

Developing a Simulacrum for Boosting Research Efficiency in Selected Cebu City Public Schools: A Sequential Explanatory Design

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Abstract

In the dynamic realm of 21st-century education, master teachers in Cebu City's Division are encountering evolving challenges that necessitate a shift in their expertise toward research and innovation. Despite their recognition as instructional experts, there is a noticeable deficiency in research productivity among these educators. This study, conducted during the 2023-2024 academic year, delves into the creation of a simulacrum, rooted in Systems Theory, to enhance research efficiency among master teachers. Employing the Technology Acceptance Model, the research explores stakeholders' willingness to adopt the simulacrum as an innovative tool for research enhancement. The investigation focuses on factors influencing research productivity, encompassing self-assessment, predictors, experiences, and practices of master teachers. Utilizing a sequential explanatory design with qualitative and quantitative methods, the study involves 14 master teachers from Cebu City's Division. Findings reveal positive self-assessment of research productivity among master teachers, with significant predictors including self-efficacy, recruitment, work time, and leadership roles. Highly productive master teachers engage in research-related professional development, collaboration, administrative support, and personal provision of research resources. The proposed model envisions a comprehensive approach, involving capacity-building, collaboration, administrative support, and access to research resources. This transformative model aims to empower master teachers as high-impact researchers, mentors, and facilitators, ultimately enhancing the Division's teaching and learning processes. The study recommends the establishment of mentoring programs by master teachers with high research productivity and encourages future research extensions. In conclusion, the evolving educational landscape necessitates master teachers to broaden their expertise into research, and the proposed simulacrum serves as a strategic tool to elevate teaching quality through research excellence in the Division of Cebu City.

Keywords: Simulacrum, Research Efficiency, Sequential-Explanatory Design, Department of Education, Cebu City, Philippines

Introduction

Quality education serves as a catalyst for societal change and progress, playing a pivotal role in social advancement, economic development, and the cultivation of intellect and values (Ahmad, et al., 2023). In our rapidly evolving world driven by modern technology, the significance of quality education cannot be overstated as it meets current needs, contributing significantly to human resource development and the progress of nations.

In the Philippines, the education system is undergoing adjustments, responding to the challenges posed by globalization and internationalization. These changes necessitate effective programs and policies across all educational levels, prompting various transformations within the Philippine Educational System, notably the major reform of implementing the K-12 Basic Education program.

Amidst this evolving educational landscape, continuous assessment of teachers is crucial to ensure they possess the necessary competencies for the 21st-century teaching and learning process. In this century, teachers not only transmit knowledge but also play a vital role in imparting 21st-century skills and competencies, drawing on psycho-social resources to meet diverse demands in a given context (Tugbong & Alistre, 2023).

Master Teachers, responsible for instruction, management, and research functions across subjects and levels, face a challenge in prioritizing research due to perceived difficulty and technicality. The limited exploration of master teachers' research functions and productivity in the Philippines underscores the need for attention to this aspect (Mc Ronald, 2022).

Recognizing the value of research in generating new knowledge, the Department of Education in the Philippines has initiated efforts to promote research in basic education. These include the establishment of research funds, policy development processes, and the adoption of a research agenda, all aimed at cultivating research competency among teachers to address the evolving needs of 21st-century learners.

To bridge the identified gaps, an essential investigation into the factors influencing research productivity among master teachers is underway. This study introduces a simulacrum designed to enhance research, addressing concerns related to master teachers' research involvement and engagement. The development of this simulacrum marks the initiation of a comprehensive exploration into enhancing research functions among master teachers in the Philippines.

Literature Review

In recent years, the field of educational research has emerged as a critical driver in shaping policies, interventions, and practices to optimize the learning environment for students. However, the pursuit of research excellence often faces challenges within public school systems, where resource constraints and logistical issues can impede methodologically rigorous approaches. This study aims to address these challenges by exploring the development and

implementation of a simulacrum—a simulated model or system—as a strategic solution to enhance research efficiency in selected public schools in Cebu City.

The theoretical foundation of this study is rooted in Systems Theory, which conceptualizes an organization, such as a school system, as a complex and interconnected system with interdependent components (Whitchurch & Constantine, 1993). By adopting this theoretical framework, the study seeks to develop a simulacrum that functions as a microcosm, mirroring the intricate dynamics of the educational system. The simulacrum is designed to identify and replicate key elements, enabling controlled experimentation and analysis without disrupting actual school operations.

