

Teachers' Research Capability and Research Engagement

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ABSTRACT: Teachers are increasingly viewed as reflective practitioners, capable of not only implementing but improving teaching practices through research-based decision-making. This study aimed to investigate the extent of teachers' research capability in terms of knowledge and skills, self-efficacy and administrative support and their level of research engagement. It also determined the significant relationship between the teachers' research capability and engagement. This study employed a descriptive correlational research design which utilized a researcher-made questionnaire that passed the validity and reliability test. The survey was administered during the School Year 2024-2025 in Talakag District I, Division of Bukidnon using purposive sampling procedure. Mean, Standard Deviation, and Pearson Product Moment Correlation Coefficient, were used to analyze and interpret the collected data. The findings showed that teachers' research capability and engagement are at high level. There is a low to moderate positive correlation between the teachers' capability and engagement. It can be concluded that teachers have their capability and do engage in research because it is part of their professional growth especially for their promotion and quality education. It is therefore recommended that teachers may make use of their capability to engage with their school heads on finding through research the best ways to solve the pressing problem faced by the education department like the literacy and numeracy proficiency level of the learners.

KEYWORDS: research capability, research efficacy, research engagement

I. INTRODUCTION

In the dynamic landscape of contemporary education, the role of teachers extends beyond mere instruction. They are increasingly viewed as reflective practitioners, capable of not only implementing and improving teaching practices but also through research-based decision-making. A strong research culture within the teaching profession is crucial for enhancing the quality of education, fostering innovation, and ultimately improving student learning outcomes. However, studies have consistently shown that teachers' research capabilities and engagement levels vary significantly.

According to Perez et al. (2022), research capability is a construct that caught many audiences such as in the field of management, engineering, and physical sciences. This includes the educational sector in advancing quality and research-based education that promulgates fact-based policies and programs. The growing interest across diverse disciplines highlights the importance of developing strong research skills to address complex, real-world problems effectively. Furthermore, enhancing research capability fosters innovation and evidence-based decision-making, which are crucial for institutional growth and societal progress. As a result, many organizations prioritize building this capability to remain competitive and relevant in their respective fields.

For Pilongo (2022), research capability is the potential of individuals in the institution to undertake the rigors of effective, efficient, and high-quality research. This capability encompasses not only the technical skills and knowledge required to conduct research but also the critical thinking and problem-solving abilities necessary to navigate complex scientific inquiries. Moreover, it reflects the institution's support system, including access to resources, mentorship, and collaborative opportunities that enable researchers to maximize their output. Ultimately, research capability is a key factor in driving innovation and contributing meaningful advancements within any academic or professional setting.

Research capability refers to the skills, knowledge, and resources that individuals or institutions possess to conduct effective and high-quality research. This includes methodological competence, critical thinking, data analysis proficiency, and the ability to communicate research findings. Developing strong research capability is essential for producing meaningful contributions to academic and professional field.

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Tamban & Maningas (2020) provided substantial findings about the technical writing skills as reference for capability management plan. Most of the barriers or challenges that the researchers encountered are lack of time to conduct the research, the pressure and nature of academic tasks, and the lack of support and funding from the administration. Since research capability can be honed through time, it is expedient that teachers or faculty members are given enough time to work with their research. The more load or preparations that a faculty member received, the less time they can utilize for their research. The nature of academic tasks should also be considered because if it is too demanding, the more that the faculty member loses the energy to conduct research. Lastly, if a faculty member finished a research article, the administration should support it 100%. If the administrator or the research director will not release the funding, the researcher will lose the appetite for doing another paper. Thus, research capability should be assessed to know the ways on how to improve it.

Meanwhile, research engagement pertains to the active participation in research-related activities. This includes conducting studies, collaborating with other researchers, attending and presenting at conferences, publishing in academic journals, and engaging with the broader community to apply research outcomes. High levels of engagement often lead to greater innovation and knowledge dissemination. Jalal (2020) did mention that the amount and quality of publications (journal articles, books, chapters, conference papers, or research proposals) submitted, accepted (in press), or published are the most effective approaches to evaluate research participation.

