Original Research Article

Application of curriculum mapping in relation to classroom learning outcomes of public elementary schools

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ABSTRACT

This study was conducted to determine the relationship between the application of curriculum mapping and classroom learning outcomes of public elementary schools in South District of Governor Generoso, Division of Davao Oriental. This utilized the non-experimental quantitative research design employing correlational method. The respondents were composed of teachers using universal sampling. The statistical tools used were Mean, Pearson Product Moment Coefficient Correlation (Pearson r) and Regression Analysis. The application of curriculum mapping and classroom learning outcomes in public elementary schools is oftentimes manifested by the teachers. There is a significant relationship between application of curriculum mapping and classroom learning outcomes in public elementary schools. The domains of analysis on the application of curriculum mapping indicators significantly influence classroom learning outcomes indicators. Thus, the application of curriculum mapping in relation to learning outcomes should be strengthened in school to help the teachers recognize the school vision, arm them with the motivation and tools to achieve it and compensate them appropriately for their efforts by being aware of teachers need and treating everyone fairly, to find that employees will be more motivated to do their work.

Keywords: curriculum mapping, classroom learning outcomes, public elementary schools, Philippines

1. INTRODUCTION

Curriculum mapping presents challenges in academia, especially when it lacks mechanisms for continuous improvement through teacher feedback and the sharing of best practices. For curriculum mapping to be effective, active engagement from the entire school community is essential [1].

At a fundamental level, curriculum maps should not merely track what has been taught or plan what to teach next. Instead, they outline essential content to be covered in each class and indicate how comprehension of this content is assessed [2]. The purpose of curriculum mapping is to document the relationships among all elements of the curriculum, serving as a tool for analysis, communication, and planning. When used effectively, curriculum maps enable educators to identify redundancies, inconsistencies, misalignments, weaknesses, and gaps within the curriculum [3].

Curriculum mapping records connections between required curriculum components and desired student learning outcomes. It supports interdisciplinary integration, provides insight into assessment methods, and allows educators to assess students' prior knowledge. This process enables teachers to build on students' knowledge and balance content across grade levels [4]. It also offers teachers and administrators a detailed view of what students are

learning, which is crucial for identifying redundancies or gaps in course content. This understanding aids in assessing course structure, including when specific lessons or concepts are taught. For example, three Grade 9 Math classes within a school or district should cover the same content and provide the same quality of instruction [3].

Curriculum mapping requires active and ongoing teacher involvement, not passive observation. Teachers should regularly reference these maps during lesson planning to reflect on what actually took place in the classroom versus what was planned. Teaching content and strategies should be tracked in real time, with data ideally recorded monthly to capture essential details accurately [5].

As teachers continually update curriculum maps, they are dynamic and ever-evolving. Notes added by teachers each year document how diverse student needs were met in lesson plans. Curriculum maps undergo continuous refinement to enhance student learning and content quality across schools [6].

Ideally, all teachers and administrators in a school or district should have access to curriculum maps on a secure, internet-accessible server. Administrators must understand the complexities of curriculum mapping and provide consistent support to teachers. Effective curriculum mapping requires thoughtful planning, execution, and full teacher participation. Without these elements, curriculum mapping is at risk of failing or needing to be restarted [7].

This study was undertaken to assist public school principals and elementary school teachers in assessing the role of curriculum mapping in enhancing classroom learning outcomes within public elementary schools in the South District of Governor Generoso, Division of Davao Oriental. The findings may serve as a foundation for future administrative policies and practices aimed at strengthening academic instruction.

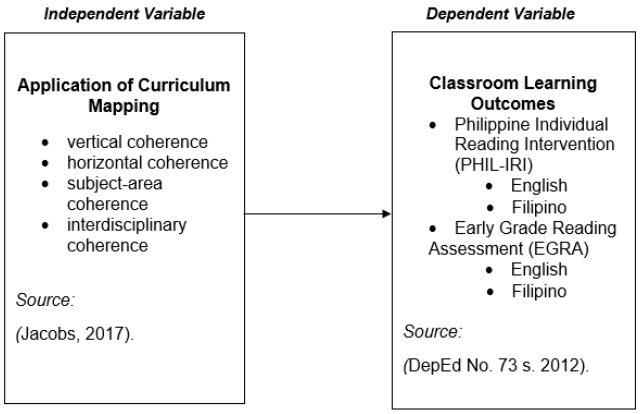

Figure 1. Conceptual Framework of the Study

1.1 Statement of the Problem

This study was conducted to determine the relationship of application of curriculum mapping in relation to classroom learning outcomes of public elementary school teachers in Governor Generoso District, Division of Davao Oriental. Specifically, it sought answer to the following sub-problems:

