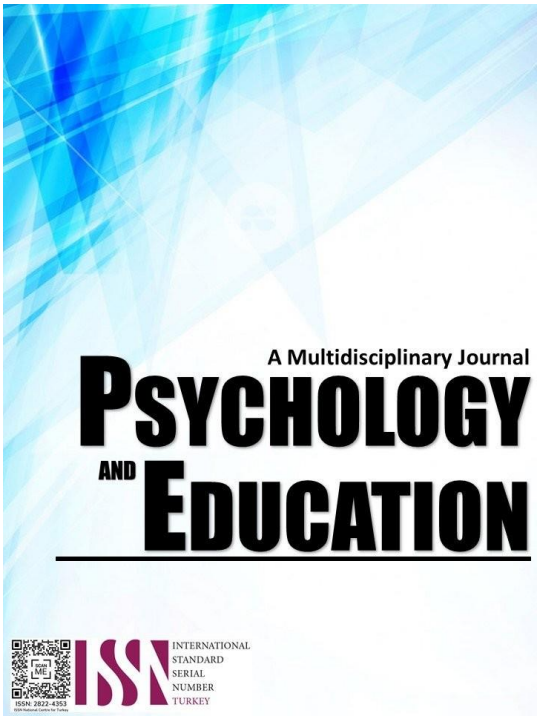
EXPOSURE TO RESEARCH TRAINING AND RESEARCH SKILLS CAPACITY AS PREDICTORS TO MOTIVATION TO UNDERTAKE RESEARCH



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Research Article

Exposure to Research Training and Research Skills Capacity as Predictors to Motivation to Undertake Research

Elen Luz R. Muñez,* Dan O. Gomez
For affiliations and correspondence, see the last page.

Abstract

This study examined how research training exposure and research skills influence the motivation of secondary teachers in the Tagum City Division to conduct research. Anchored in Self-Determination Theory and McClelland's Three Needs Theory, the research employed a descriptive-correlational design with 279 purposively sampled teachers. Data were collected via a validated survey and analyzed using descriptive statistics, Spearman-rho correlation, and multiple regression. Findings revealed high levels of research training, research skills, and motivation among respondents. Social motivation and intrinsic motivation emerged as primary drivers, surpassing attainment motivation. Correlation analysis showed strong positive relationships between research training, research skills, and motivation, with skills demonstrating slightly greater predictive power. Notably, methodology skills were more influential than information-seeking skills. Among training domains, time for research, ability to attend training, and confidence to undertake research were significant indicators of motivation, whereas training to encourage involvement in research was non-significant. The study emphasizes the need of planned training to sustain teacher motivation, including integrating research into professional duties with protected time and workload adjustment, enhancing methodology-focused training through hands-on workshop and mentorship, and fostering institutional support via incentives, collaborative networks, and recognition programs. These recommendations align with the DepEd's research agenda and address identified gaps in training accessibility and methodology competence. By strengthening these areas, schools can cultivate a robust research culture that benefits both educators and students, ultimately advancing evidence-based practices in basic education.

Keywords: *MAED educational management, research training, research skills, research motivation, secondary teachers, professional development, Philippines*

Introduction

In recent educational landscapes, a pressing, troubling situation has emerged concerning the multifaceted nature of teachers' learning motivation, particularly in research and the context of evolving pedagogical demands and professional development expectations (Deci & Vallerand, 2019; Ryan & Deci, 2020). Despite the growing emphasis on continuous education for teachers, a significant gap exists in understanding the complex aspects that contribute to and hamper teachers' intrinsic motivation to participate in continued developmental activities. One major difficulty is a lack of access to high-quality resources (Akbari & Hashem, 2020; Day & Sachs, 2020). Many educators, particularly those in schools with limited funding, may not have access to academic databases, journals, and other necessary research resources, limiting their ability to perform complete and informed literature evaluations (Xu Y., et al., 2020). This lack of accessibility creates an endless cycle in which educators who struggle to navigate the academic world become discouraged and less likely to pursue further study. Furthermore, the unsettling scenario has implications for the quality of learning and student outcomes. Teachers' motivation to learn to conduct research is a key driver in adopting innovative teaching practices and integrating research-based strategies in the classroom (Guskey, 2019; Hattie, 2019). When instructors' intrinsic motivation is misaligned with the nature of opportunities for professional growth, they may lose enthusiasm for implementing new ideas into their teaching repertoire. This misalignment can hamper the most effective implementation of evidence-based techniques could decrease teaching's overall efficacy and impact on educational results (Ingersoll & Strong, 2019; Pianta & Hamre, 2020). Overcoming this difficult situation necessitates an in-depth comprehension of the factors influencing teachers' desire for learning when conducting research, taking into account the diverse educational settings and subject-specific barriers they confront in an ever-changing educational landscape.

Another issue is that teachers don't receive adequate training and support in research methodology and literature review abilities. Teachers are frequently thrust into the research field unable to critically analyze the current literature, locate appropriate sources, and successfully synthesize conclusions (Sousa de São José & Pacheco, 2023). This lack of training causes dissatisfaction, misunderstanding, and, ultimately, a loss of enthusiasm to continue with the often-difficult work of performing a comprehensive literature study.

Furthermore, the pressure to deliver concrete results and meet external accountability metrics might hurt intrinsic motivation for research literature studies (Cochran-Smith & Lytle, 2019). Once research for educators is viewed as merely a compliance practice or a checkbox for performance assessments, the emphasis moves from authentic inquiry and knowledge generation to shallowness and expediency. This top-down approach can hinder instructors' desire to explore challenging subjects deeper and engage in substantive discussions with current studies.

In addition, in the study conducted by Garcia and Martinez (2021), the researchers investigated the impact of research skills ability on

teachers' extrinsic motivation, specifically the alleged career benefits of higher research competencies. The findings indicated that educators who actively strengthened their research abilities were likelier to receive tangible benefits such as promotion, recognition, and professional avenues. This extrinsic motivation, in turn, served as a stimulus for ongoing participation in research-related learning activities.