Research conducted in recent years has shed light on the factors influencing teachers' research engagement. A study of Saro et al. (2023) divulged that the secondary teachers exhibited strong, significant motivation and competence in academic research writing. They place a lot of importance on improving their writing. They are capable of writing action research papers that consider the technical aspects, write an introduction, choose an appropriate methodology, present results, and discussions, come to conclusions, offer recommendations, summarize references, and take other research papers into consideration.

Meanwhile, Tarrayo et al. (2021) explored research engagement among English language teachers at a Philippine University, revealing that many educators face challenges such as lack of time, heavy workloads, and insufficient research skills, which hinder their participation in research endeavors. These obstacles not only limit the teachers' ability to contribute to academic knowledge but also affect their professional growth and development. The study highlighted the need for institutional support, including training programs and workload management, to encourage and enable greater research involvement among educators. Addressing these barriers is essential for fostering a more vibrant research culture within educational institutions.

Saro and Taray (2024) disclosed that while teachers generally demonstrated competency and enthusiasm for action research, challenges such as time constraints, insufficient support, and research complexity were prevalent. Despite their willingness to engage in research activities, these barriers often limited the depth and frequency of their involvement. The findings suggested that providing more structured support systems, such as dedicated research time and accessible resources, could help teachers overcome these difficulties. Enhancing institutional support would not only boost research productivity but also empower teachers to apply their findings more effectively in the classroom.

Sagor (2020) also pointed out that many teachers felt overwhelmed by the demands of action research, which requires substantial effort and commitment beyond their regular teaching duties. This added responsibility often leads to increased stress and burnout, making it difficult for educators to maintain a balanced workload. Additionally, without proper guidance and institutional support, teachers may struggle to navigate the complexities of research processes, further discouraging their sustained engagement. These challenges highlight the need for schools to create more supportive environments that recognize and accommodate the additional demands of action research.

To effectively address the varying levels of teachers' research engagement and enhance their research capabilities, targeted research training programs are essential. These programs should be designed to equip teachers with the necessary knowledge, skills, and dispositions to conduct research within their own classrooms. This may involve training in research methodologies, data collection and analysis techniques, and the interpretation and application of research findings to improve teaching practices. For instance, Bonganciso (2023) implemented the Research Capability Program (ReCaP) at Philippine Normal University Visayas, which aimed to develop teachers' skills in conducting research and improving their instructional practices. The program included sessions on conducting action research, writing research proposals, and presenting research findings, highlighting the importance of structured training in fostering research competence among educators.

Additionally, Samosa (2021) conducted a study at San Jose National High School, focusing on cultivating a research culture through capacity-building programs. The initiative aimed to improve teachers' self-efficacy, reduce research anxiety, and enhance their attitudes toward research, emphasizing the need for supportive environments and targeted training to encourage teacher engagement in research activities. These studies underscore the significance of targeted research training programs in equipping teachers with the necessary skills and dispositions to conduct research within their classrooms, thereby enhancing their research capabilities.

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As recommended by Saro et al. (2023), the Department of Education should use extensive seminars and workshops on action research to give teachers more knowledge and a deeper understanding of how to conduct research. These professional development activities can serve as platforms for hands-on learning, where teachers can engage with real research scenarios and collaborate with peers. By fostering a supportive learning environment, such initiatives can boost teachers' confidence, enhance their research skills, and ultimately lead to more meaningful integration of research into classroom practice. Continuous training also ensures that educators stay updated with current methodologies and trends in educational research.

Mockler and Groundwater-Smith (2021) also recommended the establishment of research networks to foster collaboration and shared learning among teachers engaged in action research. These networks can create a sense of community and support, enabling educators to share best practices, challenges, and research findings in a collaborative environment. By connecting teachers across different schools or regions, research networks can encourage innovation, reduce feelings of isolation, and promote sustained engagement in research. Such collaboration can ultimately lead to improved teaching practices and more impactful educational outcomes.