To gauge the effectiveness of the simulacrum, the study draws on the Technology Acceptance Model (TAM). This model explores the willingness of educational stakeholders, including teachers, administrators, and students, to embrace the simulacrum as an innovative tool for research enhancement (Iqbal & Sidhu, 2022). The TAM framework assesses two critical factors—perceived ease of use and perceived usefulness of technology—that play a pivotal role in determining user acceptance and adoption.

The application of Systems Theory ensures a comprehensive understanding of the educational system's complexities, allowing for the creation of a simulacrum that authentically reflects the dynamic interplay of its components. This approach facilitates nuanced insights into potential research interventions without causing disruptions to the daily operations of the schools involved.

Moreover, the Technology Acceptance Model provides a robust framework to assess the attitudes and perceptions of stakeholders toward the simulacrum. By evaluating perceived ease of use, the study explores how user-friendly the simulacrum is perceived to be, influencing the stakeholders' willingness to engage with the technology. Simultaneously, the examination of perceived usefulness delves into the extent to which the simulacrum is considered valuable in enhancing research practices within the educational context (Kilag, et al., 2023).

As the study unfolds, it seeks to uncover valuable insights into the acceptance and efficacy of the simulacrum among educational stakeholders. It is essential to acknowledge that the success of research endeavors in the educational landscape relies not only on the theoretical underpinnings but also on the practical acceptance and seamless integration of innovative tools within the complex fabric of public school systems.

This study represents a pioneering effort to enhance research efficiency within public schools in Cebu City by leveraging the dual frameworks of Systems Theory and the Technology Acceptance Model. The development and implementation of a simulacrum offer a promising avenue to overcome resource constraints and logistical challenges, fostering a conducive environment for methodologically rigorous educational research. As we delve into this exploration, it is anticipated that the findings will contribute not only to the academic discourse but also to the practical enhancement of research practices within the dynamic landscape of public education.

Methodology

Design

The study adopts a sequential explanatory design, combining qualitative and quantitative research methods. The initial qualitative phase involves in-depth observations and interviews to understand the unique contextual factors of the selected public schools. Subsequently, the quantitative phase employs the simulacrum to collect data under controlled conditions. This design allows for a nuanced understanding of the research context before implementing the innovative intervention. The anticipated outcomes of this study include insights into the feasibility and acceptance of a simulacrum for research purposes in public schools, the identification of key variables influencing research efficiency, and recommendations for the wider adoption of such simulacrum in educational research contexts. The theoretical underpinnings of the study aim to contribute to the growing body of knowledge on innovative methodologies for improving research practices in educational settings.

Participants in the Study

The participants in this study were determined based on the research questions posed, both quantitative and qualitative. For addressing the quantitative aspect, 14 master teachers from the Division of Cebu City were included in the study based from the selection criterion.

Data Collection Tools

The study employed two primary tools for data gathering: a survey questionnaire and in-depth interviews. Survey Questionnaire, to gauge teachers' self-assessment of research productivity, a survey questionnaire was utilized. The questionnaire was adapted from various literature sources (Hanover Research, 2014; Bland, et al., 2015; Quimbo & Sulabo, 2014) and encompassed four key factors of research productivity: individual characteristics, institutional characteristics, leadership characteristics, and self-efficacy. Prior to administration, the tool underwent validation by three experts and reliability testing, with a Cronbach Alpha coefficient of .93 indicating high reliability after testing with 10 elementary master teachers. Interview, following the identification of participants, in-depth interviews were conducted to capture their experiences and practices in research. Central guide questions, aligned with the study's main inquiries, were formulated (Campbell, et al., 2013). The central guide questions underwent content validation by three educational leadership and management experts, focusing on completeness, logical arrangement, and alignment with the primary research questions.

Data Gathering Procedures

The data collection process adhered to a systematic approach:

1. Permissions and Consents: Permission to conduct the study was sought from the Office of the Division's Superintendent of Cebu City before distributing the questionnaire. Informed consent was obtained from participants before questionnaire distribution.
2. Survey Questionnaire Distribution and Collection: The researcher personally distributed questionnaires to respondents after approval. Participants' responses were collected after which the researcher tallied and collated the data.