Mitchell et al. (2022) also explored the influence of research skills capacity in reducing teacher motivation. The study found that instructors who lacked confidence in their research skills were more likely to experience sentiments of motivation, which are defined by a lack of curiosity or perceived relevance in professional development activities. Overcoming the deficiencies in research skills through specialized instruction was associated with decreased motivation, highlighting the potential for training interventions to increase educators' overall motivation to acquire knowledge.

However, a concerning gap persists in understanding the nuanced interplay between exposure to research training, research skills capacity, and its potential impact on teachers' motivation to conduct research (Garcia & Martinez, 2021). While teachers are becoming more encouraged to participate in professional development activities and research projects, there has been limited inquiry into how the acquisition of study-related information and skills connects with their intrinsic drive to study (Johnson & Wang, 2019). This creates a challenging situation in which the educational community may engage in research training without a thorough knowledge of its direct impact on teacher motivation, thus impeding the effective integration of research techniques into the teaching profession. As a result, understanding the connection is critical for bridging the present gap and informing strategic approaches to teacher development consistent with current educational objectives and practices.

In this particular scenario, the researcher aims to conduct a study to investigate the complicated relationship between research training and research skills capacity, and their impact on the motivation for learning among teachers. The focus of this investigation is particularly directed towards teachers within secondary schools situated in Tagum City. The goal is to understand how acquiring research-related information and abilities affects these teachers' motivation to undertake research.

The study is focused on the Self-Determination Theory (SDT) and seeks to determine whether "motivation can be enhanced by developing research competence and capability through research training." According to SDT, when people believe their actions will impact the outcome, they are more driven to act. According to certain studies, the Expectancy-Value-Cost Model of Motivation can be used to investigate the desirability of achieving a result. Expectancy refers to behavior that is determined by confidence, competence, and capability to reach a desired objective, and it is generally acquired via the acquisition of skills and knowledge. In the context of increasing research capacity, this relates to instructors' perceived confidence and competence to undertake research successfully.

Furthermore, this philosophy asserts that each individual should be able to make decisions. And govern their own lives, particularly if the results of their decisions and activities are beneficial. People are often motivated by a desire to progress and find contentment. The theory is inspired by individuals' need for competency, mastery of the ability to achieve a goal in the short term while maintaining lucrative careers in the long term; connection or relatedness, a desire to meet belonging and association needs; and self-determination, the desire to feel in control over one's behavior and the future, and thus be able to take action to that result. According to this study, current and prospective income are critical motivators for persons seeking higher education degrees.

This study is also based on McClelland's Three Needs Theory, which holds that three fundamental desires influence everyone's motivation. A passion for power, accomplishment, and association drives a person. Individuals have a combination of these drives, with one trait generally dominating the other two (McClelland, 1965).

McClelland's work has contributed to the development of personality tests to assess individuals' potential skills and abilities (McClelland, & Burnham, 2008). It can also be used to gain a deeper understanding of a group of people and their needs, allowing steps to be made to satisfy individual needs. According to this study, an achievement-motivated person may require constant challenges, such as mastering specific or specific skills; an affiliation-motivated person may require regular assessment and critique of the skills developed; and a power-motivated person may require a clear path for advancement in the appropriate use of his or her skills.

In addition, motivational theories rely on hypotheses about human nature (Deci, & Ryan, 1985). They categorized motivation into three types: motivation, extrinsic motivation, and intrinsic motivation. Amotivation substantially and negatively correlates with educational performance (Vallerand & Bissonnette, 1992). Amotivation is a lack of desire to act (Williams & Deci, 1996).

Ratelle et al. (2017) define motivation as the absence of motivation and a failure of the individual to perceive the conditions between their acts and outcomes. A motivation arises when particular students do not receive favorable feedback on their performance or believe they have failed consistently. Based on the updated theory of helplessness, irrelevant circumstances promote motivation. A motivation occurs when one considers oneself incapable of achieving desired achievements (Deci, E. L., & Ryan, R. M.,1985).

Katz, I. (1995) Skill Acquisition Theory describes how people grow through the learning process of various abilities, from basic acquisition to advanced mastery. Cognitive and psychomotor skills are examined from classroom instruction to sporting and industrial uses. Subahan Mohd Meerah et al. (2012) also identified two markers for educators' research skills: information-seeking skills and methodology skills.

Methodology

The study focused on secondary school teachers. A comprehensive sampling strategy was employed to select 279 respondents from the entire Department of Education, Tagum City Division. The purposive sampling method ensured that the chosen participants aligned with specific inclusion criteria. These criteria stipulated that respondent had to meet three essential qualifications: a) hold the position of a Plantilla Secondary Teacher within the DepEd Tagum City division, b) have at least five years of teaching experience, and c) have attended research training within the last five years. By carefully defining these criteria, the study ensured a targeted and representative sample, capturing the perspectives and experiences of teachers who possessed both teaching expertise and recent exposure to research training.

The selection criteria not only guaranteed the relevance of the respondents to the study's focus but also contributed to the overall validity of the findings. By narrowing the participant pool to individuals who fulfilled specific roles and qualifications, the study aimed to derive insights directly applicable to the unique context of secondary school teachers within the educational landscape of Tagum City. This purposive approach to participant selection enhanced the study's ability to draw meaningful connections between research training, research skills, and teachers' motivation to undertake research.

The study used an adapted-modified survey questionnaire, carefully crafted to suit the specific objectives and context of the research. The instrument was composed of various sections that focused on the main variables of the study. The questionnaire included four indicators for the research training variable: time for research, training to encourage involvement in research, ability to attend research training, and confidence to undertake research, represented by five, five, seven, and nine-item statements, respectively. The variable on research skills capacity consisted of two indicators: information-seeking skills, composed of 25 item statements, and methodology skills, with 13 item statements. Meanwhile, the independent variable, the teachers' motivation to undertake research, was assessed using three indicators: attainment research, intrinsic research, and social research, comprising 15-item statements.