The Department of Education has also issued several orders to support teachers in doing research. DepEd Order No. 24, s. 2020 focused on enhancing research capabilities through structured training programs. Furthermore, DepEd Order No. 44, s. 2021 provided guidelines for research management and utilization in schools. DepEd Order No. 13, s. 2022 aimed to streamline research processes and promote collaborative research processes. Lastly, DepEd Order No. 34, s. 2023 reinforced the role of research in educational innovation and improvement.

These directives reflected a commitment to fostering a research-oriented culture within the educational system. These provide a framework for addressing the challenges faced by teachers in conducting action research and highlighted the need for continuous support and resources.

Similar to the findings to the above-mentioned studies, just like other regions in the Philippines, teachers in the Talakag District may also experience challenges that limit their engagement in research. However, without specific studies focusing on Talakag District, it is difficult to provide definitive evidence. So, to gain a more precise understanding of research capability and research engagement among teachers in Talakag District, this study was conducted.

This study was grounded on Self-efficacy Theory of Bandura and Lev Vygotsky's Theory of Constructivism, as cited by Garrido (2020) rooted in his Sociocultural Theory. According to Bandura's Self-Efficacy Theory, people are more likely to engage in activities if they believe they are competent. Self-efficacy refers to one's belief that one can complete tasks that lead to achieving goals.

This theory is linked to this study because teachers' research skills may be linked to their attendance at research-related training, linked to the two sources of Bandura's self-efficacy, namely mastery experiences, and vicarious experiences. Furthermore, this theory serves as a springboard for teachers' research engagement. It is believed that people with moderate to high self-efficacy were more likely to engage in task-related activities and persevere longer when faced with adversity. This task frequency and persistence lead to more mastery experiences, boosting self-efficacy.

Some studies collectively support the notion that targeted research training programs can enhance teachers' self-efficacy by providing opportunities for mastery and vicarious experiences, thereby encouraging greater engagement in research activities. Lawrent (2022) examined the sources of teacher self-efficacy in a school system facing expansion challenges. The study found that mastery experiences, learning from practical situations, and effectively addressing challenges were the primary drivers of teacher efficacy. This underscored the importance of hands-on experiences and overcoming obstacles in building teachers' confidence in their abilities.

Furtado Nina et al. (2024) investigated the predictors of primary school teachers' self-efficacy beliefs for inclusive education. The study revealed strong positive correlations between teachers' mastery and vicarious experiences and their self-efficacy beliefs. Their study highlighted the significance of both personal achievements and observing others' successes in enhancing teachers' confidence in their teaching abilities.

Lev Vygotsky's Theory of Constructivism, rooted in his Sociocultural Theory, provides a valuable lens for understanding this study. Vygotsky posited that knowledge is constructed through social interactions and meaningful engagement within a cultural context, emphasizing the role of collaborative learning and guided experiences. To support the idea that Lev Vygotsky's Sociocultural Theory provides a valuable framework for understanding teachers' research capability and engagement, recent studies have applied his concepts to contemporary educational contexts. For instance, Wibowo et al. (2025) explored the relevance of Vygotsky's constructivist learning theory in differentiated learning within primary schools, highlighting the importance of social interactions and collaborative learning in knowledge construction.

Similarly, Rigopouli et al. (2025) examined Vygotsky's ideas in the context of technology-enhanced learning design, emphasizing the role of teachers in scaffolding students' learning experiences. These studies underscore the applicability of Vygotsky's theory

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in modern educational settings, reinforcing its relevance to research training programs aimed at enhancing teachers' research skills and engagement.

This idea emphasizes the value of establishing a nurturing environment where teachers actively build their comprehension of research procedures through cooperation, mentoring, and involvement in research training programs in relation to their research capability. The idea that teachers can attain higher levels of research competence with the right scaffolding—such as peer collaboration opportunities or coaching from seasoned researchers—makes the "Zone of Proximal Development" (ZPD) concept especially pertinent. For instance, Gao (2024) demonstrated that pre-service teachers' lesson plan designs improved significantly with appropriate scaffolding from instructors and peers, indicating that guided support can bridge the gap between teachers' current and potential capabilities.