1. What is the level of application of curriculum mapping of public elementary school teachers in terms of:
    - 1.1 vertical coherence,
    - 1.2 horizontal coherence,
    - 1.3 subject-area coherence and
    - 1.4 interdisciplinary coherence?
2. What is the level of classroom learning outcomes of public elementary school teachers in terms of:
    - 2.1 Philippine Individual Reading Intervention (PHIL-IRI)
        - 2.1.1 English
        - 2.1.2 Filipino
    - 2.2 Early Grade Reading Assessment (EGRA)
        - 2.1.1 English
        - 2.2.2. Filipino
3. Is there significant relationship between application of curriculum mapping in relation to classroom learning outcomes of public elementary school teachers?
4. What domains of application of curriculum mapping is significantly influence classroom learning outcomes of public elementary school teachers?

1.2 Thoeretical Framework

This study is anchored in three foundational theories: Piaget's Constructivist Learning Theory, Vygotsky's Zone of Proximal Development (ZPD), and Tyler's Curriculum Theory, each providing a relevant framework for understanding the role of curriculum mapping in enhancing classroom learning outcomes. Piaget's Constructivist Learning Theory [15] emphasizes that students actively construct knowledge based on personal experiences and interactions, underscoring the need for a curriculum that is adaptable and responsive to students' developmental stages. This aligns with curriculum mapping by ensuring that lessons build on students' prior knowledge and encourage active engagement. Vygotsky's ZPD [16] further supports this approach by highlighting the importance of designing instruction that meets students at their individual learning levels, bridging the gap between what they can do independently and what they can achieve with guidance. By using curriculum mapping to structure learning within the ZPD, teachers can maximize student growth and scaffold learning effectively. Tyler's Curriculum Theory [17] complements both theories by advocating for a systematic approach to curriculum development where educational objectives, instructional strategies, and assessments are consistently aligned. Through curriculum mapping, educators can ensure that each component of instruction is intentionally structured to achieve specific learning outcomes, making the curriculum both comprehensive and outcome-focused in public elementary schools.

2. METHODOLOGY

2.1 Research Design

This study used the non-experimental quantitative research design utilizing the correlational method. This method can be adapted to determine the needed data since it involves collecting data in order to determine whether the relationship exists between two or more quantitative variables. In this connection, this research design is appropriate in this investigation on analysis on the application of curriculum mapping in relation to classroom learning outcomes [8].

Quantitative research design aimed at discovering how many people think, act or feel in a specific way. Quantitative research design involves large sample sizes, concentrating on the quantity of responses, as opposed to gaining the more focused or emotional insight that is the aim of qualitative research. The standard format in quantitative research design is for each respondent to be asked the same questions, which ensures that the entire data sample can be analyzed fairly. The data is supplied in a numerical format, and can be analyzed in a quantifiable way using statistical methods. Surveys can, however, be tailored to branch off if the respondent answers in a certain way - for instance, people who are satisfied or dissatisfied with a service may be asked different questions subsequently [9]. This method is used since the variables of this research study measure the relationship between the application of curriculum mapping in relation to classroom learning outcomes of public elementary school teachers. This is also used to describe the statistical association between two or more variables.

2.2 Research Respondents

The respondents of the study were 132 public school teachers from Governor Generoso South District Elementary Schools, totaling 134 respondents. Universal sampling was applied to examine the relationship between curriculum mapping and classroom learning outcomes among public elementary school teachers. Universal sampling is appropriate for this study because it includes all eligible teachers in the district, ensuring comprehensive data that accurately reflects the group's perspectives. Additionally, this method minimizes selection bias, providing a more holistic view of curriculum mapping practices. The respondents, each with at least three years of teaching experience, offer valuable insights due to their established familiarity with classroom practices. This study was conducted during the 2022-2023 school year.

2.3 Research Instrument

The instrument used in this study was the survey questionnaire on the application of curriculum mapping in relation to classroom learning outcomes of public elementary school teachers. It was a researcher-made test that was based on some relevant studies and literature reviewed. Prior to the administration, the draft of this instrument was tested for content validity and reliability by the panel of experts in the field of Doctor of Educational Management.

2.4 Data Gathering Procedure

The data was gathered through the following procedures:

Permission to conduct the study. A letter of permission was secured to conduct the study on analysis on the curriculum mapping in relation to classroom learning outcomes of public elementary school teachers. Upon approval, the researcher prepared the letter addressed to the Schools Division Superintendent, principals and the Dean of Graduate School in Rizal Memorial Colleges.