Each item in the questionnaire was measured by means of a five-point Likert scale with the following options: 5- Strongly Agree, 4- Agree, 3- Neutral, 2- Disagree, and 1- Strongly Disagree. The interpretation of the results was based on the following range of means and descriptive equivalents: 4.20 to 5.00 as Very High, which indicated that the level of the variable was observed all the time; 3.40 to 4.19 as High, which indicated that the level of the variable was observed most of the time; 2.60 to 3.39 as Moderate, which indicated that the level of the variable was slightly observed; 1.80 to 2.59 as Low, which indicated The variable's level was rarely observed, and the level of 1.00 to 1.79 was very low, indicating that the variable's level was not observed at all.

To ensure the questionnaire's reliability and validity, the instrument underwent a validation process by a panel of experts. The experts assessed each item's clarity, relevance, and appropriateness, ensuring that every statement effectively captured the construct it was meant to measure. Based on their evaluation, necessary revisions were made to enhance the overall quality and accuracy of the instrument. The adaptation and modification of the survey tool were grounded in ensuring that it would be contextually relevant, reliable, and effective in measuring the intended variables of the study.

The study used a descriptive-correlational design. Creswell (2019) and Fraenkel and Wallen (2019) advocate using descriptive-correlational designs when the research objective is to examine relationships among variables without manipulating them. This design was particularly suitable for the current study as it allowed for a detailed exploration of the connections between exposure to research training, research skills capacity, and teachers' motivation to conduct research. A descriptive-correlational design offered an ideal pathway for this exploration, allowing the mapping out of connections without establishing definitive cause-and-effect relationships (Creswell, 2019). This approach was particularly valuable because it enabled the uncovering of potential associations by carefully examining how changes in exposure to research training and research skills capacity might coincide with shifts in teacher motivation, shedding light on potential, previously unknown connections (Shaughnessy, 2020).

Additionally, this design painted a comprehensive picture, as it did not just explore isolated variables; it allowed for a rich and textured understanding of all three elements within the teacher population (Cochran-Smith & Lytle, 2019). It gathered extensive data on teachers' research training experiences, their current skill levels, and the degree of their motivation to conduct research, providing a nuanced understanding of these interconnected factors.

The cornerstone of this research lies in the robust survey questionnaire chosen for data collection. This instrument, an adaptation of the Research Training questionnaire by Arrietta et al., the research skills capacity questionnaire by Meerah et al., and the motivation questionnaire by Vallerand et al., was specifically tailored to assess the different variables of the study. To ensure its suitability for this study, the questionnaire underwent rigorous validation by a panel of experts. Following successful validation and approval by the research committee of the University of Mindanao (UM), Tagum City graduate school, the questionnaire was deemed ready for dissemination to the selected respondents through a face-to-face approach. At least 30 minutes were allocated for them to carefully consider their responses, accompanied by a detailed informed consent form. This form ensured transparency by outlining the study's purpose, data usage, and anonymity guarantees. The collected data were then subjected to meticulous tabulation and analysis to illuminate the intricate relationships between the investigated variables.

The data underwent statistical treatment that included mean and standard deviation to evaluate the central tendency and variability of

numerical data. Specifically, these analyses addressed research objectives 1, 2, and 3. Moreover, Spearman-rho was used as a correlation coefficient to assess the magnitude and direction of these associations, where positive coefficients signified positive interactions, negative coefficients signified negative relationships, and coefficients near 0 indicated the lack of a substantial relationship. This analysis specifically addressed research objective 4. Furthermore, for objective 5, a non-parametric regression (Kernel) was employed. This statistical technique was used to estimate the relationship between two variables without making any assumptions about the underlying functional form of the relationship.

These were considerable ethical issues and concerns that had specific ramifications for this quantitative inquest. Such problems and concerns arose primarily from the methodology involved in this study. The ethical problems relevant to this research included the right to perform the study, secrecy, and anonymity.

The researcher observed and fulfilled all ethical requirements in the conduct of the study, following to the study protocol assessments and standardized criteria, notably in handling the population and data, including, but not limited to:

The study upheld the principle of voluntary participation, ensuring that all teachers from the selected schools had the free will to participate without any form of consequence, penalty, or loss of benefits. The purpose and benefits of the study were clearly described and presented to the participating schools, ensuring transparency and informed decision-making. The respondents' rights to contribute to the body of knowledge were carefully acknowledged and respected throughout the research process.

Respondents who did not meet the specific inclusion criteria were excluded from the study. These criteria stipulated that participant had to: a) hold the position of a Plantilla Secondary Teacher within the Department of Education, Tagum City Division; b) have at least five years of teaching experience; and c) have attended research training within the last five years.

Teachers who did not meet these criteria, such as those with less than five years of experience, those who had not attended research training within the last five years, or those who held positions outside the Plantilla Secondary Teacher classification, were excluded from the sample.

Additionally, any respondent who felt uncomfortable or unwilling to continue their participation at any point during the study was given the right to withdraw without any repercussions. The withdrawal criteria ensured that participation remained voluntary and that respondents could exit the study if they chose to, safeguarding their autonomy and well-being.

Throughout the study, the researcher was devoted to protecting all respondents' privacy and confidentiality. Personal information gathered from respondents was kept totally confidential and used only for the purposes of this research.

The informed consent method was an important aspect of this study since it ensured that all participants completely understood the nature and scope of their engagement before choosing to participate.

The research questionnaires were designed to be free of technical terms, ensuring that respondents could easily understand the content. Before distribution, the purpose of the study, along with its objectives, was clearly explained to all potential participants in straightforward, non-technical language. This explanation was provided in both written and verbal formats to accommodate different levels of comprehension.