Similarly, Rahman (2024) highlighted the importance of collaborative learning and scaffolding in STEM education, emphasizing that teachers' professional development is enhanced when supported within their ZPD. These studies underscore the relevance of Vygotsky's theory in fostering teachers' research engagement through structured support systems.

This implies that by fostering interactive and reflective research training sessions, aligned with Vygotsky's constructivist principle, teachers are not merely passive recipients of knowledge but active participants in constructing their research skills. This approach not only enhances their capability but also encourages sustained engagement in research, ultimately contributing to their professional growth and the advancement of educational practices.

Addressing the unique requirements and difficulties instructors have in their circumstances is a crucial component of good research training. Training programs should, for instance, consider the different degrees of technical literacy among teachers and offer enough assistance for using technology for research. Furthermore, incorporating technologically advanced learning resources and platforms can improve research training programs' usability and efficacy. In similar vein, DeCoito (2023) and Starks and Reich (2023) identified limited technical literacy among educators as a significant hurdle, emphasizing the need for professional development programs that integrate technology training to enhance teachers' capabilities.

From these, it can be implied that research training programs should also provide a cooperative and encouraging learning atmosphere. The establishment of teacher research communities, where teachers may exchange research experiences, work together on projects, and support one another, can help achieve this. Enhancing teacher research participation and capacity can also be greatly aided by mentoring programs, in which seasoned researcher mentors and assists new teacher researchers. To make sure that research training programs are accomplishing their intended objectives, it is essential to assess their efficacy. This could entail gathering information on how teachers view the training, how their attitudes and actions toward research have changed, and how research-informed practices affect students' learning results.

In this study, the teachers' engagement in research is coupled with the department's objective, which is the development of the culture of research. A person or group acquires knowledge and skills through experience or education from seminars and training related to research writing. The level of identity is equivalent to the teachers' performance through the lens of their research engagement.

II. METHODOLOGY

The study employed a correlational research design to investigate teachers' research capability and engagement. The study employed a correlational research design to investigate teachers' research capability and engagement. This design allowed the researchers to examine the strength and direction of the relationship between teachers' skills in conducting research and their level of involvement in research activities. By analyzing these correlations, the study aimed to identify key factors that may be associated with research engagement among teachers. The findings provided valuable insights into how enhancing specific research competencies could lead to increased participation in scholarly endeavors.

Descriptive statistics was used. Problems 1 and 2 employed Mean and Standard Deviation to describe teachers' research capabilities and engagement. Problem 3 employed the Pearson Product Moment Correlational Coefficient to determine the significant relationship between the independent and dependent variables.

III. RESULTS AND DISCUSSION

Problem1. What is the level of the teachers' research capability based on:

- 1.1 knowledge and skills;
- 1.2 self-efficacy; and
- 1.3 administrative support?

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Table 1. Overall Teachers' Research Capability

Variables	Mean	SD	Description	Interpretation
Knowledge and Skills	4.24	0.54	Agree	High
Self-Efficacy	4.25	0.53	Agree	High
Administrative Support	4.23	0.54	Agree	High
Overall Mean	4.24	0.54	Agree	High

Note: 4.51-5.00 Very High; 3.51-4.50 High; 2.51-3.50 Moderate; 1.51-2.50 Low; 1.00-1.50 Very Low

Table 1 shows the overall level of the teachers' research capability. It has an overall Mean of 4.24 with SD=0.54, indicating agreement and regarded as high level. The data imply that the teachers have the high-level capability and capacity to conduct research at work. They already know the steps and the process in conducting research. They even have the support they need from their superiors. According to Bogo and Aperocho (2020), teachers who conduct research studies must be given recognition, support and assistance. They sacrifice most of their free time just to make sure that the conduct of research is smooth and accurate. A simple recognition will definitely inspire them to continue and finish what they started.

