent does digital competence predict the willingness to adopt GenAI and ethical concerns on the use of GenAI?
- 4) How do the indicators contribute to their respective latent constructs of Digital Competence, Willingness, and Ethical Concerns?

## 2. Methodology

### 2.1 Research Design

Using a quantitative-correlational research design and Structural Equation Modeling, this study investigates Filipino students' digital skills and readiness to use generative artificial intelligence in their studies. This correlational design indicates that digital competencies, AI ethics, and demographics influence students' inclination to use GenAI technology. Using SEM to investigate how these factors interact and which combinations of interrelated factors predict students' willingness to use GenAI technology in their studies provides a more integrated view of the literature on multidimensional technology adoption in higher education.

### 2.2 Research Locale

This investigation was conducted in Isabela, Cagayan Valley, Philippines. Isabela's specific demographics and socioeconomic variables affect how digital competency is implemented across educational institutions and the adoption of GenAI. The location of Isabela allows the study of rural areas, which show the digital gap in technology and education. This study examined GenAI's difficulties and prospects for a developing yet fast-changing place.

### 2.3 Respondents of the Study

Stratified random sampling was used to select 498 college students from various colleges in Isabela, Philippines. This sampling method balances student demographics, academic fields, and geographic areas. Many remote institutions encounter obstacles due to the "digital divide," so this sampling method allows the research to collect diverse digital literacy levels across varying levels of technical access. This research can help explain how subpopulations perceive generative artificial intelligence.

### 2.4 Instrument

The current study used a structured survey to analyze GenAI adoption based on digital competency, GenAI acceptance, and AI ethics. DigComp provides a foundation for establishing the Philippine Digital Competencies scale. GenAI adoption was based on technology acceptance models and AI ethics. Before distribution, a small pilot study with potential participants validated the questionnaire's phrasing, clarity, soundness, and stability.

### 2.5 Data Gathering Procedure

It took several steps to collect data from students, starting with institutional consent. An online structured questionnaire allowed respondents to complete it, increasing the likelihood of a higher response rate. Anonymity increased respondents' engagement in data collection. Data was collected over one academic semester.

The researcher used Jamovi to analyze quantitative data. It started with descriptive data on respondents' demographics, digital competency, willingness to adopt GenAI, and ethical concerns encountered when using GenAI. SEM was then used to evaluate the hypothesized correlations between digital competence, ethical concerns, and GenAI preparedness in students. This analytical method enhances comprehension of direct and indirect interactions among variables. It shows how these factors interact in Philippine higher education is more complicated.

### 2.6 Ethical Considerations

The entire process depends on ethics. Before starting our research, the researcher obtained informed consent from all participants to ensure they understood its goals, how it would be conducted, and their rights, including the right to withdraw. Student response data and organizational information were stored safely and anonymously. Institutional ethical principles and rules for human subject research apply to this study. This research required institutional review board approval before data collection.

## 3. Results and Discussion

Table 1. Level of higher education students' competence, willingness, and ethical concerns on the use of generative AI technologies

	Mean	SD
Digital Competence	3.48	0.842

Willingness to Use Generative AI Technologies	3.24	0.798
Ethical Concerns about Generative AI Technologies	3.15	0.765

Table 1 shows an average score of 3.48; college-level students demonstrate strong Digital Competence and a grasp of Generative AI technology. As students become more comfortable with technology-based learning environments, educators are increasingly focusing on digital literacy. Students' average score was 3.24, showing a moderate desire to adopt Generative AI technology for learning. In contrast, the lowest mean score for ethical concerns related to Generative AI technology was 3.15, indicating that students may be hesitant to accept it due to ethical concerns fully. Data indicate the need to educate students about AI and establish an ethical framework for its use. Academics require improved information on how to use AI in the classroom (Francis et al., 2025).

The three sectors' identical average ratings indicate that educational systems must prioritize the ethical implications of technology. According to the study, technology's ethical implications will influence how users use it, so educational programs must promote digital literacy and morality. GenAI has an optimistic outlook, but this study shows that students need better ethical training in technology. Prior research has shown that integrated courses must address the use and ethics of GenAI. This will help pupils adopt technology holistically (Seba et al., 2025). Quality education that includes AI ethics is needed as Philippine schools enhance digital literacy.

Table 2. Significant difference in the level of competence, willingness, and ethical concerns of the use of generative AI technology: Sex

Independent Samples T-Test				
		Statistic	df	p
Digital Competence	<b>Student's t</b>	0.521	496	0.603
Willingness to Use Generative AI Technologies	<b>Student's t</b>	-2.545 <sup>a</sup>	496	0.011
Ethical Concerns about Generative AI Technologies	<b>Student's t</b>	-0.968	496	0.334

Note.  $H_a \mu_{Female} \neq \mu_{Male}$

<sup>a</sup> Levene's test is significant ( $p < .05$ ), suggesting a violation of the assumption of equal variances

Group Descriptives						
	Group	N	Mean	Median	SD	SE
<b>Digital Competence</b>	Female	269	3.50	3.57	0.791	0.0482
	Male	229	3.46	3.43	0.900	0.0595
<b>Willingness to Use Generative AI Technologies</b>	Female	269	3.16	3.13	0.710	0.0433
	Male	229	3.34	3.25	0.882	0.0583
<b>Ethical Concerns about Generative AI Technologies</b>	Female	269	3.12	3.00	0.766	0.0467
	Male	229	3.19	3.00	0.765	0.0505

Table 2's Independent Samples T-Test (Welch's T-Test) results reveal differences in the views of college-aged men and women on GenAI technology. GenAI awareness and concerns are not statistically different across male and female college students ( $p > 0.05$ ). There is a statistically significant difference in the utilization of GenAI technology between male and female college students. Male college-aged students' mean willingness to utilize GenAI was  $M = 3.34$ , with an SD of 0.882, while female students' mean was  $M = 3.16$ , with an SD of 0.710.

This comparison yields a t-test of -2.545 and a p-value of 0.011. Even while men and women are equally knowledgeable and ethical about GenAI, these findings suggest that men are more likely to use new technology in education. Findings also suggest creating an inclusive atmosphere for college-aged female students to empower them to use GenAI technology. Thus, institutions must develop programs and regulations to help female students accept instructional technology.