Participants were told about their rights in a clear and transparent manner. This includes the ability to willingly participate or decline without repercussions, the opportunity to quit the research study at any time, and the right to secrecy over the information submitted.

The potential hazards and benefits of participating in the study were explained to the responders. The risks were small and mostly related to the time commitment necessary, but they were communicated to ensure complete openness. The study's merits, such as adding to educational research and influencing future policy or practice, were also emphasized.

Before administering the research questionnaire, the appropriate authorities, including the school division Superintendent and the School Principal, obtained formal consent. Following this, individual informed consent was sought from each respondent. A consent form was provided, detailing the study's purpose, the respondents' rights, and the potential risks and benefits. Participants were asked to read and sign the consent form, indicating their willingness to participate. For those who preferred a verbal explanation, the content of the form was read aloud, and their consent was recorded.

The distribution of the respondents showed how the respondents were disseminated. Furthermore, the data collection procedures were indicated, as well as how the questionnaire was administered, and the manner of respondents involved in the study.

The study did not include any high-risk situations that the respondents may have faced in terms of physical, psychological, or socioeconomic problems. The study only involved their field of motivation towards learning.

The results of the study benefited teachers, educational institutions, administrators, and policymakers of DepEd Tagum City Division, as well as students, the research community, and society at large.

The study had no trace or evidence of misrepresentation of someone else's work as the researcher's own. The study underwent plagiarism detection using software like Grammarly or Turnitin. The study had no trace or evidence of intentional misinterpretation of

what had been done. There was no making up of data and results, nor were conclusions purposefully put forward that were not accurate. The study found no evidence of intentionally distorting the work to match a model or theoretical expectation, nor was there any indication of overclaiming or exaggeration. The study had no trace of conflict of interest, such as the disclosure of COI, which is a set of conditions in which professional judgment concerning primary interests such as participants' welfare or the validity of the research tends to be influenced by secondary interests such as financial or academic gains or recognitions. The study had no trace of misleading the respondents to any potential harm.

The researcher of this study was a graduate of Bachelor of Science in Secondary Education. Throughout the development of the study, the researcher received valuable guidance and feedback from the adviser. Due to his significant contributions in refining and improving the study through a series of revisions, Dr. Dan O. Gomez was included as a co-author in any publication of this research. The study adhered to the standards set by the University of Mindanao Ethics Review Committee, following all guidelines for ethical consideration. After receiving approval, the study was subjected to pilot testing, and the collected data were interpreted to ensure the consistency of the research questionnaire.

Results and Discussion

This section presents the study's key findings, including thorough feedback of each table based on statistical analysis and supported by appropriate references. The results are presented in both tabular and textual formats to ensure that the data is clear and structured. Each table is followed by a detailed discussion of major trends, relationships, and their implications for the study's objectives.

Level of Research Training

Table 1 shows the level of research training among secondary teachers in the Tagum City Division, as measured by four important indicators: (1) time for research, (2) training to encourage participation in research, (3) ability to attend research training, and (4) confidence to do research. The overall mean score of 3.73 with a standard deviation (SD) of 0.74 suggests that respondents have high level of research training.

Table 1. *Level of Research Training*

Indicators	*Mean*	*SD*	*Descriptive Equivalent*
Time for Research	3.71	0.87	High
Training to Encourage Involvement Research	3.54	0.89	High
Ability to Attend Research Training	3.83	0.83	High
Confidence to Undertake Research	3.83	0.73	High
Overall	3.73	0.74	High

Among the indicators, Ability to Attend Research Training and Confidence to Conduct Research had the highest mean scores of 3.83, with standard deviations of 0.83 and 0.73, respectively. This shows that secondary teachers in the division believe they are capable of participating in research training and are confident in doing research. Their confidence may derive from prior experience to research-related activities, institutional mandates necessitating research participation, or professional development initiatives within the Department of Education (DepEd), as highlighted by Brew (2010).

The indicator Time for Research received a mean score of 3.71 (SD = 0.87), which, while still considered high, suggests that secondary teachers may struggle to allocate adequate time for research due to their teaching loads, administrative responsibilities, and other professional obligations. This is consistent with the findings of Sibanda, Iwu, and Benedict (2018), who said that time restrictions are a substantial obstacle to research production among educators. Given that many secondary teachers are responsible for many subject areas, extracurricular activities, and other school-related responsibilities, it is unsurprising that finding time for research remains a challenge.

Meanwhile, Training to Encourage Involvement in Research had the lowest mean score of 3.54 (SD = 0.89). While the rating remains excellent, this shows that there may be room for improvement in the implementation and accessibility of research training programs designed expressly for secondary teachers. Previous research has shown that ongoing research training and mentorship improve teacher's engagement and productivity in research (Shen, H. 2017). The comparatively low score may imply that, while research training opportunities exist, they are not as frequent, well-promoted, or accessible to instructors who are dealing with a heavy academic workload.

The findings indicate that institutional support is critical in promoting research participation among secondary teachers. The overall high descriptive equivalent indicates that instructors in the Tagum City Division consider themselves well-trained in research-related tasks. However, the discrepancies in outcomes underscore the need for improvement, particularly in terms of expanding access to research training programs and addressing time constraints. Schools and educational institutions should improve their research capability-building programs by introducing structured research training schedules, incorporating research into workload organization, and providing incentives for conducting research (Bland, C. J. & Ruffin, M. T. 1992). Building mentorship efforts and collaborative study linkages within the division may help increase secondary teachers' research participation and efficiency.

These findings are consistent with the increased emphasis on research culture in basic education institutions, notably in the Philippine

educational system, where instructors are being pushed to perform action research to improve classroom instruction. Future research may look into specific challenges to attending research training, as well as the impact of administrative support on teachers' enthusiasm to participate in research. Administrators at institutions may also implement policies that promote research as a critical component of professional development, ensuring that teachers have the necessary skills and resources to participate effectively to educational research.