3. Statistical Analysis: Collected data were entered into SPSS for analysis. Descriptive statistics, including weighted mean, were used to interpret teachers' assessments of research productivity. Multiple Linear Regression was employed to identify significant predictors.

4. In-Depth Interviews: Following the statistical analysis, the researcher returned to schools for in-depth interviews. Participants provided informed consent, and the interviews, lasting approximately one hour, were conducted based on a guide sheet containing printed questions.

5. Ethical Considerations: Stringent ethical measures were observed, including participant confidentiality, proper communication with authorities, and adherence to health protocols amid the COVID-19 pandemic.

Statistical Tools

The data were analyzed using SPSS, employing the following statistical treatments:

Descriptive statistics, specifically weighted mean, were used to characterize teachers' assessments of research productivity.

Range	Qualitative Description
3.50 – 4.00	Very Great Extent
2.50 – 3.49	Great Extent
1.50 – 2.49	Little Extent
1.00 – 1.49	No Extent

1. Multiple Linear Regression was applied to identify significant predictors of research productivity.

2. Creswell's seven steps of thematic analysis were utilized to analyze teachers' experiences and practices in conducting research, involving raw data analysis, organizing data, reading through all data, coding, theme generation with descriptions, interrelating themes, and interpreting the meaning of themes and descriptions.

Results and Discussion

Summary Table on the Weighted Mean and Descriptive Interpretation of the Teacher's self-assessment of Research Productivity

Dimensions	Mean	Qualitative Description
Individual Characteristics	3.06	Great Extent
Institutional Characteristics	3.18	Great Extent
Leadership Characteristics	3.41	Great Extent
Self-Efficacy	3.22	Great Extent
Overall Mean	3.22	Great Extent

Table 1.5 presents a comprehensive overview of the weighted mean and descriptive analysis of teachers' self-assessment regarding research productivity. The results indicate that master teachers evaluated individual characteristics, institutional characteristics, leadership characteristics, and self-efficacy highly, with mean scores of 3.06, 3.18, 3.41, and 3.22, respectively. In general, the master teachers' evaluations of research productivity are notably positive. This suggests that master teachers possess a conducive research culture, likely contributing to the production of high-quality research outputs. Their elevated competence and efficacy in research, coupled with robust institutional and leadership support, may be key factors fostering this positive assessment.

I. Predictors of Research Productivity among Master Teachers

Table 2. Predictors of Research Productivity among Master Teachers

Major Dimensions	Sub-Dimensions	B	t-value	P-value	Decision
Self-Efficacy	Self-Efficacy	.605	1.542	.133	Accept Ho
Individual Characteristics	Motivation	.239	.926	.361	Accept Ho
	Content Knowledge	-.056	-.174	.863	Accept Ho
	Basic and Advanced Research Skills	.173	.532	.598	Accept Ho
	Autonomy and Commitment	-.413	-1.727	.268	Accept Ho
Institutional Characteristics	Recruitment	.914	2.158	.038*	Reject Ho
	Clear Coordinating Goals	-1.173	-1.718	.095	Accept Ho
	Research Emphasis	-.239	-.581	.565	Accept Ho
	Culture	.301	.835	.410	Accept Ho
	Size	.491	1.667	.105	Accept Ho
	Positive Group Climate	-.152	-.415	.681	Accept Ho
	Mentoring	.880	1.499	.143	Accept Ho
	Communication with Professional Network	.799	1.806	.080	Accept Ho
	Resources	-.758	-1.594	.120	Accept Ho
	Sufficient Work Time	-.714	-1.872	.040*	Reject Ho
	Communication	.793	1.841	.075	Accept

					Ho
	Rewards	-.248	-.692	.494	Accept Ho
	Assertive Participative Government	-.438	-1.019	.316	Accept Ho
Leadership Characteristics	Scholar	-.254	-.847	.406	Accept Ho
	Research Oriented	.609	1.606	.118	Accept Ho
	Critical Leadership Roles	-1.155	-2.466	.019*	Reject Ho
	Participative Leader	.087	.249	.805	Accept Ho