The apparent gender inequality in technology adoption is consistent with the Gender Technology Disparity literature (Caner, 2025), which shows that men are more confident in technology and more likely to adopt it, as demonstrated by results (Chaamwe, 2025). This has major consequences for classroom AI use because, as the gender gap in technology use closes, men will increasingly use AI. Both genders are aware of and concerned about GenAI's ethical aspects, but males may be better at applying that knowledge to practice, so both need equal educational interventions.

Additionally, this survey emphasizes the necessity for all student demographics to improve their digital skills. The desire among academics, administrators, and students to adopt AI technology affects their ethical judgment regarding its use in their professions and teaching for two reasons. Therefore, higher education institutions must provide comprehensive training to support the moral development of AI and to boost students' comfort and desire to use AI technology, especially among female students. These actions will help educational institutions integrate GenAI into the academic landscape and develop new pedagogical options based on this technology (Zhang, 2025; Cutillas et al., 2025).

Table 3. Significant difference in the level of competence, willingness, and ethical concerns of the use of generative AI technology: Year Level

One-Way ANOVA (Welch's)					
		<b>F</b>	<b>df1</b>	<b>df2</b>	<b>p</b>
	Digital Competence	2.88	3	265	0.036
	Willingness to Use Generative AI Technologies	3.07	3	265	0.028
	Ethical Concerns about Generative AI Technologies	2.69	3	268	0.047
<b>Post Hoc Tests</b>					
Games-Howell Post-Hoc Test – Digital Competence					
		<b>First Year</b>	<b>Fourth Year</b>	<b>Second Year</b>	<b>Third Year</b>
<b>First Year</b>	<b>Mean difference</b>	—	-0.262	-0.0632	-0.2434
	<b>p-value</b>	—	0.083	0.918	0.121
<b>Fourth Year</b>	<b>Mean difference</b>	—	—	0.1990	0.0189
	<b>p-value</b>	—	—	0.237	0.998
<b>Second Year</b>	<b>Mean difference</b>	—	—	—	-0.1802
	<b>p-value</b>	—	—	—	0.319
<b>Third Year</b>	<b>Mean difference</b>	—	—	—	—
	<b>p-value</b>	—	—	—	—

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

Games-Howell Post-Hoc Test – Willingness to Use Generative AI Technologies

		First Year	Fourth Year	Second Year	Third Year
<b>First Year</b>	<b>Mean difference</b>	—	-0.318*	-0.136	-0.14189
	<b>p-value</b>	—	0.014	0.461	0.516
<b>Fourth Year</b>	<b>Mean difference</b>	—	—	0.182	0.17638
	<b>p-value</b>	—	—	0.272	0.377
<b>Second Year</b>	<b>Mean difference</b>	—	—	—	-0.00546
	<b>p-value</b>	—	—	—	1.000
<b>Third Year</b>	<b>Mean difference</b>	—	—	—	—
	<b>p-value</b>	—	—	—	—

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

#### Games-Howell Post-Hoc Test – Ethical Concerns about Generative AI Technologies

		First Year	Fourth Year	Second Year	Third Year
<b>First Year</b>	<b>Mean difference</b>	—	-0.271*	-0.163	-0.1358
	<b>p-value</b>	—	0.027	0.286	0.523
<b>Fourth Year</b>	<b>Mean difference</b>	—	—	0.108	0.1349
	<b>p-value</b>	—	—	0.665	0.549
<b>Second Year</b>	<b>Mean difference</b>	—	—	—	0.0274
	<b>p-value</b>	—	—	—	0.992
<b>Third Year</b>	<b>Mean difference</b>	—	—	—	—
	<b>p-value</b>	—	—	—	—

Note. \*  $p < .05$ , \*\*  $p < .01$ , \*\*\*  $p < .001$

A one-way ANOVA showed statistically significant differences between students of different years in the four areas tested. This confirmed that students' exposure to and experience with generative AI change over time. First-year students were less inclined to employ generative AIs ( $p = .014$ ) and more ethically concerned ( $p = .027$ ) than fourth-year students. As students gain experience, their comfort and concerns with generative AI increase (Nam & Bai, 2023). Only a small variation in generative AI expertise was observed between first- and fourth-year students ( $p = .036$ ). This suggests that incoming students have a baseline of knowledge and do not change their understanding of generative AI as they progress through their studies. Tailored educational programs should be developed to meet the needs and concerns of students at various stages of their education, with a focus on ethical issues and practical applications.

While a relatively high level of knowledge was associated with moderate acceptance of Generative AI, universities need to develop support mechanisms to educate students about the technology and, more importantly, help them address ethical considerations. These channels include workshops, policy conversations, and justification projects. Education stakeholders recognize that Generative AI's ethical implications must be clearly considered by assisting students' critical analysis of its use. This stance promotes AI education that keeps

up with AI technology while maintaining academic integrity.

Table 4. Extent of digital competence predicts the willingness to adopt GenAI and ethical concerns about the use of GenAI

Model Fit Measures

Model	R	R <sup>2</sup>
1	0.577	0.332

Note. Models estimated using sample size of N=498

Model Coefficients - Digital Competence

Predictor	Estimate	SE	t	p
Intercept	1.247	0.1460	8.54	<.001
Willingness to Use Generative AI Technologies	0.395	0.0471	8.37	<.001
Ethical Concerns about Generative AI Technologies	0.303	0.0492	6.15	<.001

Table 4 shows that willingness to employ and ethical concerns regarding generative AI predict students' digital skills. The regression analysis showed a moderately significant positive association ( $R = .577$ ) and that 33.2% ( $R^2 = .332$ ) of the variance in students' digital competence was explained. Both variables were significant ( $p < .001$ ), with willingness to use having a greater impact (Estimate = 0.395) than ethical concerns (Estimate = 0.303). Thus, students' ethical knowledge of generative AI depends on their adoption of it.

Examining the factors shows how students' technological willingness to adopt can improve their digital skills. The positive correlation between willingness to adopt and digital competency over time is consistent with previous studies that show students who are interested in AI technologies are more likely to improve their digital competency as they progress through school (Hashish et al., 2025). Aljamaan et al. (2025) found that students are becoming more aware of the ethical implications of using new technologies in school. This study supports Maqbool et al. (2025), who found that higher academic levels are associated with greater prior exposure to digital tools and increased use of AI technology, suggesting that a willingness to use Generative AI fosters the development of critical digital skills.