Level of Research Skills

Table 2 shows the respondents' level of research skills as tested in two important areas: information seeking skills and methodology skills. The overall mean score of 4.01 with a standard deviation (SD) of 0.65 falls into the high descriptive category, indicating that secondary teachers in the Tagum City Division believe they have a high level of research skills, particularly in gathering information and applying research methodologies.

Table 2. *Level of Research Skills*

Indicators	*Mean*	*SD*	*Descriptive Equivalent*
Information seeking skills	4.06	0.69	High
Methodology skills	3.79	0.69	High
Overall	4.01	0.65	High

Among the two variables, Information Seeking Skills had the highest mean score of 4.06 (SD = 0.69), indicating that respondents are highly skilled at locating, accessing, and evaluating sources of information relevant to their research. This competency is critical for teachers engaged in research because it allows them to retrieve accurate, reliable, and credible data to support their studies, particularly in action research aimed at improving classroom instruction (Gonzalez, C. 2018). The high score indicates that secondary teachers in the division are proficient in using research databases, library resources, and online search engines to gather necessary literature and data. This finding is consistent with the research of Wu, Y. T., and Tsai, C. C. (2020), which underlined how digital literacy and access to online research tools improve information-seeking behaviors among educators and professionals. Given the Department of Education's (DepEd) increasing emphasis on research-based teaching methodologies, this finding demonstrates teacher ability to navigate multiple information sources to improve their instructional practices.

On the other hand, Methodology Skills received a slightly lower mean score of 3.79 (SD = 0.69), though still classified as high. This shows that, while respondents demonstrate competency in research procedures, there may be room for development, notably in study framework design, method selection, and data analysis. According to Creswell, J.W. and Creswell, J.D. (2018), mastering research technique is critical for doing high-quality research because it ensures the validity and dependability of findings. The somewhat lower score in this area may indicate that secondary teachers require additional training in research design, statistical analysis, and the use of qualitative or quantitative methodologies, all of which are essential for undertaking rigorous educational research. Many teachers may have received limited formal instruction in research methodology during their undergraduate studies, adding to the need for additional professional development in this area.

The overall high level of research skills indicates that secondary teachers in Tagum City Division have an adequate basis for conducting research. However, the gap between the two variables suggests that, while their information-seeking skills are strong, they require additional training in research methods.

This is consistent with the findings of Jansen and Rieh (2019), who discovered that educators and early-career researchers frequently struggle with the technical components of study design despite their expertise in information retrieval. Addressing this gap is critical, particularly in light of DepEd's Basic Education Research Agenda, which encourages teachers to do classroom-based research to improve teaching and learning outcomes.

These findings indicate that schools and research organizations should prioritize methodology training in order to bridge the gap between information retrieval and research implementation. Providing structured workshops, hands-on research experiences, and mentorship programs can assist secondary teachers develop their methodological skills (Borg, W. R. 2015). Furthermore, incorporating research methodology courses into DepEd's professional development programs can help instructors employ proper research approaches in real-world classroom settings.

Furthermore, digital literacy and library resource training may be strengthened to ensure that secondary teachers maintain their high level of information-seeking skills. As information sources grow in the digital era, teachers must develop critical assessment skills to distinguish between trustworthy and non-credible sources, ensuring that their study is based on accurate and legitimate data (Pickard, A. J. 2017).

Future research may investigate the specific problems that teachers encounter when implementing research methodology and provide focused interventions to increase their research skills. Institutions may also investigate blended learning approaches, which combine online materials with in-person mentoring to give flexible and accessible training opportunities for research teachers. Educators' research abilities must be strengthened in order to establish an evidence-based teaching culture, which will eventually help both teachers' professional development and student learning results.

Level of Motivation to Undertake Research

Table 3 shows the level of motivation to conduct research among Tagum City Division secondary teachers, which is divided into three categories: social research motivation, intrinsic research motivation, and attainment research motivation. The overall mean score is 3.89, with a standard deviation (SD) of 0.68, which is considered high. This shows that secondary teachers in Tagum City Division are highly motivated to participate in research activities for personal, professional, and social reasons.

Table 3. *Level of Motivation to Undertake Research*

Indicators	*Mean*	*SD*	*Descriptive Equivalent*
Attainment research	3.79	0.83	High
Intrinsic research	3.94	0.66	High
Social research	3.98	0.77	High
Overall	3.89	0.68	High

Among the three indicators, Social Research Motivation received the highest mean score of 3.98 (SD = 0.77). This indicates that teachers view research as a means to contribute to society, address educational challenges, and generate solutions that benefit their students and schools. As educators, their research activities may focus on improving teaching practices, boosting student learning outcomes, and resolving institutional issues. Deci, E. L.; Ryan, R. M. (2020) emphasize the importance of social motivation in research involvement, stating that people are more likely to do studies when they see the possible influence on communities. This is congruent with the findings of Nguyen et al. (2021), who discovered that educators are frequently driven by a desire to make significant contributions to their community and the greater educational system. The high score in this category indicates that Tagum City Division teachers understand the importance of research in creating educational policies, instructional methods, and school development initiatives.

Intrinsic Research Motivation, with a mean score of 3.94 (SD = 0.66), also falls within the high category. This shows that many teachers are inwardly motivated by curiosity, intellectual gratification, and a desire to broaden their professional expertise. For educators, research is a tool for self-improvement, allowing them to better their pedagogical techniques, explore new teaching methods, and advance in their careers. According to Ryan and R. M. & Deci, E.L. According to (2017), intrinsic motivation promotes creativity, tenacity, and increased participation in academic pursuits. The findings show that teachers in Tagum City Division find research rewarding and see it as an important part of their professional development, which is consistent with the Self-Determination Theory, which states that intrinsically motivated people are more persistent in complex tasks (Deci, E. L., and Ryan, R. M. (2020).