Administration and Retrieval of Questionnaire. The researcher modified the questionnaire for the two variables. The adviser reviewed the questionnaire before producing some copies for validation purposes. The researchers submitted the final form of the questionnaire to the adviser for revision and final version.

The adviser gives a go-signal to the researcher for the production of the survey questionnaire. Adequate and cleared copies were printed to avoid problems with the administration. The researcher administered the questionnaire personally to the respondents of the study and they were requested to answer the questionnaire honestly so that valid and

reliable data was elicited. One hundred percent (100%) of the questionnaire was retrieved. The complete questionnaire was organized accordingly.

Collation and Tabulation of Data. The results were collated and tabulated before subjecting it to statistical treatment. Results were analyzed and interpreted based on the purpose of the study.

2.5 Data Analysis

The following statistical tools with their corresponding justifications used in the conduct of the study were:

Mean. This was used in the analysis of the application of curriculum mapping in relation to classroom learning outcomes of public elementary school teachers.

Pearson Product Moment Coefficient Correlation (Pearson r). This was used to determine the significant relationship between the level of the application of curriculum mapping in relation to classroom learning outcomes of public elementary school teachers.

Regression Analysis. This was used to determine the significant influence of the level on the application of curriculum mapping in relation to classroom learning outcomes of public elementary school teachers.

3. RESULTS AND DISCUSSION

3.1 Level of Application of Curriculum Mapping among Public Elementary School Teachers

Table 1. *Level of Application of Curriculum Mapping of Public Elementary School Teachers*

No	Items	Mean (x)	Descriptive Level
1.	vertical coherence	3.33	High
2.	horizontal coherence	3.20	Moderate
3.	subject-area coherence	3.37	Moderate
4	interdisciplinary coherence	3.72	High
	Overall	**3.63**	**High**

As presented in Table 1 is the level of application of curriculum mapping of public elementary school teachers in terms of vertical coherence, horizontal coherence, subject-area coherence and interdisciplinary coherence The mean ratings of these indicators are as follows vertical coherence (3.33), horizontal coherence (3.20), subject-area coherence (3.37) and interdisciplinary coherence (3.72). The overall mean rating of application of curriculum mapping of public elementary school teachers is 3.63, which is described as high. This implies that public elementary school teachers are demonstrating a strong commitment to curriculum mapping practices, ensuring alignment between their instructional activities and curriculum standards. Teachers may be actively organizing lessons, assessments, and resources in a structured way that promotes consistency across grade levels and subjects. This level of application can lead to improved instructional coherence and enhanced student learning outcomes, underscoring the importance of continued support and training in curriculum mapping to sustain and further develop these effective practices.

This finding supports the study of Lam & Tsui [10], who found that effective curriculum mapping among teachers leads to greater alignment between teaching practices and curriculum goals, resulting in enhanced instructional quality. Their study highlighted that when teachers actively engage in curriculum mapping, it promotes a more cohesive learning experience for students and ensures that instructional activities are purposefully directed toward achieving curriculum standards.

Moreover, this finding coincides with the study of Steinert et al. [11], which observed that teachers who consistently apply curriculum mapping practices report higher confidence in their instructional effectiveness and experience fewer challenges in meeting educational standards. They noted that curriculum mapping enables teachers to structure their lessons more strategically, leading to better alignment with learning objectives and improved student outcomes.

3.2 Level of Classroom Learning Outcomes among Public Elementary School Teachers

Table 2. *Level of Classroom Learning Outcomes among Public Elementary School Teachers*

No	Items	Mean (x)	Descriptive Level
1	classroom learning outcomes of public elementary school teachers in terms of Philippine Individual Reading Intervention (PHIL-IRI) in English	3.48	High
2	classroom learning outcomes of public elementary school teachers in terms of Philippine Individual Reading Intervention (PHIL-IRI) in Filipino	3.47	High
3	classroom learning outcomes of public elementary school teachers in terms of Early Grade Reading Assessment (EGRA) in English	3.95	High
4	classroom learning outcomes of public elementary school teachers in terms of Early Grade Reading Assessment (EGRA) in Filipino	3.81	High
	Overall	**3.68**	High

As presented in Table 2 is the level of classroom learning outcomes of public elementary school teachers in terms of Philippine Individual Reading Intervention (PHIL-IRI) English, Filipino, Early Grade Reading Assessment (EGRA) English and Filipino. The mean ratings of the indicators are as follows: Philippine Individual Reading Intervention (PHIL-IRI) English 3.48, Filipino 3.47, Early Grade Reading Assessment (EGRA) English 3.95 and Filipino 3.81.