This research is important for educational institutions that want to foster ethical and technological practice. Generative AI ethics must be discussed in the curriculum to prepare students for technical competence and digital citizenship. Curriculum makers and educators must consider the ethics of Generative AI as well as its technology (Baharin, 2025). Educational institutions can integrate technology more fully by including ethical debates. The integrated approach promotes technological skills that boost academic performance and ethical frameworks that enable people navigate complex digital contexts (Hammood, 2025).

**Model Fit**

Test for Exact Fit

$\chi^2$	df	p
1030	149	<.001

Fit Measures

CFI	TLI	RMSEA	RMSEA 90% CI	
			Lower	Upper

## Test for Exact Fit

$\chi^2$	df	p
1030	149	<.001

## Fit Measures

CFI	TLI	RMSEA	RMSEA 90% CI	
			Lower	Upper
0.938	0.928	0.0799	0.0753	0.0846

## Factor Covariances

		Estimate	SE	Z	p
	<b>Knowledge</b>	1.000 <sup>a</sup>			
<b>Knowledge</b>	<b>Willingness</b>	0.713	0.0184	38.8	<.001
	<b>Ethical Concerns</b>	0.728	0.0194	37.4	<.001
<b>Willingness</b>	<b>Willingness</b>	1.000 <sup>a</sup>			
	<b>Ethical Concerns</b>	0.737	0.0194	38.0	<.001
<b>Ethical Concerns</b>	<b>Ethical Concerns</b>	1.000 <sup>a</sup>			

<sup>a</sup> fixed parameter

The tables show the Covariance factors and Model Fit Measures resulting from a Confirmatory Factor Analysis (CFA) for the purpose of confirming the overall structure or integrity of your model, not necessarily the individual contribution of each indicator. In order to evaluate how much an indicator contributes directly to Digital Competence (labeled Knowledge), Willingness, and Ethical Concern, typically a Factor Loadings table would be reviewed. However, the Factor Covariance Table provides evidence that these three latent constructs are very distinct and yet significantly correlated (ranging from 0.713 to 0.737;  $p < .001$ ), which reflects that the indicators consisting of each of the constructs are working in unison or “in tandem,” therefore a change in one latent area should closely match a change in the others. In addition, the Fit Measures were generally acceptable, including CFI: 0.938, TLI: 0.928, and RMSEA: 0.0799; indicating that the indicators have been grouped in such a manner as to adequately represent their respective constructs.

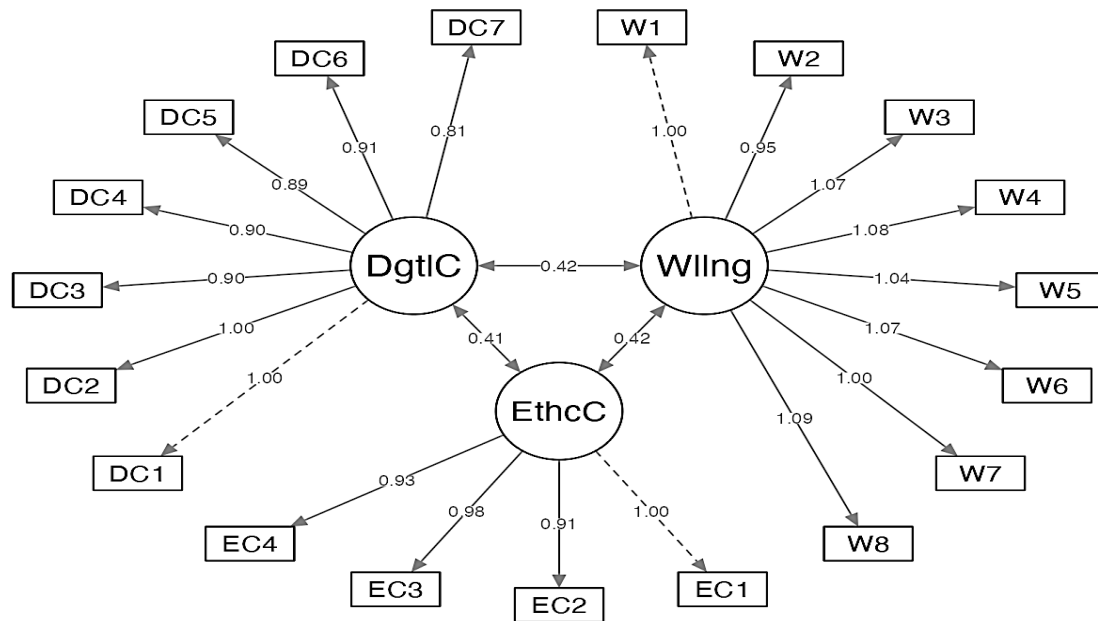


Figure 1. Path Model for Digital Competence, Willingness, and Ethical Concerns

Note: The circle layout requires the rotation to be 'Exogenous Top' or 'Exogenous Bottom'. Rotation has been set to 'Exogenous Top'.

Path model studies show how digital competence, willingness to use, and ethical concerns affect the adoption of generative AI in higher education. Path analysis shows that all constructs are positively correlated, with willingness to use and ethical concerns having the strongest correlation of 0.42. It is believed that ethical knowledge will directly enhance student engagement with generative AI. In addition to ethical concerns, digital competence is associated with willingness to use at 42%. Students become more confident and likely to employ AI tools as their digital skills develop. At 0.41, digital competencies correlate with ethical concerns, showing that they are essential for understanding and managing AI's ethical difficulties (Fang, 2023).

In structural models of the latent variables and their measured indicators, DC1-DC7, W1-W8, and EC1-EC4, the measured constructs have high factor loadings ranging from 0.81 to 1.09. All three surveys represent each construct category well, as shown by their high factor loadings. The model's validity is supported by modest levels of representation for each concept, which capture students' opinions of digital competency, willingness to adopt generative AI, and ethical concerns about it. The correlation between theoretical constructs and measured indicators supports this study's quantitative measures and model fit (Caner, 2025; Zhang, 2025).