In the same table, the variable, *Self-Efficacy*, was rated the highest with the Mean of 4.25 with SD=0.53, described as Agree and interpreted as High level. The data imply that the teachers have high level of believe in themselves that they can start and finish in conducting research. There is a widespread belief among educators that they may also quantify their own self-efficacy through research. Through the process of conducting research, educators are able to do self-evaluations, which allows them to identify their own strengths and limitations, which can greatly assist them in developing their future goals and actions. There is no doubt that they will be able to improve their performance in this manner. Because they are thoroughly instructed on the areas that they need to maintain as well as enhance on, teachers become more efficient as a result of study. In addition to this, they are able to recognize those who can provide them with aid and direction (Oco et al., 2022).

Meanwhile, the variable, *Administrative Support*, was rated the lowest with the Mean of 4.23 with SD=0.54, described as Agree and interpreted as High Level. The data imply that the teachers feel the support, guidance and assistance of the administration in their journey of conducting research. There are several types of incentives that are provided to the lecturers in accordance with the policy that the organization has in place during the time they are conducting research. The findings of the study that they conduct can be employed as a component of their attachments when they are looking for promotions or even sponsorships. Research is something that teachers are encouraged to do since they are seen to be individuals who are able to supply first-hand data and interpretations that are essential when it comes to developing new policies or improvements (Oco et al., 2022).

Problem 2. What is the level of teachers' research engagement?

Table 2 presents the level research engagement of the teachers. It has an overall Mean of 4.24 with SD=0.54, indicating agreement and regarded as High Level. The data imply that the teachers have high engagement for research. Aside from religiously attending to trainings and seminars. They also participate in research gatherings to be updated with the latest in research. The teachers value the importance of research that is why they take it seriously and with appreciation.

Batool et al. (2021), revealed that teachers know the importance of research in their decision makings at work. That is why research matters to them. Even if doing it requires lot of time and effort, teachers still find ways and means to make it.

Table 2. Research Engagement

Indicators	Mean	SD	Description	Interpretation
<i>I engage in research because ...</i>				
1. I enjoy it.	4.15	0.54	Agree	High
2. it is good for my professional development.	4.30	0.54	Agree	High
3. it will help me get promotion.	4.29	0.52	Agree	High
4. my school head expects me to.	4.25	0.54	Agree	High
5. other teachers can learn from findings of my work	4.21	0.53	Agree	High
6. I want to contribute to the improvement of my classroom management strategies.	4.24	0.55	Agree	High
7. I want to find better ways of teaching.	4.28	0.52	Agree	High
8. I am motivated to contribute more than what is expected of me.	4.27	0.56	Agree	High
9. I want to test my out of the box ideas	4.18	0.53	Agree	High
Overall Mean	4.24	0.54	Agree	High

Note: 4.51-5.00 Very High; 3.51-4.50 High; 2.51-3.50 Moderate; 1.51-2.50 Low; 1.00-1.50 Very Low

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In the same table, indicator 2, *I engage in research because it is good for my professional development*, was rated the highest with the Mean of 4.30 with SD=0.54, described as Agree and interpreted as High Level. The data imply that the teachers recognize the benefits of crafting and conducting research. The teachers believe that the advantages they can get from doing research is beyond their career development as the progress they can create and contribute for the students is beyond comparison.

According to Oco et al. (2022) as well as Apgar et al. (2023), the fulfillment and satisfaction in conducting research and the difference that the teachers can contribute to the students as well as the body of knowledge is incomparable. Research may take a lot of sacrifices and patience but its benefits is beyond compare.

Meanwhile, indicator 1, *I engage in research because I enjoyed it*, was rated the lowest with Mean of 4.15 with SD=0.54, described as Agree and interpreted as High Level. This data imply that the teachers make sure that they are enjoying the process while conducting the research study. This is important because in this way, the teachers can overcome the challenges and stress that may be encountered at the course of the conduct of the research study.

For Anderson et al. (2023), when the teachers are enjoying at what they are doing like in conducting research, they will not get easily tired and resort to giving up on finishing the research study. Instead, they feel more inspired and motivated that they need to finish the research to come up with better solution or remediation to a problem so that it will be solved at the same time help the struggling students.

Problem 3. Is there a significant relationship between the level of teachers' research capability and research engagement?