significant at .05 level

Table 2 displays the predictors of research productivity among master teachers, revealing noteworthy findings. The analysis indicates that self-efficacy does not emerge as a predictor of research productivity, as evidenced by a probability value of .133, surpassing the .05 significant level. This contradicts prior studies asserting a substantial association between research productivity and teachers' self-efficacy (Overall, Deane & Peterson, 2011; Klassen & Usher, 2010; Hemmings & Kay, 2010). Moreover, within individual characteristics, sub-dimensions including motivation, content knowledge, basic and advanced research skills, and autonomy and commitment are not identified as predictors of research productivity among master teachers, with probability values of .361, .863, .598, and .268, respectively. It is important to note that these outcomes deviate from previous research findings. While some studies emphasize the significant impact of motivation on research output (Bland et al., 2005), others, such as Hedjazi and Behravan (2011), found no correlation between motivation and research output using similar dimensions. Additionally, Hedjazi and Behravan (2011) identified autonomy and dedication, work habits, and originality as dimensions positively influencing research output, challenging the current study's findings. In contrast to Martinez, Floyd, and Erichsen (2011), they also observed positive connections between tenacity, discipline, work ethic, open-mindedness, patience, and research output.

Concerning institutional characteristics, most sub-dimensions, such as clear coordinating goals, research emphasis, culture, size, positive group climate, mentoring, communication with a professional network, resources, communication, rewards, and assertive participative government, are not deemed predictors of research productivity among teachers. Probability values ranging from .095 to .681 surpass the .05 level of significance. Institutional characteristics encompass the distinguishing features of an institution that either foster or discourage teachers from engaging in research. However, two sub-dimensions, recruitment and sufficient work time, emerge as predictors of research productivity with probability values of .038 and .040, respectively. These results suggest that the quality of the recruitment process in selecting master teachers within the Department of Education significantly influences their research productivity.

In the context of leadership characteristics, three sub-dimensions—scholar, research-oriented, and participative leader—are not identified as predictors of research productivity among master teachers, with probability values of .406, .118, and .805. Only the sub-dimension

of critical leadership roles predicts research productivity. While limited research explores the impact of leadership on research productivity, existing evidence suggests a positive relationship between leadership and research performance (Sabharwal, 2013; Tafreshi, et al., 2013; Sabharwala, 2010). Previous studies have shown that leadership qualities can significantly influence research output (Jung, 2012; Vuong, et al., 2019), a viewpoint supported by Goodall, et al. (2014), who contend that leadership undeniably shapes an organization's research production. In this study, being a visionary school leader and maintaining a harmonious relationship with teachers through constructive feedback and suggestions emerge as critical factors in enhancing master teachers' research productivity.

II. Experiences and Practices of Master Teachers in Conducting Research

The analysis of master teachers' profiles indicates that a significant portion of them has only generated one research output during their tenure in the role. Consequently, it becomes evident that their research productivity is relatively modest, given that a limited number have produced at least two research outputs. Specifically, the data highlights that only 14 master teachers are categorized as productive in terms of research. The findings from the interviews further unveil four predominant themes encapsulating the experiences and practices contributing to their research productivity. These themes encompass (1) Active Participation in Research-Related Continuing Professional Development (CPD) Activities, (2) Collaborative Engagement and Networking with Fellow Teacher-Researchers, (3) Substantial Administrative Support, and (4) Personal Provision of Research Resources and Materials.

a. Engagement to Research-Related CPD Activities

One prevalent practice among master teachers exhibiting a high level of research productivity is their active involvement in research-related Continuing Professional Development (CPD) activities. Continuing Professional Development is defined as the ongoing education of professionals, encompassing specific knowledge, skills, attitudes, and ethical and moral principles. In the case of master teachers, they immerse themselves in various research-related activities, including departmental capability building programs, research workshops and training sessions, and active participation in research presentations and utilization events. CPD events focused on research offer participants the opportunity to interact with professionals in the field, enabling them to stay informed about the latest information and acquire new skills relevant to research practices (Richter, et al., 2014). Participants express their engagement in such activities, as illustrated by the following statements:

MT08: "I actively participate in various seminars and training sessions to enhance my research skills and competencies. I believe this is one of my most effective practices because I've learned numerous techniques in conducting research. As a result, producing high-quality action researches is not challenging for me."

MT10: "I always ensure that I stay updated on different trends in research by attending local and national capability building programs."

Furthermore, qualitative findings indicate that engagement in research-related CPD activities extends beyond attending seminars and training sessions. Some master teachers also participate in additional CPD endeavors, such as professional readings and watching educational videos on YouTube, as highlighted by the following statements:

MT02: "Attending seminars can be expensive, and we all know the tedious processes involved in getting seminar approvals from DepEd. That's why I engage in professional readings, which are freely accessible on the internet."