Thus, as students' digital literacy rises, so will their readiness to use generative AI and their knowledge of AI ethics. This complements existing research on the need for higher education digital literacy and ethics programs (Bahçekapılı, 2025). Thus, this research emphasizes the need for institutions to create comprehensive training plans that improve students' technical skills and ethical thinking as they encounter generative AI to prepare them for the potential challenges of greater use of generative AI in academia (Belguith, 2025).

#### 4. Implications for Teacher Education and Teaching

Based on the data provided regarding students' digital competence, willingness, and ethical concerns toward generative AI (GenAI), here are the implications for teacher education and a formal conclusion for this research.

- 1) Findings indicate that the teacher education model should evolve from the traditional model of simply providing technical knowledge and skills to a new model that incorporates an ethical framework grounded in the ethics of technology use in the classroom. Since the average student has already achieved some level of digital literacy, teacher educators should focus on creating "tailored educational programs" specific to each student's level of digital competence, and that place greater emphasis on the ethical issues of using technology in the classroom, particularly regarding AI.
- 2) The faculty and administration should implement programs and initiatives designed to support and empower female students. Results indicate that female students are less likely to adopt GenAI, even though their awareness and knowledge of GenAI are similar to those of their male counterparts, suggesting a gender gap. Furthermore, teaching should move toward an integrated approach in which students learn

about ethics and technology concurrently, developing the knowledge, skills, and ability to become responsible citizens who can navigate the complex digital environment.

- 3) Since first-year students exhibit greater reluctance and more ethical concerns when exposed to AI technology than fourth-year students, teacher educators should follow a scaffolded model for AI exposure. Students should be exposed to and supported in building comfort with using AI from the early stages of their collegiate studies through graduation. In addition, the study revealed that digital competence is a strong predictor of willingness to use AI technology and of the development of ethical awareness surrounding its use. Providing students with the opportunity to develop their technical competence will help them become more responsible and ethical users.

## 5. Conclusion

The research analyzed how developing digital competence affects the propensity to embrace generative artificial intelligence (GenAI) and students' perceptions of the ethical implications of AI technologies on college campuses. The study's primary finding was that although most students understand the functionality of this technology, there exists a "paradox" between technical ability and willingness to use these technologies, with demographic differences by gender and year in school. Further, the authors concluded that students' ethical awareness does not prevent them from wanting to use this type of technology, but rather increases their willingness to do so. Furthermore, as digital competence increases, students' awareness and readiness to navigate and regulate the ethical complexities of AI also increase. If institutions are to maximize the benefits of JunAI and achieve a seamless integration of this technology, institutions must create "equitable & productive" environments that nurture technical ability and social responsibility.

It is recommended that future research define the "support mechanisms" that provide women with the resources needed to overcome obstacles to adoption. For example, investigating the policy discussions and workshop formats that work best to facilitate success for women will provide a blueprint to strengthen women in this area. Longitudinal research could provide insights into changes in attitudes and AI adoption levels among first- and fourth-year students. This would provide valuable information about how and why the "marginal differences" identified between first- and fourth-year students are evolving as AI's presence in secondary education increases. Additionally, further investigation into faculty preparedness and its impact on student perceptions of AI would contribute to a broader understanding of the educational landscape.

## References

- Adewusi, M., AINEBYOONA, C., Odekeye, T., & NGOMA, M. (2025). AI in Universities: The Good, the Bot, and the Ugly Truths. <https://doi.org/10.21203/rs.3.rs-6883202/v1>
- Aghaee, N., Vrågård, J., & Brorsson, F. (2024). Generative AI in Higher Education: Educators' Perspectives on Academic Learning and Integrity. *European Conference on E-Learning*, 23(1), 406-414. <https://doi.org/10.34190/eceel.23.1.3090>
- Aljamaan, F., Mubarak, M., Altamimi, I., Alanteet, A., Als Salman, M., Dasuqi, S., ... & Temsah, M. (2025). Generative Artificial Intelligence Integration in Medical Education: A Cross-Sectional Survey of Medical Students' Perceptions and Attitudes in Saudi Arabia. <https://doi.org/10.21203/rs.3.rs-6222830/v1>
- Alrayes, A., Henari, T., & Ahmed, D. (2024). ChatGPT in Education — Understanding the Bahraini Academics' Perspective. *The Electronic Journal of E-Learning*, 22(2), 112-134. <https://doi.org/10.34190/ejel.22.2.3250>
- Baharin, A. (2025). Exploring the Adoption of Generative Artificial Intelligence by TVET Students: A UTAUT Analysis of Perceptions, Benefits, and Implementation Challenges. *Journal of Information Systems Engineering & Management*, 10(19s), 429-437. <https://doi.org/10.52783/jisem.v10i19s.3052>
- Bahçekapili, E. (2025). Generative AI and digital literacy: Unravelling user intentions through PLS-SEM and machine learning. *Journal of Information Science*. <https://doi.org/10.1177/01655515251396900>
- Belguith, M. (2025). Adoption of AI in entrepreneurship education: University teachers' perceptions. *International Journal of Advances in Educational Research*, 2(1), 1-24. <https://doi.org/10.62941/ijaer.v2i1.151>
- Bhimavarapu, U. (2025). Digital Literacy and Critical Thinking Enhancing Student Perspectives on Artificial Intelligence. In *Exploration of K-12 Teaching and Learning for Teacher Educators*, 107-120. <https://doi.org/10.4018/979-8-3693-9370-3.ch005>
- Caner, S. (2025). Modeling ChatGPT Adoption Among Undergraduates: An Integrated UTAUT2 and Digital Competence Framework. *Sage Open*, 15(2). <https://doi.org/10.1177/21582440251343340>
- Chaamwe, N. (2025). Investigating the Factors Influencing Students' Adoption of Generative AIs in Universities: A Case of the Copperbelt University. *Zambia Ict Journal*, 8(1), 47-53.