Meanwhile, Attainment Research Motivation, with the lowest mean score of 3.79 (SD = 0.83), remains within the high category. However, data shows that achievement-oriented motives like professional advancement, recognition, and promotions have a significantly lower impact than social and intrinsic motivations. While teachers recognize the importance of research in their professional success, their motivation to conduct studies stems from a strong commitment to student development and community impact. Schunk, D.H. and DiBenedetto, M.K. (2021) emphasize that goal-setting and self-efficacy are important components of achievement motivation, although these characteristics may differ based on institutional support and individual goals. This shows that, while teachers value research in their careers, they may want more organized incentives, such as research funds, awards, or promotion chances, to increase their commitment.

The findings suggest that the Department of Education (DepEd) in Tagum City Division should leverage the high levels of social and intrinsic motivation among teachers to sustain and enhance their research engagement. Encouraging action research projects, providing platforms for research dissemination, and integrating research-based teaching strategies can further strengthen teachers' motivation. Schools and DepEd offices may also consider implementing mentorship programs, research workshops, and interdisciplinary collaborations to sustain high intrinsic motivation (Harackiewicz et al., 2016).

Furthermore, the comparatively low attainment motivation score indicates the need for more structured academic rewards and career paths in research. To encourage more research participation, schools may consider honoring outstanding teacher-researchers, granting research-related professional development credits, and offering financial or time-based incentives (Linnenbrink-Garcia et al., 2018).

Future studies may look into the specific problems that secondary teachers encounter when undertaking research, as well as solutions that can boost their enthusiasm and productivity. Furthermore, it would be useful to investigate ways to develop the division's research culture, ensuring that professors have enough resources, institutional support, and chances for collaboration.

Significant Relationship Between Research Training, Research Skills, and Motivation

Table 4 presents the correlation analysis results examining the relationship between research training, research skills, and motivation to undertake research among the secondary teachers of Tagum City Division. The results show a significant beneficial relationship between both factors, implying that both research training and research skills play important roles in influencing educational enthusiasm to conduct research. Thee computed r-value of 0.760 for research training indicates a strong positive correlation with motivation. This suggests that as secondary teachers of Tagum City Division receive more research training, their motivation to conduct research increases. The r-square value of 0.5776 implies that 57.76% of the variance in motivation can be attributed to research training, while

the remaining 42.24% may be influenced by other factors such as institutional support, access to research resources, and personal interest. The p-value of 0.001 (below the 0.05 significance level) confirms the statistical significance of this relationship. These findings emphasize the value of structured training programs in providing teachers with the requisite knowledge, confidence, and exposure to research activities, which ultimately boosts motivation.

Table 4. *Significant Relationship Between Research Training, Research Skills, and Motivation*

Independent Variable	*Dependent Variable*	*r-value*	*r-square*	*p-value*	*Decision*
Research Training	Motivation to Undertake Research	0.760*	.5776	0.001	Reject H0
Research Skills		0.791*	0.6257	0.001	Reject H0

Similarly, research skills demonstrate an even stronger positive correlation with motivation, as indicated by an R-value of 0.791. This suggests that secondary teachers in Tagum City Division who possess well-developed research skills are more likely to be motivated to conduct research. The r-square value of 0.6257 shows that 62.57% of the variation in motivation is explained by research skills, making it a slightly stronger predictor of motivation than research training. The p-value of 0.001 further confirms the statistical significance of this relationship. These findings are consistent with Bandura's (1997) idea of self-efficacy, which states that people who are more competent in research abilities are more confident and, as a result, more driven to conduct research. This is especially crucial for secondary teachers, as those who are more experienced in research tend to suffer less anxiety and frustation, allowing them to conduct research more effectively.

When comparing research training and research skills, both have a considerable impact on teacher motivation to conduct research. However, the somewhat larger r-value and r-square for research skills indicate that learning research competence has a greater impact on motivation than training alone. This means that, while training offers the fundamental foundation, real application and improvement of research abilities are more important in sustaining long-term motivation. Nonetheless, research training and research skills are closely associated, as good training programs often result in the development of excellent research skills among teachers.

Given these findings, the Tagum City Division may focus both research training and research skill development to foster a research-oriented culture among secondary teachers. Schools and the Department of Education (DepEd) should establish comprehensive training programs that combine academic knowledge with practical applications to improve research skills. Furthermore, integrating research-based coursework, classroom action research projects, and experiential learning opportunities can help teachers improve their research skills.

To better encourage secondary teachers' research engagement, the division could offer mentorship programs, writing workshops, and statistical consultations to boost confidence and motivation. Furthermore, creating a good research atmosphere through the recognition of great teacher-researchers, research funds, and conference attendance can motivate more teachers to participate in research activities.

Regression Analysis on the Influence of Research Training and Research Skills on Motivation

The regression analysis results in Table 5 provided insight into the relationship between research training, research skills, and motivation to conduct research among secondary teachers in Tagum City Division. The computed regression coefficient (R = 0.829) shows a substantial positive relationship between the independent factors (research training and skills) and the dependent variable (motivation to conduct research). This implies that when secondary teachers gain further training and develop stronger research skills, their motivation to conduct research grows significantly.

Table 5. *Regression Analysis of the Influence of Research Training and Research Skills to Motivation to Undertake Research*

Independent Variable	*Unstandardized Coefficients*		*Standardized Coefficients*	*t- value*	*p-value*	*Decision*
	B	*SE*	*Beta*			
(Constant)	0.458	0.145				
Research Training	0.349	0.048	0.378*	7.332	0.001	Reject H_0
Research Skills	0.532	0.054	0.505*	9.809	0.001	Reject H_0
Dependent Variable: Motivation to Undertake Research						
R= 0.829* R^2 = 0.687						
F-ratio 302.680 P-value 0.001						

According to the coefficient of determination ($R^2 = 0.687$), secondary teachers' research motivation is 68.7% explained by their research training and skills. This demonstrates the significant predictive ability of these variables in affecting teachers' motivation to pursue research. Other factors, including institutional support, workload, research incentives, and access to research money and resources, may account for 31.3% of the variance.

