Professional Learning Communities and Learners' Academic Achievement: Basis for a Strategic Development Plan

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Abstract

This study determined the influence of professional learning communities on learners' academic achievement and used this as the basis for crafting a strategic development plan in the Schools Division of Naga City. The study investigated: (1) the level of practices; (2) the level of management; and (3) the level of leadership in the teachers' professional learning communities; (4) the level of learners' academic achievement; (5) the significant differences in the level of practices, management, and leadership of teachers professional learning communities among group of respondents; (6) the significant relationships on the level of practices, management, and leadership to academic achievement; (7) the significant influences on the level of practices, management, and leadership of teachers' professional learning communities to academic achievement; and (8) the strategic development plan proposed to enhance the level of practices, management, and leadership of teachers in the professional learning communities.

This study used descriptive-comparative-correlational methods. The data were gathered through survey questionnaires and documentary analysis. The data were treated statistically through weighted mean, mean, frequency, percentage, standard deviation, One-Way ANOVA, Pearson Product Moment Correlation Coefficient, and Coefficient of Determination.

The findings were: (1) the level of practices in the teachers' professional learning competencies obtained an overall average weighted mean of 3.90; (2) the level of management in the teachers' professional learning competencies got an overall average weighted mean of 3.89; (3) the level of leadership in the teachers' professional learning competencies had an overall average weighted mean of 3.91; (4) the learners' academic achievement obtained an overall result of 84.18; (5) the differences

in the level of practice among master teachers, management level between school heads and master teachers, and leadership level among school heads got F-values equal to 3.89, 5.84, and 7.5, and 6.19; and p-values equal to 0.021, 0.003 and 0.000, and 0.002 respectively; (6) the relationships level of practice and academic achievement obtained r-values from 0.32 to 0.62, with p-values from 0.135 to 0.481; between management and academic achievement, r-values were equal to 0.51 to -0.184, and 0.72, p-values=0.064 to 0.692; and between leadership and academic achievement, had r-values from -0.01 to 0.26, with p-values from 0.56 to 0.977; (7) the influence of the level of practice, management and leadership on academic achievement obtained r^2-values=0.38, 0.32, 0.10, and 0.28; 0.52 and 0.33; 0.13, 0.06 and 0.03; (8) the proposed strategic development plan will enhance the level of practice, management, and leadership of master teachers and school and the academic achievement of learners.

The conclusions were: (1) the level of practice in the teachers' professional learning communities was very high; (2) the level of management in the teachers' professional learning communities was very high; (3) the level of leadership in the teachers' professional learning communities was very high; (4) the level of learners' academic achievement was approaching proficiency; (5) the differences in the level of practice among master teachers were significant, among school heads not significant; in the level of management among master teachers, and school heads were significant; and the level of leadership among master teachers was not significant, while for the school heads, it was significant; (6) the relationships between the level of practice, management, and leadership, and academic achievement were not significant; (7) the influence of the level of practice, management, and leadership of the PLCs on academic achievement was not significant; and (8) the proposed strategic development plan aims to improve education in Naga North District I by enhancing teacher collaboration and professional growth.

Introduction

In a rapidly changing world, teachers should recognize that they must continually learn. They must be lifelong learners to stay relevant and prosper and be the best teachers possible. Teachers must improve their ability to learn faster from changing conditions because learning comes with challenges to please learners and win programs, initiatives, and activities in an educational organization. All these cannot be faced by a teacher alone, as time passes, these issues only grow more tough, complex, and demanding. Teachers who work alone may find it difficult to learn new tools or obtain better results. They might not even be aware of new approaches, criteria or requirements. Teachers who work alone may become less effective since they are viewed as out of touch with the outmoded approach and obsolete abilities. As a result, the quality of teaching is affected as it has a significant impact on the quality of learning. Teachers must be equipped by providing professional development opportunities to overcome these challenges so that the systematic application of appropriate strategies for delivering and measuring the learning objectives targeted by each lesson result in successful teaching.

On a global scale, most schools' educational challenge is to provide equitable access and improved levels of learning for all students. School reforms in many education systems have focused on education quality, with a special emphasis on improving the learning results of all learners and their holistic development. Teacher quality is the single most important in-school factor influencing learner achievement. The improvement in teaching quality is of great importance, as well as the strong influence of leadership on teaching and learning.

Professional Learning Communities (PLCs) have become increasingly popular in educational settings to foster collaboration, improve teaching practices, and ultimately enhance student achievement. This comprehensive strategy aims to enhance learning outcomes significantly while fostering continuous professional development among educators. A PLC comprises educators who collaboratively engage in reflective processes enhancing teaching practices and promoting student learning. These communities enable educators to share best practices, discuss instructional strategies, analyze student data, and work towards common goals.