<https://doi.org/10.33260/zictjournal.v8i1.340>

- Cutillas, A., Balili, E., Rellin, E., Remo, M., Quindala, E., & Bacalso, F. (2025). Analyzing alternative academic assessments (AAAs) in universities with cheat-proofing behaviors and instructor-formulated mechanics in an AI-dependent setting. *Environment and Social Psychology*, 10(5). <https://doi.org/10.59429/esp.v10i5.3265>
- Fang, X. (2025). Research on the Ethical Adoption of College Students' Learning Applications of Generative Artificial Intelligence. *Journal of Computer Assisted Learning*, 41(6). <https://doi.org/10.1111/jcal.70146>
- Francis, N., Jones, S., & Smith, D. (2025). Generative AI in Higher Education: Balancing Innovation and Integrity. *British Journal of Biomedical Science*, 81. <https://doi.org/10.3389/bjbs.2024.14048>
- Hammood, W. (2025). Investigating Factors Affecting AI Adoption in Higher Education Using Structural Equation Modelling (SEM). *KHWARIZMIA*, 2025, 50-57. <https://doi.org/10.70470/khwarizmia/2025/006>
- Harris, J. (2024). Process over product. *Pacific Journal of Technology Enhanced Learning*, 6(1), 16-17. <https://doi.org/10.24135/pjtel.v6i1.190>
- Hashish, E., Alsayed, S., & Razek, N. (2025). Embracing AI in academia: A mixed-methods Study of nursing students' and educators' perspectives on using ChatGPT. *Plos One*, 20(7), e0327981. <https://doi.org/10.1371/journal.pone.0327981>
- Hazaimah, M. & Al-Ansi, A. (2024). Model of AI acceptance in higher education: arguing the perspectives of teaching staff and students. *International Journal of Information and Learning Technology*, 41(4), 371-393. <https://doi.org/10.1108/ijilt-01-2024-0005>
- Kanont, K., Pingmuang, P., Simasathien, T., Wisnuwong, S., Wiwatsiripong, B., Poonpirome, K. & Khlaisang, J. (2024). Generative-AI, a Learning Assistant? Factors Influencing Higher-Ed Students' Technology Acceptance. *The Electronic Journal of E-Learning*, 22(6), 18-33. <https://doi.org/10.34190/ejel.22.6.3196>
- Kubota, K., Aishima, M., & Fujita, T. (2025). Harnessing Generative AI in Nursing Informatics: A Theoretical Critique and Policy Innovation Perspective from Japan. *International Nursing Review*, 72(3). <https://doi.org/10.1111/inr.70108>
- Maqbool, T., Ishaq, H., Shakeel, S., Nisa, A., Rehman, H., Kashif, S., ... & Jamshed, S. (2025). Future pharmacy practitioners' insights towards integration of artificial intelligence in healthcare education: Preliminary findings from Karachi, Pakistan. *Plos One*, 20(2), e0314045. <https://doi.org/10.1371/journal.pone.0314045>
- Nam, B. & Bai, Q. (2023). ChatGPT and its ethical implications for STEM research and higher education: a media discourse analysis. *International Journal of Stem Education*, 10(1). <https://doi.org/10.1186/s40594-023-00452-5>
- Ranes, B. (2025). AI integration in facilitating learning: Its benefits, challenges, and strategies for enhancement. *Divine Word International Journal of Management and Humanities (Dwijmh)*, 4(3), 2095-2109. <https://doi.org/10.62025/dwijmh.v4i3.181>
- Seba, F., Isola, M., Mills, L., Zalake, M., & Krive, J. (2025). Incorporating Generative AI Into a Health Informatics Curriculum to Build 21st Century Competencies: Multisite Pre-Post Study. *Jmir Medical Informatics*, 13, e76507-e76507. <https://doi.org/10.2196/76507>
- Suh, W. and Ahn, S. (2022). Development and Validation of a Scale Measuring Student Attitudes Toward Artificial Intelligence. *Sage Open*, 12(2). <https://doi.org/10.1177/21582440221100463>
- Villarino, R. (2025). Artificial Intelligence (AI) integration in Rural Philippine Higher Education. *International Journal of Educational Research and Innovation*, (23). <https://doi.org/10.46661/ijeri.10909>
- Zaidy, A. (2024). The Impact of Generative AI on Student Engagement and Ethics in Higher Education. *Journal of IT, Cybersecurity, & AI*, 1(1), 30-38. <https://doi.org/10.70715/jitcai.2024.v1.i1.004>
- Zhang, X. (2025). Integrating AI Literacy with the TPB-TAM Framework to Explore Chinese University Students' Adoption of Generative AI. *Behavioral Sciences*, 15(10), 1398. <https://doi.org/10.3390/bs15101398>

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# Should Children Learn Music? A Critical Analysis Under China's New Education Policies

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## Abstract

With the implementation of recent education reforms in China, including the “Double Reduction” policy, the structure of educational competition has undergone significant transformation. While subject-based tutoring has been restricted, competitive pressures have not diminished; rather, they have shifted into domains associated with quality-oriented education, including music learning. Drawing on the frameworks of Education involution and Cultural capital, this study examines how music education has become a new site of educational competition. The analysis combines structural, familial, and individual perspectives to explore how policy conditions, social expectations, and educational practices interact in shaping music learning. The findings suggest that music education is increasingly instrumentalised, as its intrinsic value in aesthetic development becomes intertwined with externally driven forms of evaluation and competition. Under conditions of educational involution, participation in music learning is often sustained not by intrinsic motivation, but by the need to maintain relative advantage within competitive environments. At the same time, music education functions as a form of cultural capital, contributing to processes of social differentiation and reproduction. This study highlights the tension between the intrinsic educational value of music and its instrumental role within contemporary education systems. It contributes to a broader understanding of how domains associated with holistic development are reshaped under conditions of persistent educational competition.

**Keywords:** music education, education involution, cultural capital, double reduction policy, educational competition

## 1. Introduction

Since the implementation of China's “Double Reduction” policy in 2021, which aims to alleviate excessive academic burden in compulsory education and regulate the expansion of extracurricular tutoring (Research Group of China National Children's Center, 2023), the structure of educational competition has undergone a significant transformation. While subject-based training has been strictly restricted, competition has not disappeared; rather, it has shifted into new domains associated with so-called quality-oriented education, including music, arts, and physical education. In particular, music education has gained increasing institutional and social attention, as it has gradually been incorporated into evaluation systems and broader frameworks of student assessment. (Pan Liqin & Wang Huan, 2021)

This transformation reflects a deeper structural dynamic within contemporary Chinese education, often described as Education involution. (Zhang Wen, Pan Chao, Yao Shiming, Zhu Jijia, Ling Dong, Yang Hanchun, Xu Jingsha & Mu Yan, 2024) Under conditions of limited high-quality educational resources and persistent competition for selective opportunities, families continue to intensify their investment in education even when the marginal returns of such investment decline. Although the Double Reduction policy has altered the form of

competition by restricting subject-based tutoring, it has not fundamentally changed the underlying logic of selection.