Research skills had the largest standardized coefficient ($\beta = 0.505$, $p = 0.001$), suggesting a significant impact on research motivation. This finding implies that secondary teachers in Tagum City Division with strong research abilities are more likely to participate in research activities because they feel more capable of handling various components of the research process, such as data collecting,

analysis, and academic writing. Research training has a substantial impact on motivation, with a standardized coefficient of $\beta = 0.378$ ($p = 0.001$). Exposure to structured training programs increases instructors' willingness and confidence in conducting research.

The t-values for research training ($t = 7.332$) and research skills ($t = 9.809$) are statistically significant ($p = 0.001$), rejecting the null hypothesis (H_0). This demonstrates that research training and research abilities have a considerable influence on secondary teachers' motivation to conduct research. Furthermore, the F-ratio (302.680, $p = 0.001$) supports the regression model's overall significance, demonstrating that research training and research skills work together to motivate teachers to perform research.

These findings highlight the importance of professional development programs in cultivating a strong research culture among secondary teachers in Tagum City Division. Given that research skills have a somewhat stronger impact than research training, schools may prioritize developing instructors' research competences through hands-on activities, mentoring, and real-world research applications. To improve teachers' skills, the division and school administrations should organize regular research capability-building seminars, action research workshops, and peer-review sessions.

Furthermore, structured training programs may be designed to meet the actual research needs of teachers. Many secondary instructors confront time restrictions, a lack of resources, and little assistance when conducting research. Mentorship, research funding possibilities, and joint research projects can help to overcome these barriers and increase motivation.

Regression Analysis of the Influence of the domains of Research Training to Motivation to Undertake Research

The regression analysis results presented in Table 6 highlight the extent to which different domains of research training influence the motivation of secondary teachers in the Tagum City Division to conduct research.

The model has moderate to good predictive value ($R = 0.763$, $R^2 = 0.581$), explaining 58.1% of teacher's motivation to conduct research through independent factors. The total model is statistically significant (F-ratio = 95.151, p-value = 0.001), indicating its validity in determining the association between research training and motivation.

Three of the independent variables were shown to have a substantial positive influence on teacher motivation. First, time for research ($B = 0.221$, $p = 0.001$, Beta = 0.282) indicates that when teachers are given adequate time for research activities, their motivation to conduct research improves. Given the demands of teaching, secondary educators frequently struggle to find time for research work. This finding is consistent with earlier research (e.g., Brew & Boud, 2009), which emphasize the need of institutional assistance in time management to promote research productivity among educators.

Table 6. *Regression Analysis of the Influence of the domains of Research Training to Motivation to Undertake Research*

Independent Variable	*Unstandardized Coefficients*		*Standardized Coefficients*	*t- value*	*p-value*	*Decision*
	B	*SE*	*Beta*			
(Constant)	1.219	0.149				
Time for Research	0.221	0.049	0.282*	4.464	0.001	Reject H_0
Training to Encourage Involvement Research	0.086	0.058	0.113	1.485	0.139	Do not Reject H_0
Ability to Attend Research Training	0.220	0.059	0.270*	3.708	0.001	Reject H_0
Confidence to Undertake Research	0.185	0.055	0.198*	3.384	0.001	Reject H_0
Dependent Variable: Motivation to Undertake Research						
$R = 0.763$*			$R^2 = 0.581$			
F- ratio= 95.151			P- value= 0.001			

Second, the capacity to attend research training ($B = 0.220$, $p = 0.001$, Beta = 0.270) is important for inspiring teachers. The positive and important relationship between attending research training and motivation emphasizes the need of ongoing professional development. Teachers who have the opportunity to participate in organized research training are more likely to develop confidence and interest in conducting research, which supports Shin et al.'s (2014) findings that professional development increases research involvement among educators.

Third, confidence in conducting research ($B = 0.185$, $p = 0.001$, Beta = 0.198) has a substantial influence on motivation. When teachers believe they are capable of conducting research, they are more likely to participate in it. This is consistent with Bandura's (1997) Social Cognitive Theory, which claims that self-efficacy greatly influences behavior. Teachers with higher levels of confidence are more likely to take on research projects because they believe in their capacity to conduct and complete research successfully.

However, the variable "Training to Encourage Involvement in Research" ($B = 0.086$, $p = 0.139$, Beta = 0.113) did not show a significant influence. This shows that just asking teachers to participate in research without taking into account practical restrictions such as time, skills, and confidence may be insufficient to inspire them. This conclusion confirms Hemmings and Kay's (2010) observation that, while encouragement is important, it must be supplemented by specific interventions that increase instructors' capacity and confidence

in research.

These findings highlight the importance of institutional policies that allot devoted research time, provide accessible research training, and increase teachers' confidence in research. Education leaders and administrators in the Tagum City Division should explore incorporating research training into professional development programs while also providing teachers with practical opportunities to apply their knowledge. Furthermore, creating a research culture in schools that supports, recognizes, and provides adequate resources can dramatically increase teachers' enthusiasm to perform research. Providing organized mentorship, research grants, and publication chances can also help teachers stay motivated, thereby enhancing the division's research production.

Regression Analysis of the Influence of the domains of Research Skills to Motivation to Undertake Research

The regression analysis in Table 7 focuses into the impact of research skills, specifically information-seeking and methodology skills, on the desire of secondary teachers in the Tagum City Division to conduct research. The correlation value (R = 0.791) shows that there is a strong positive association between these research skills and teacher motivation. According to the coefficient of determination (R^2 = 0.626), teachers' research skills account for 62.6% of the variance in motivation to conduct research. The total model is statistically significant, with an F-ratio of 231.307 and a p-value of 0.001, indicating that research skills play an important role in shaping instructors' motivation to participate in research activities.