This implies that public elementary school teachers are achieving strong classroom learning outcomes in areas measured by the Philippine Individual Reading Intervention (PHIL-IRI) and the Early Grade Reading Assessment (EGRA) in both English and Filipino. Students generally perform well in reading proficiency and comprehension, as supported by these assessments. This level of outcome reflects effective teaching practices and successful reading interventions, highlighting the positive impact of targeted literacy programs on students' foundational reading skills.

This finding aligns with the study of Misanes et al. [12], who found that focused reading interventions, such as those provided through PHIL-IRI and EGRA, contribute significantly to improved reading outcomes among elementary students. Their research showed that

targeted literacy programs in both English and Filipino help students strengthen foundational reading skills, leading to greater comprehension and reading fluency.

Similarly, this finding is consistent with the study of Slavin et al. [13], which demonstrated that elementary students participating in structured reading programs tend to achieve higher literacy levels. They highlighted that systematic interventions and regular assessments help teachers better support students' reading development.

3.3 Significance of the Relationship Between Application of Curriculum Mapping in Relation to Classroom Learning Outcomes

Table 3. *Significance of the Relationship Between Application of Curriculum Mapping in Relation to Classroom Learning Outcomes*

Variables	X	Y	r-value	Degree of Correlation	p-value	Decision (Ho)
Application of Curriculum Mapping	4.35		0. 061	High Correlation	0.00	Rejected
Classroom Learning Outcomes		4.11				

As presented in Table 3 is the significant relationship between the application of curriculum mapping in relation to classroom learning outcomes of public elementary school teachers obtained the overall computed r-value of 0.061 with an equivalent p-value of 0.00 at α 0.05 of significance set in this study. This indicates that the null hypothesis is hereby rejected and it could be stated therefore, that there is a significant relationship between the application of curriculum mapping in relation to classroom learning outcomes of public elementary school teachers. This implies that the higher the result of the application of curriculum mapping, the better the classroom learning outcomes of public elementary school teachers.

This finding supports the study of Okojie [3], who discovered that the application of curriculum mapping significantly improves classroom learning outcomes by providing teachers with a clear, organized framework for instructional planning. When teachers consistently apply curriculum mapping, it leads to more effective teaching practices, better alignment with learning objectives, and improved student performance.

Moreover, this finding aligns with the study of Nevenglosky [14], which found a positive correlation between curriculum mapping and student achievement in elementary schools. When teachers implement curriculum mapping effectively, it ensures that instructional content is thoroughly covered, gaps in learning are minimized, and students achieve better learning outcomes.

3.4 The Domains of Application of Curriculum Mapping Significantly Influence to Classroom Learning Outcomes of Public Elementary School Teachers

Table 4a. *Descriptive Statistics*

Model	Sum of Squares	Degrees of Freedom	Mean Square	F	Sig
Regression	54.3897	3	56.019	.058	0.013
Residual	502.301	131	11.5947		
Total	534.101	134			

Note: Significance when P < 0.05 (2T)

Table 4b. The Domains of Application of Curriculum Mapping Significantly Influence to Classroom Learning Outcomes of Public Elementary School Teachers

Application of Curriculum Mapping					
Classroom Learning Outcomes (Indicators)		*B*	β	*t*	*Sig.*
vertical coherence	Philippine Individual Reading Intervention (PHIL-IRI) English	-.077	-.058	-.505	.613
horizontal coherence	Filipino	.016	.014	.127	.897
subject-area coherence	Early Grade Reading Assessment (EGRA) English	-.219	-.207	-1.809	.073
interdisciplinary coherence	Filipino	.165	.188	1.572	.109
		-.076	-.057	-.504	.612
		.015	.013	.126	.896
R	.271				.135
R^2	.073				
F	.058				
P	.013				

As presented in Table 4(a,b) is the domains of analysis on the application of curriculum mapping significantly influence to classroom learning outcomes of public elementary school teachers which gained an overall computed r-value of 0.013 with an equivalent f-value 0.058 at α 0.05 of significance set in this study. This indicates that the null hypothesis is rejected and it could be stated therefore, that the domains of analysis on the application of curriculum

mapping indicators significantly influence classroom learning outcomes indicators. This implies that the higher the result of domains of analysis on the application of curriculum mapping, the better the classroom learning outcomes of public elementary school teachers.

This finding validates the theory of Constructivist Learning by Piaget [15], which posits that learning is most effective when structured around organized and meaningful experiences. In this context, the application of curriculum mapping can be seen as a tool that provides teachers with a structured framework for delivering content in a way that aligns with students' developmental stages and learning needs. The positive relationship between curriculum mapping and classroom learning outcomes supports the idea that a well-organized curriculum, which actively engages students in the learning process, leads to improved educational results.