At the same time, the growing emphasis on music learning can be understood through the lens of Cultural capital, as theorised by Pierre Bourdieu. (Lu Yi, 2023) Beyond its intrinsic aesthetic value, music functions as a socially recognised form of cultural distinction that can signal refinement, discipline, and educational quality.

Against this background, an apparent tension emerges between the intrinsic educational value of music and its instrumental deployment within competitive structures. While music education has long been associated with aesthetic development, creativity, and emotional growth, its role in contemporary practice is increasingly shaped by external demands such as certification, competition, and performance evaluation.

This study therefore aims to examine how music education has become a new site of educational competition in post-Double Reduction China, and to analyse the mechanisms through which policy structures, family strategies, and individual learning experiences interact in this process. Drawing on the theoretical frameworks of education involution and cultural capital, the paper develops a multi-level analysis that connects macro-level policy constraints, meso-level family decision-making, and micro-level transformations in learning motivation.

## **2. Theoretical Foundation**

This study draws on the concepts of Education involution and Cultural capital to explain the persistence and transformation of educational competition under recent policy changes in China. While education involution provides a structural explanation for the intensification and redistribution of competition, cultural capital theory helps to account for why music education has become a particularly salient site of such competition. In addition, the intrinsic value of music education is introduced as a normative framework against which its instrumentalization can be critically examined.

### *2.1 Education Involution*

Education involution refers to a form of intensified competition in which individuals continue to increase their investment in education despite diminishing marginal returns, particularly under conditions of limited access to high-quality resources. (Guo Yanling, 2021) In such contexts, competition is not driven by the expectation of absolute improvement, but by the necessity of maintaining relative position within a highly stratified system.

In the context of contemporary China, educational competition has long been concentrated in exam-oriented domains. (Zhang Shijie & Gao Xiaodong, 2021) However, following the implementation of the Double Reduction policy, the restriction of subject-based training has not eliminated competitive pressures; rather, it has reshaped their expression. As opportunities for differentiation within traditional academic pathways become constrained, families are compelled to seek alternative domains in which competitive advantage can be maintained. From the perspective of education involution, this shift does not represent a reduction in competition, but a redistribution of competitive practices into new areas, including those associated with quality-oriented education such as music.

### *2.2 Cultural Capital and Music Education*

The shift of competition into music education can be further understood through the framework of Cultural capital, as developed by Pierre Bourdieu. (Bourdieu, P., 1986) Bourdieu instrumentalizes cultural capital in embodied, objectified, and instrumentalization forms, all of which are relevant to music education. Musical skills and dispositions constitute embodied capital, instruments and learning resources represent objectified capital, and examination certificates and competition awards function as instrumentalization capital.

Within this framework, participation in music education extends beyond the cultivation of artistic competence. It also serves as a strategy through which families accumulate symbolic resources that may be converted into educational and social advantage. (Barbara B, Julien L & David S., 2025) In competitive educational environments, such resources contribute to processes of social differentiation and reproduction. (Davies S & Rizk J., 2018) The growing emphasis on examinations, certifications, and measurable achievements in music learning can therefore be understood not merely as pedagogical choices, but as manifestations of broader strategies of cultural capital accumulation.

### *2.3 The Intrinsic Value of Music Education*

While the above frameworks explain the instrumentalization of music learning, it is also necessary to consider the intrinsic educational value of music. Music education has traditionally been associated with aesthetic development, emotional expression, and creative engagement. (Madrussan, E., 2025) These dimensions position music not only as a skill-based domain, but as a form of aesthetic education that contributes to broader processes of personal and cultural formation.

The contrast between these intrinsic values and the instrumental uses of music education forms a central tension

in this study. When music learning becomes primarily oriented toward external indicators such as certification and competition outcomes, its educational function may be redefined in ways that prioritise measurable achievement over aesthetic experience. This tension provides a critical perspective for analysing how music education is transformed under conditions of educational competition.

### **3. Transformation of Music Learning Under Educational Involution**

#### *3.1 Normative Foundations of Music Education*

From the perspective of music education, learning music has traditionally been understood not merely as the acquisition of technical skills, but as a form of aesthetic and holistic development. Music education is commonly associated with the cultivation of aesthetic sensitivity, emotional expression, and creative engagement, which together contribute to broader processes of personal formation. (Carrillo C., Viladot L. & Pérez-Moreno J., 2017) In this sense, music functions as a domain of learning that extends beyond measurable academic outcomes and supports the development of non-cognitive capacities such as self-regulation, imagination, and interpersonal awareness. (Blasco J.S. & Calatrava C., 2020)

Within educational discourse, these functions position music as a central component of aesthetic education. (Koelsch S., 2015) Rather than serving as an auxiliary supplement to academic subjects, music education is often conceptualised as an integral part of fostering well-rounded individuals, particularly in contexts where educational reform emphasises holistic development. In the Chinese context, this orientation is reflected in policy frameworks that promote balanced development across multiple domains, including moral, intellectual, physical, and aesthetic dimensions.

Importantly, the value of music education in this framework lies in its process rather than in externally measurable outcomes. Engagement with music—through listening, performance, and creative exploration—provides opportunities for students to experience meaning, emotion, and cultural expression in ways that differ fundamentally from standardised forms of assessment. (Wang Bailu, 2024) From this perspective, music learning is not primarily oriented towards certification, competition, or instrumental achievement, but towards the cultivation of aesthetic experience and personal growth.

This understanding provides a normative baseline for the present study. By clarifying what music education is intended to achieve, it becomes possible to examine how, under conditions of educational competition, these aims may be reinterpreted or displaced. In particular, the contrast between intrinsic educational value and externally driven forms of achievement offers a critical lens for analysing the transformation of music learning in contemporary contexts.