Table 3 shows the test of correlation between teachers' research capability and engagement. The independent variable is teachers' research capability in terms of knowledge and skills, self-efficacy, and administrative support whereas the dependent variable is teachers' research engagement.

For *Knowledge and Skills*, it registered a computed r-value of 0.548 with the computed p-value of 0.001. The computed p-value is less than the p-critical value at 0.05 level of significance. The data imply that significant moderate positive correlation was registered between research capability and engagement when knowledge and skills is put into consideration. Thus, the null hypothesis is rejected. Knowledge and skills in crafting and conducting research is a must. It allows the teachers to surpass obstacles and challenges that can sometimes make them question if it is worth it to continue and finish their research study. When the teachers have high capability towards research, they can overcome the challenges and eventually create something that is beneficial to them and the learners.

Table 3. Test of Correlation for Teachers' Research Capability and Engagement

Variables	r-value	p-value	Level of Correlation	Decision	Interpretation
Knowledge and Skills	0.548	0.001	Moderate Positive Correlation	Reject Ho	Significant
Self-Efficacy	0.247	0.034	Low Positive Correlation	Reject Ho	Significant
Administrative Support	0.277	0.029	Low Positive Correlation	Reject Ho	Significant

Note: 0.91 - 1.00 Very High Positive Correlation 0.71 – 0.90 High Positive Correlation

0.51 – 0.70 Moderate Positive Correlation 0.31–0.50 Low Positive Correlation

0.00 – 0.30 Negligible Positive Correlation *Significant when computed p-value <0.05*

Anub (2020) divulged that teachers who are exposed to various concepts and updates about research will have less challenges in performing the necessary steps to finish their research study. Thus, teachers should engage in various trainings and seminars and be able to put it into action by applying it to the research study that they will create.

For *Self-Efficacy*, it registered a computed r-value of 0.247 with the computed p-value of 0.031. The computed p-value is less than the p-critical value at 0.05 level of significance. The data imply that significant low positive correlation was registered between research capability and engagement when self-efficacy is considered. Thus, the null hypothesis is rejected. Self-efficacy is beneficial for teachers' research engagement. When the teachers are fully equipped with the necessary knowledge and skills in conducting research, it will be easier for them to conduct it. More so, they will not get easily discouraged if challenges arise along the way.

This finding supported the study of Tarrayo et al. (2021) who noted that when the teachers have the courage and confidence to conduct a research study, it will be easier for them face challenges and be able to finish the research study. The school heads and stakeholders may need to be fully supportive as well towards the teacher conducting the research study.

For *Administrative Support*, it registered a computed r-value of 0.277 with the computed p-value of 0.029. The computed p-value is less than the p-critical value at 0.05 level of significance. The data imply that significant low positive correlation was registered between research capability and engagement when administrative support is taken into account. Thus, the null hypothesis is

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rejected. Administrative Support is also vital to the teachers' research engagement. Once the school heads support the teachers in conducting the research study. It will inspire and motivate them to finish their proposed study. It will also make them feel valued and appreciated.

The result corroborates that of Lee and Chen (2021) who stressed that assistance from school leaders and stakeholders might increase instructors' morale while undertaking research. Teachers will not back down from tackling obstacles because they know they have the faith and confidence of their superiors and clientele.

IV. CONCLUSIONS

Based on the findings presented, the following conclusions are drawn:

1. Teachers are well-versed and equipped with the necessary capabilities in doing research because they are technologically equipped and received administrative support through professional development activities.
2. Teachers do engage in research for professional development especially for their promotions and for quality teaching.
3. Teachers' engagement in research is important in developing their capability in doing research.

V. RECOMMENDATIONS

In the light of the findings and conclusions outlined above, the following recommendations are presented:

1. Teachers may uphold their high level of research capability. They may make use of their research capability in finding better ways to improve the pressing problems in education, like the literacy and numeracy proficiency level of all learners.
2. Teachers may continue to engage in doing with research in to find better ways to improve the quality of their teaching.
3. Teachers and administrators may engage to collaborate their research capabilities to enhance their educational practices and thus, improve learning outcomes.

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