Additionally, this finding aligns with Vygotsky's Zone of Proximal Development (ZPD) [16], which suggests that learning occurs most effectively within a range where students can achieve success with appropriate guidance. Curriculum mapping aids teachers in structuring lessons that are both challenging and achievable within students' ZPD, enabling them to maximize learning by targeting students' readiness levels and providing the necessary support. By incorporating Vygotsky's theory, curriculum mapping can be used to scaffold learning, allowing teachers to help students move progressively toward independent mastery.

Moreover, this finding affirms Tyler's Curriculum Theory [17], which emphasizes the importance of a coherent and systematically designed curriculum for achieving desired learning outcomes. According to Tyler's framework, the alignment of instructional strategies, learning objectives, and assessment practices is crucial in promoting student success. This study reinforces the notion that effective curriculum mapping—when carefully planned and executed—can enhance classroom learning outcomes by ensuring that all elements of the curriculum are aligned and purposefully applied in teaching.

4. CONCLUSION

Based on the findings obtained in this study, the following conclusions are drawn:

The application of curriculum mapping by public elementary school teachers in terms of vertical coherence, horizontal coherence, subject-area coherence, and interdisciplinary coherence is high and is manifested oftentimes by the teachers. This signifies that the teachers are encouraging the application of curriculum mapping in the classroom, which is critical to successful teaching.

The classroom learning outcomes of public elementary school teachers in terms of Philippine Individual Reading Intervention (PHIL-IRI) English, Filipino, Early Grade Reading Assessment (EGRA) English and Filipino are high and manifested oftentimes. This signifies that effective teachers inspire colleagues to work together for classroom learning outcomes in the service of something greater than themselves.

There is a significant relationship between the application of curriculum mapping in relation to classroom learning outcomes in public secondary schools. This indicates that the null hypothesis is hereby rejected. This implies that the higher the application of curriculum mapping, the better the relationship between classroom learning outcomes of teachers in public secondary schools.

The domains of analysis on the application of curriculum mapping indicators is significantly influence classroom learning outcomes indicators. This indicates that the null hypothesis is

rejected. This implies that the higher the application of curriculum mapping, the better influence on classroom learning outcomes of teachers in public elementary schools.

5. RECOMMENDATIONS

In the light of the foregoing findings and conclusions of this study, the researcher formulated the following recommendations for conclusions:

The application of curriculum mapping in relation to classroom learning outcomes should be strengthened within schools to support teachers in aligning with the school's vision, fostering motivation, and providing them with the necessary tools to achieve educational goals. Administrators should be attentive to teachers' needs, offering fair treatment and appropriate recognition to enhance morale and encourage a commitment to delivering quality education.

Additionally, teachers are responsible and accountable for designing and delivering high-quality learning experiences through effective curriculum mapping. To maximize student impact, it is essential that curriculum mapping practices adhere to the principle of constructive alignment, ensuring that all components—learning outcomes, instructional strategies, and assessment tools—are harmonized for maximum effectiveness. For example, if a desired learning outcome is to develop students' analytical skills, assessment tools should include tasks and questions that test and foster analytical thinking.

The study also emphasizes that effective curriculum mapping significantly influences classroom learning outcomes, which are primary goals for educational institutions. Teachers should strive to implement best practices in curriculum mapping to optimize learning experiences and outcomes for their students. Furthermore, the results of this study could serve as valuable secondary data for future researchers exploring curriculum mapping and classroom outcomes in educational settings, offering an opportunity for emerging scholars to pursue new avenues of research in this field.

Expanding on these recommendations, schools and educational policymakers should consider providing targeted professional development opportunities and resources to support teachers in mastering curriculum mapping practices. Workshops, training sessions, and access to curriculum mapping tools can empower teachers to apply these practices effectively, leading to more cohesive and impactful learning environments. Such actions would provide specific, actionable steps for teachers, administrators, and policymakers to enhance the practical implications of curriculum mapping in education.

CONSENT

In this quantitative study, strict ethical protocols were implemented to safeguard the privacy and confidentiality of all participants. Prior to data collection, informed consent was secured, with participants being thoroughly briefed on the study's purpose and the confidentiality measures in place. No personal identifiers were gathered; instead, each participant received a unique code for use in data analysis. All data were securely stored on encrypted servers with restricted access limited to the research team. Results were reported in aggregate, ensuring that individual responses could not be traced back to specific participants. Additionally, statistical analysis was conducted to further reduce any risk of participant identification, fully protecting their privacy.

Disclaimer (Artificial intelligence)

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

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