#### *3.2 Structural Drivers of the Instrumentalisation of Music Learning*

The transformation of music learning from an aesthetic practice into a competitive resource cannot be understood solely at the level of individual choice. Rather, it is shaped by structural conditions embedded within the contemporary education system. In particular, the persistence of selective evaluation mechanisms, combined with policy-induced shifts in educational provision, creates the conditions under which music education becomes susceptible to instrumentalisation. (Nadarajam, D., 2022)

From the perspective of Education involution, the key driver of this transformation lies in the continuity of competitive selection. Although recent policy reforms have restricted subject-based tutoring and sought to reduce students' academic burden, they have not fundamentally altered the scarcity of high-quality educational opportunities or the importance of relative differentiation within the system. (Moreno-Salto I & Robertson S L., 2021) As a result, competition is not eliminated but reconfigured. When traditional academic pathways for distinction are constrained, new domains emerge as alternative arenas for competition. Music education, particularly in contexts where it is linked to evaluation frameworks or perceived as contributing to comprehensive quality, becomes one such domain.

At the policy level, this process is further reinforced by the expanding institutional visibility of music education. The inclusion of music within broader educational evaluation frameworks, as well as its association with holistic development, increases its perceived relevance for student assessment. (Zhu Xiao & Huang Naixing, 2019) While the original intention of such reforms is to promote balanced development, their implementation may generate unintended consequences. In competitive environments, any domain that is formally recognised within evaluation systems can be reinterpreted as a potential source of advantage. Consequently, music learning may be repositioned from a developmental activity to a strategic resource within educational competition.

This structural dynamic is closely linked to the logic of Cultural capital. Cultural practices can acquire value not only for their intrinsic qualities but also for their role in social differentiation. In this context, music education functions as a form of capital that can be accumulated, displayed, and potentially converted into educational advantage. (LAREAU A & WEININGER E B., 2023) The increasing emphasis on examinations, certifications,

and measurable achievements within music learning reflects this process of institutionalisation. What might otherwise be an open-ended aesthetic activity becomes structured around recognisable and comparable forms of achievement.

The interaction between policy structures and cultural capital dynamics creates a feedback loop that reinforces instrumentalisation. As music education becomes more widely perceived as valuable within competitive frameworks, participation expands. This, in turn, raises the threshold of differentiation, prompting further investment from families seeking to maintain relative advantage. In this way, the logic of education involution is extended into domains that were not originally central to academic competition. Music learning is thus transformed not because of its inherent characteristics, but because of the structural conditions that redefine its function within the education system.

### *3.3 Family and Individual Responses to Competitive Pressures*

The structural conditions outlined above are translated into concrete practices through the responses of families and individuals. In competitive educational environments, decisions about music learning are shaped not only by personal preference, but also by perceptions of risk, social expectations, and the strategic pursuit of advantage.

At the family level, engagement in music education can be understood as a form of risk management under conditions of uncertainty. In contexts where pathways to educational success are perceived as increasingly competitive and unpredictable, families may seek to expand their children's skill sets in order to maintain flexibility and avoid potential disadvantage (Saltmarsh & McPherson, A., 2022). Music learning, particularly when associated with recognised forms of assessment such as graded examinations or competition awards, is often viewed as a relatively legitimate and socially valued option within this strategy. From the perspective of Education involution, such behaviour reflects a broader pattern in which participation becomes necessary not because of guaranteed returns, but because withdrawal carries perceived risks of falling behind.

This dynamic is further reinforced by the logic of Cultural capital. As cultural practices become markers of distinction, families may interpret participation in music education as an indicator of both educational commitment and social status. (Kim, T., 2023) In this context, decisions about music learning are influenced not only by individual interest, but also by processes of social comparison and collective behaviour. When music education becomes widely adopted within peer groups, non-participation may be perceived as a disadvantage, thereby encouraging further expansion of participation. This process contributes to the normalisation of music learning as a near-expected component of children's educational trajectories.

At the individual level, these family strategies and social expectations shape the meaning and experience of music learning. Under conditions where participation is externally motivated, the orientation of learning may shift from intrinsic engagement to outcome-driven performance. Educational research often distinguishes between intrinsic motivation, associated with interest and enjoyment, and extrinsic motivation, associated with external rewards and evaluation. (Drahmann, M., Merk, S., Cramer, C., et al., 2019) In contexts of competitive pressure, music learning may become increasingly aligned with the latter, as students focus on measurable achievements such as examination results, certifications, and competition outcomes.

This shift in motivation is accompanied by changes in learning practices and experiences. Rather than engaging in exploratory or expressive forms of musical activity, students may prioritise repetitive practice aimed at meeting predefined assessment criteria. While such practices can lead to the development of technical proficiency, they may also narrow the scope of musical engagement by emphasising standardisation and performance outcomes. As a result, the experiential and expressive dimensions of music learning risk being overshadowed by its evaluative functions.

Taken together, these family and individual responses illustrate how structural pressures are internalised and reproduced through everyday educational practices. The instrumentalisation of music learning is therefore not solely imposed from above, but actively sustained through the interaction between systemic constraints, social expectations, and individual adaptation.

### *3.4 Consequences and Emerging Contradictions*

The dynamics discussed above give rise to a central tension in contemporary music education. While music learning is traditionally associated with aesthetic development and personal growth, it is increasingly shaped by external pressures related to evaluation and competition. As a result, its role is redefined within a framework that prioritises measurable outcomes and comparative performance. From the perspective of Education involution, this shift reflects the extension of competitive practices into new domains, where participation is driven less by intrinsic motivation than by the need to maintain relative advantage. At the same time, through the lens of Cultural capital, music education becomes embedded in processes of social differentiation, as its outcomes are increasingly formalised and recognised within evaluative systems. The result is not the disappearance of music's educational value, but its reconfiguration. Intrinsic and instrumental logics coexist, often in tension, reshaping

both the meaning and experience of music learning. In this sense, music education becomes a particularly revealing site through which broader contradictions between development and competition in contemporary education can be understood.

#### 4. Conclusion and Implications

The analysis presented in this study suggests that the transformation of music education under recent policy reforms is not characterised by a reduction of educational competition, but by its reconfiguration. While the “Double Reduction” policy has successfully limited the expansion of subject-based tutoring, it has not fundamentally altered the structural conditions that sustain competitive pressure. Instead, these pressures have been redirected into domains associated with quality-oriented education, among which music has become a particularly prominent site.