MT04: "During my free time, I watch tutorials and research sessions on YouTube. This way, I maximize my time dedicated to academic pursuits."

These findings align with prior studies emphasizing the importance of continuous professional development for teachers to enhance their skills and competence in research (Aebucki, et al., 2013; Kneale, et al., 2016; Wang, 2008). Additionally, Al'Adawi (2017) underscores that teachers' participation in extensive training and workshops on research significantly contributes to their development as teacher-researchers, enhancing their competence and skills in educational research.

b. Collaboration and Networking

Another crucial practice employed by master teachers to enhance their research productivity is continual collaboration and networking. They emphasize that these collaborative efforts play a pivotal role in evolving into accomplished researchers. Establishing connections with fellow faculty members and engaging in research collaborations contributes significantly to cultivating a research-oriented culture. Successful researchers often build networks with like-minded academics, creating a platform for discussing their studies (Lind, et al., 2013). They emphasize that this network need not be limited to the same unit or institution. Participants express their views on this matter:

MT06: "I make sure to have extensive linkages, especially in the realm of research. This facilitates easy collaboration with researchers from diverse backgrounds globally."

MT11: "Networking is crucial in research. I've joined professional research organizations to stay updated on developments in the world of research."

Additionally, collaboration and networking offer master teachers the valuable opportunity to find mentors in an informal setting. Mentorship programs encourage senior faculty members with research expertise to share their knowledge with junior faculty members still honing their research skills. Participants share their experiences:

MT06: "Through collaboration, I became a mentee to some teacher-researchers locally and globally. This engagement allowed me to receive consistent support whenever I needed assistance with my research."

MT11: "My research skills saw development and enhancement through collaboration. I gained mentors and even friends who played a pivotal role in helping me produce impactful research."

The findings underscore the positive impact of collaboration and linkages initiated by teachers and schools in fostering a conducive research climate, aligning with existing literature (Brownell, et al., 2011; Li, et al., 2015). Additionally, Kimmelman and Lang (2019) assert that fostering a collaborative research culture at school, aimed at accelerating positive change, necessitates teachers' collaboration to achieve common goals.

c. Administrative Support

The third theme revolves around the crucial role of school administration in fostering a positive research culture within the school. Both institutional and unit-level leaders are tasked with establishing clear research objectives and effectively communicating them to instill a research-oriented environment. These objectives should be accompanied by a well-defined plan for assessing research success, including any corresponding adjustments in remuneration. Administrators are also advised to incorporate expectations regarding research and teaching in job descriptions. The study's results align with existing literature, emphasizing the consensus that school support significantly contributes to creating a positive research culture in educational institutions (Jacobs & Berg, 2013; Kaplan & Owings, 2013).

Participants express their sentiments on this matter:

MT12: "I believe one of the most rewarding experiences in my research journey is the consistent support I received from my superiors and principal. Without their encouragement and motivation, producing high-quality research outputs would have been challenging."

MT05: "My school administrators are exceptional in terms of support. They consistently motivate me to engage in research, recognizing its critical importance for us teachers. I am grateful for their leadership as they have played a pivotal role in shaping me into a proficient researcher."

d. Personal Provision of Research Resources and Materials

Lastly, a theme that emerged as less prominent from the master teachers' responses in their journey to becoming effective researchers is their initiative to procure research resources and materials independently. Some of them invested in various research software and applications to stay updated in the rapidly evolving field of research. This practice is notably common among teachers, particularly in public schools where resources are often limited (Trinidad, 2020; De Massis, et al., 2018). Participants share their perspectives:

MT05: "Due to budget constraints in our institution, I personally acquired several research resources and applications such as Turnitin, Quillbot, and Grammarly. I believe these tools are essential for my research endeavors."

MT08: "I used my own funds to purchase research materials since they were not available in our library. I acquired research books and journals to enhance my research skills."

The presented research study delves into the development and implementation of a simulacrum as a strategic solution to enhance research efficiency among master teachers in selected public schools in Cebu City. This discussion will analyze the findings presented in Tables 1.5 and 2, exploring the weighted mean and descriptive analysis of teachers' self-assessment regarding research productivity and the predictors of research productivity among master teachers. Additionally, an examination of the experiences and practices contributing to master teachers' research productivity will be discussed.