Motivation was most strongly influenced by technique skills, with a standardized beta coefficient of 0.455 and a p-value of 0.001. This means that secondary teachers who understand research methods well, such as research design, data collection, and analysis, are more likely to be motivated to conduct research. This finding is consistent with Creswell's (2014) assertion that mastering research methodologies reduces apprehension and increases confidence in research productivity. Proficiency in research methodology is vital for secondary teachers because it allows them to perform action research to improve teaching strategies and student learning outcomes.

Table 7. *Regression Analysis of the Influence of the domains of Research Skills to Motivation to Undertake Research*

Independent Variable	*Unstandardized Coefficients*		*Standardized Coefficients*	*t- value*	*p-value*	*Decision*
	B	*SE*	*Beta*			
(Constant)	0.554	0.158				
information seeking skills	0.386	0.055	0.389*	6.953	0.001	Reject H_0
methodology skills	0.447	0.055	0.455*	8.127	0.001	Reject H_0
Dependent Variable: Motivation to Undertake Research						
R= 0.791* R^2 = 0.626						
F- ratio= 231.307 P- value= 0.001						

Similarly, information-seeking skills had a substantial effect on teacher motivation, with a standardized beta coefficient of 0.389 and a p-value of 0.001. This shows that teachers who are skilled at identifying, evaluating, and using research resources are more likely to conduct research. Individuals with good information literacy abilities, according to Kuhlthau (2004), are more confident in conducting research because they can easily obtain trustworthy sources and incorporate important findings into their studies. These abilities are especially important for teachers since research-based teaching approaches help with evidence-based decision-making and ongoing professional development.

The findings underscore the importance of research skills in inspiring secondary teachers in the Tagum City Division. Given the demands of the Department of Education's research agenda and the emphasis on evidence-based educational practices, it is critical to improve teachers' knowledge of research methodologies and information literacy. Schools and education agencies may consider providing targeted training, mentorship programs, and institutional support to strengthen teachers' research capabilities, ultimately promoting a research culture in secondary education.

Conclusions

Based on the findings, the following conclusions were drawn: First, there was a high level of exposure to research training among secondary school teachers in the Tagum City Division. Teachers reported enough time for research, great confidence in conducting research, and the ability to attend training programs. However, training to encourage involvement in research received lower scores, indicating the need for more targeted and accessible research training options.

Second, the study found that teachers have a high degree of research capabilities, notably in terms of information-seeking and methodological abilities. These competencies demonstrate that educators can locate relevant literature, establish research frameworks, analyze data, and apply research findings to their teaching practice.

Third, teachers indicated a high level of motivation to conduct research, with social, intrinsic, and attainment-related factors contributing to their involvement. This shows that teachers have a strong internal motivation to improve professionally and contribute to educational innovation through research.

Fourth, the study found a significant positive correlation between exposure to research training, research skill capacity, and motivation

to conduct research. Notably, research skills had a higher impact on motivation than research training. This means that, while training is still necessary, the development of practical research competencies is more important in maintaining teachers' willingness to engage in research.

Furthermore, critical determinants of motivation included time for research, ability to attend research training, and confidence to conduct research, while Training to Encourage Involvement in Research was not a significant predictor. This implies that contextual factors such as teacher workload and institutional support may have a stronger influence on research motivation than training availability alone.

Given these findings, schools and the Department of Education (DepEd) may expand research support mechanisms through mentoring, collaborative research, and capacity-building initiatives aimed at improving methodological expertise. As a result, teachers will be more prepared to conduct relevant research that promotes academic success, professional development, and informed educational decisions.

These findings are consistent with the goals of SDG 4 on Quality Education, which promotes teacher competency and continual professional development. The study also contributes to SDG 8 on Decent Work and Economic Growth and SDG 9 on Industry, Innovation, and Infrastructure by emphasizing the role of teacher-led research in encouraging innovation in the education sector.

Based on the study's findings, the following recommendations are made to improve research participation among secondary teachers in the Tagum City Division. These are designed to address the specific weaknesses and strengths revealed in the report, focusing on important stakeholders.

School administrators and DepEd authorities could start by allocating dedicated research time through workload adjustments or substitute teacher accommodations, as time limits were identified as a significant limitation (mean = 3.71). Formalizing research as part of instructors' performance measurements and providing incentives such as promotions, research funds, or awards would take advantage of the high relationship between research training, skills, and motivation (r = 0.760 and 0.791, respectively). Teachers' high social motivation (mean = 3.98) creates a chance to construct mentorship programs and school-based learning communities to maintain involvement.

Training providers, such as DepEd and higher education institutions, may prioritize methodology skill development (mean = 3.79) through hands-on workshops in research design, statistical analysis, and academic writing. The lower rating for training accessibility (mean = 3.54) indicates the need for adaptable delivery methods, needs assessments, and follow-up mentoring. Building on teachers' high information-seeking skills (mean = 4.06), further training should emphasize critical evaluation of digital resources and the use of research databases.

The findings imply that teachers expand on their existing abilities by actively participating in ongoing professional development, particularly in methodology applications. Their high levels of confidence (mean = 3.83) and social motivation make them ideal candidates for collaborative action research addressing real-world classroom difficulties.

Future researchers may conduct studies to identify systemic barriers to training involvement and assess the long-term effects of research engagement on teaching methods. Creating sustainable frameworks for incorporating research into teachers' duties as educators would give useful insight for policy implementation.

These strategic interventions contribute to multiple Sustainable Development Goals: SDG 4 (Quality Education) through improved evidence-based teaching; SDG 8 (Decent Work and Economic Growth) through professional development opportunities; and SDG 9 (Industry, Innovation, and Infrastructure) by encouraging research-driven innovations in educational systems. The joint application of these principles will foster a thriving research culture that benefits both educators and students while also contributing to the larger aims of educational change.

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Affiliations and Corresponding Information

Elen Luz R. Muñez
University of Mindanao Tagum College – Philippines

Dan O. Gomez, EdD
University of Mindanao Tagum College – Philippines