By drawing on the frameworks of Education involution and Cultural capital, this study has shown how music learning is gradually incorporated into processes of differentiation and competition. At the structural level, the persistence of selective evaluation systems creates conditions in which new forms of distinction become necessary. At the level of family and individual practice, these conditions are translated into strategies of participation, accumulation, and adaptation. As a result, music education is not simply expanded, but transformed in its function, as its intrinsic educational value becomes intertwined with externally driven forms of achievement.

This transformation highlights a broader contradiction within contemporary education. On the one hand, policy discourse emphasises holistic development and the cultivation of aesthetic and creative capacities. On the other hand, the logic of competition encourages the conversion of such domains into measurable and comparable forms of performance. Music education thus becomes a site in which these competing logics coexist, revealing the limits of reform efforts that focus on reducing specific practices without addressing underlying structural dynamics.

These findings carry several implications for understanding the role of music education within current educational contexts. At the policy level, they point to the importance of aligning evaluation systems with the intended aims of aesthetic education, so that participation in music is not primarily interpreted through its contribution to competitive differentiation. At the institutional level, they suggest the need to consider how curricular and extracurricular practices shape the ways in which music learning is experienced, particularly in relation to the balance between expressive engagement and performance-oriented assessment. At the level of family and individual practice, they highlight how educational choices are shaped by broader social expectations and uncertainties, rather than by purely individual preferences.

In conclusion, this study does not seek to determine whether children should or should not learn music. Instead, it demonstrates how the meaning and function of music learning are reshaped under conditions of educational competition. In doing so, it contributes to a more nuanced understanding of how domains traditionally associated with personal development are transformed within contemporary educational systems, and how the tension between intrinsic value and instrumental logic continues to shape educational practice.

#### References

- Barbara B, Julien L, David S. (2025). What Works and for Whom? Effectiveness and Efficiency of School Capital Investments Across the U.S. *The Quarterly Journal of Economics*, (3), 3.
- Blasco J.S., Calatrava C. (2020). Influencia de la Música en las Emociones Percibidas en el Alumnado de Educación Secundaria y Bachillerato. Universidad de Almería; Almería, Spain.
- Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), *Handbook of theory and research for the sociology of education* (pp. 241–258). Greenwood Press.
- Carrillo C., Viladot L., Pérez-Moreno J. (2017). Impact of music education: A review of the scientific literatura. *Rev. Electrónica Complut. Investig. Educ. Music*, 14, 61–74.
- Davies S, Rizk J. (2018). The Three Generations of Cultural Capital Research: A Narrative Review. *Review of Educational Research*, 88(3), 331-365.
- Drahmann, M., Merk, S., Cramer, C., et al. (2019). Pre-Service Teachers in Germany’s Pluralistic Scholarship System and Their Motivations for Becoming Teachers. <https://doi.org/10.31219/osf.io/py9tr>
- Guo Yanling. (2021). A Study on the Manifestations and Attributions of “Involution” among Contemporary Chinese College Students — Based on the Perspective of Discourse Analysis. *Coal Higher Education*, 39(5), 65-71.
- Kim, T. (2023). Knowledge and identity on the move: The three elements affecting comparative education. *Scuola Democraica*, (3), 443-462.

- Koelsch S. (2015). Music-evoked emotions: Principles, brain correlates, and implications for therapy. *Ann. N. Y. Acad. Sci.*, 1337, 193–201.
- LAREAU A, WEININGER E B. (2023). Cultural Capital in Educational Research: A Critical Assessment. *Theory and Society*, 32, 567-606.
- Lu Yi. (2023). Rethinking the Theory of Cultural Capital and Cultural Reproduction. *Fudan Education Forum*, 21(6), 1.
- Madrussan, E. (2025). Musical Listening Between Everyday Reality and Sensory Experience. On the Aesthetic Education of Young People. In: Brinkmann, M., Türistig, J., Weber-Spanknebel, M. (eds) *Realities in Pedagogical and Phenomenological Contexts*. Phänomenologische Erziehungswissenschaft, vol 13. Springer VS, Wiesbaden. [https://doi.org/10.1007/978-3-658-47518-5\\_10](https://doi.org/10.1007/978-3-658-47518-5_10)
- Moreno-Salto I, Robertson S L. (2021). On the ‘life of numbers’ in governing Mexico’s education system: a multi-scalar account of the OECD’s PISA. *Globalisation, Societies and Education*, 19(2), 213-227.
- Nadarajam, D. (2022). The zombification crisis in a crisis: Neoliberal Battles and teacher survivors in the pandemic. In A. W, Wiseman (Ed.), *Annual Review of Comparative and International Education 2021* (pp. 149-157). Merald Group Publishing.
- Pan Liqin, Wang Huan. (2021). Exploration of the Proposition of Music Quality Assessment for Junior High School Graduates — Taking the Music Assessment in Various Cities of Jiangsu Province in 2020 as an Example. *Basic Education Curriculum*, 8(5), 63-70.
- Research Group of China National Children’s Center. (2023). Report on the Status of Children’s Extracurricular Life under the Background of “Double Reduction”: Technical Report. *Chinese Extracurricular Education*, 32(06), 11-24.
- Saltmarsh & McPherson, A. (2022). Un/satisfactory Encounters: Communication, Conflict and Parent-School Engagement. *Critical Studies in Education*, 63(2), 147-162.
- Wang Bailu. (2024). Collaborative Education of College Music Education and Mental Health Education. *Chinese Journal of School Health*, 45(09), 1212 + 1369.
- Zhang Shijie, Gao Xiaodong. (2021). The Real Dilemma and Improvement Strategies of Cultivating Sports Values of Young People under Exam-Oriented Education. *Fujian Sports Science and Technology*, 040(4), 88-92.
- Zhang Wen, Pan Chao, Yao Shiming, Zhu Jiajia, Ling Dong, Yang Hanchun, Xu Jingsha, Mu Yan. (2024). Individual Psychological Connotation and Characteristic Dimensions of “Involution” Phenomenon in Chinese Society. *Acta Psychologica Sinica*, 56(1), 107-123.
- Zhu Xiao, Huang Naixing. (2019). Innovation of keyboard teaching in primary and secondary school music courses under the new curriculum reform. *Popular Literature and Art*, (03), 224. DOI: 10.20112/j.cnki.issn1007-5828.2019.03.164.

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