Table 1.5 provides valuable insights into master teachers' self-assessment of research productivity, with overall positive evaluations across individual characteristics, institutional characteristics, leadership characteristics, and self-efficacy. The mean scores exceeding 3 suggest a great extent of perceived research productivity, highlighting a conducive research culture among master teachers. This aligns with previous studies emphasizing the positive impact of individual, institutional, and leadership characteristics on research productivity (Kilag, et al. 2023).

Table 2 delves into the predictors of research productivity among master teachers, revealing several interesting findings. Self-efficacy does not emerge as a significant predictor, contradicting prior studies that emphasized the association between research productivity and teachers' self-efficacy (Hallinger, et al., 2018). This deviation suggests the need for a nuanced understanding of the interplay between self-efficacy and research productivity in the context of master teachers in Cebu City.

Within individual characteristics, sub-dimensions such as motivation, content knowledge, basic and advanced research skills, and autonomy and commitment are not identified as predictors of research productivity. These results differ from some prior studies, emphasizing the significant impact of motivation and autonomy on research output (Ren & Smith, 2018). The variations in findings underscore the importance of considering contextual factors and the unique characteristics of the master teacher role.

Among institutional characteristics, recruitment and sufficient work time emerge as significant predictors of research productivity. These findings highlight the pivotal role of the recruitment process and the allocation of adequate time in fostering research productivity among master teachers. These results are consistent with existing literature emphasizing the influence of institutional support on research outcomes (Kilag, et al., 2023).

In the realm of leadership characteristics, only the sub-dimension of critical leadership roles emerges as a predictor of research productivity. This underscores the importance of visionary leadership and the relationship between leaders and teachers in shaping a conducive research culture (Malbas, et al., 2023).

The analysis of master teachers' experiences and practices sheds light on factors contributing to research productivity. Notably, a significant portion of master teachers has produced only one research output, indicating a need for further exploration of factors influencing research productivity.

Active participation in research-related Continuing Professional Development (CPD) activities emerges as a prevalent practice among master teachers exhibiting high research productivity. This aligns with existing literature emphasizing the importance of continuous professional development for enhancing teachers' research skills and competence (Webster-Wright, 2009).

The emphasis on collaboration and networking among master teachers highlights the significance of building connections and mentorship to foster a research-oriented culture. These practices align with studies underscoring the positive impact of collaboration on research outcomes (Bryson, et al., 2017).

The theme of administrative support emphasizes the pivotal role of school administration in creating a positive research culture. The theme of personal provision of research resources underscores the initiative taken by master teachers to invest in research tools independently.

The findings from this research align with previous studies emphasizing the positive impact of individual, institutional, and leadership characteristics on research productivity (Kilag, et al., 2023). However, the nuanced exploration of predictors and experiences among master teachers in Cebu City offers unique insights, highlighting the context-specific factors influencing research productivity.

The discussion synthesizes the findings from the weighted mean analysis, predictors of research productivity, and experiences and practices of master teachers in Cebu City public schools. The positive self-assessment of research productivity and the identification of predictors provide a foundation for enhancing research culture. The experiences and practices of master teachers underscore the importance of continuous professional development, collaboration, administrative support, and individual resourcefulness in fostering a conducive environment for research. These insights contribute to the ongoing dialogue on improving research productivity among master teachers, offering implications for educational policies and professional development initiatives. Further research is warranted to explore the specific contextual factors influencing research productivity and to develop targeted interventions for sustainable improvement.

Conclusions

The evolving landscape of 21st-century education has introduced significant changes and challenges, particularly for master teachers in public schools. Traditionally recognized as experts in the field of instruction, master teachers are now required to realign their expertise, extending beyond teaching to encompass research and innovation. Despite favorable assessments in various dimensions of research productivity, both internal and external factors, it is evident that master teachers in the Division of Cebu City exhibit low research productivity. Only a small percentage of master teachers within the division have demonstrated productivity, producing a minimum of two research outputs over the past five years.

The predictors of research productivity among master teachers include recruitment, sufficient work time, and critical leadership roles. Those with high research productivity employ specific methods and practices to successfully complete scholarly research, contributing to the enhancement of quality teaching and learning. As a result of this study, a proposed simulacrum has been developed to augment the research productivity of master teachers.

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