Across countries such as Singapore, Korea, Taiwan, Japan, and China, Professional Learning Communities (PLCs) have demonstrated positive effects on student outcomes, as evidenced by results from the Programme for International Student Assessment (PISA). For instance, Singapore emphasizes

teacher collaboration within PLCs, leading to improved instructional practices and learner outcomes. Korea and Japan similarly prioritize teacher collaboration, lesson planning, and sharing best practices within PLCs, resulting in enhanced learner achievement and engagement. Japan focuses on lesson study within PLCs, promoting shared expertise and research-based teaching methods. Taiwan utilizes structured PLCs to support collaboration and exchange of pedagogical knowledge among teachers, integrating technology to enhance productivity and instructional quality. Lastly, in China, PLCs foster a culture of accountability for learner success, aligning curriculum standards and instructional strategies across schools and promoting inclusive practices to address diverse learners needs. These show, PLC serve as a comprehensive strategy for enhancing learning outcomes and promoting continuous professional development among educators.

The construction of professional learning communities has become a prevailing framework for teachers' professional learning and development. Teachers who work within successful professional learning communities improve instruction which lead to improve student achievement and contribute to the effectiveness of the schools. When teachers collaborate with their colleagues to enhance their practices, they become more effective in supporting their students' learning. Collaborating with colleagues demonstrates a strong professional community, which has a significant impact on building a sense of joint responsibility for the learners' development. This sense of duty has a favorable relationship with higher levels of learner accomplishment. In a school with a high level of empowerment, a strong professional community is likely to emerge. Professional networks provide places for instructors to apply their personal practical knowledge to common concerns.

Along with this, there must be strong shared management and leadership. School leaders must facilitate a school development process that harnesses the potential of teachers. They should provide structure for professional learning communities while also providing openness for teachers to problem solve within the structure. Instructional leaders and teachers must have mutual agreement that the purpose of professional learning communities is to provide a pathway for learners' achievement and improvement. From here, teachers should have time to reflect on their practice and use the learners' achievement data to support what they are doing.

In consonance with this, the Department of Education issued an order through DepEd Order No. 35, s. 2016 on the implementation of Republic Act No. 10533, or the Enhanced Basic Education Act of 2013, which centers on the Learning Action Cell (LAC) as a K to 12 Basic Education Program School-Based Continuing Professional Development Strategy for the improvement of Teaching and Learning. Under this mandate, section 2 states that:

> "Through this policy, the department fully supports the continuing Professional development of its teaching personnel based on the principle of lifelong learning and DepEd's commitment to the development of teachers' potential towards success in the profession. This can be done through the school-based LAC, which primarily functions as a professional learning community for teachers that will help them improve practice and learner achievement."

This policy, too, institutionalizes the professional learning communities to develop and fully support the teachers by nurturing their knowledge and skills in terms of teaching and learning delivery. The agency underscores its support for the continuing professional development undertaken through the school-based learning action cell (LAC) to assist the teachers improve and enhance their teaching and learning skills practices.

Professional learning communities should also be facilitated by the school principal or a designated LAC leader. There should be some basic procedure that must be followed for a systematic structure, plan, and shared leadership foundations to be implemented. School administrators must encourage teachers to take on leadership responsibilities to improve the teaching and learning process.

At the same time, the teachers' professional development program is also outlined in the Department of Education Order No. 42, s. 2017 RE: National Adoption and Implementation of the Philippine Professional Standards for Teachers which explains that:

> "The teachers' professional as well as personal growth and development needs are embedded in the Philippine Professional Standards for Teachers (PPST), which is considered to be a florilegium of

competencies and skills that make up teaching quality with the K to 12 reforms. Thus, the learning action cell (LAC) serves as a venue to deliver professional development programs for DepED pedagogues to help attain leveling up career stages along the Philippine Professional Standards for Teachers (PPST)."

Operative leadership is essential for the success of PLC. Ineffective leadership, micromanagement, or lack of support from administrators can impede the progress of PLCs and create barriers to meaningful collaboration among teachers. However, school leaders must look into creating a shared vision for improving teaching practices and learner achievement. Leaders need to inspire and motivate educators to work towards common goals. Implementing new practices and transforming school culture through PLC can be met with resistance from some educators. Overcoming this resistance requires strong leadership, supportive structures, and ongoing professional development to help educators embrace change and innovation. Addressing the stated issues related to practices, management and leadership in PLCs is core for maximizing teachers' potential in enhancing teaching practices and ultimately to improve learner achievement.

Naga City Division, on its journey towards global competitiveness, has embarked on a path of significant transformation by initiating an array of rigorous training programs. One striking manifestation of this commitment is the annual implementation of In-Service Training (INSET) and Learning Action Cell (LAC) sessions across all schools within the division. However, amidst these progressive strides, there loom underlying challenges that present hurdles in the seamless practice, effective management and adept implementation of professional learning communities. These hurdles, though subtle, pose significant barriers to address them adequately.

In the context of enhancing educational quality and fostering a collaborative learning environment, the researcher orchestrated a study centered on Professional Learning Communities and their profound impact on learners' achievement levels. This was propelled by the necessity within the division to maintain a sustained delivery of high-quality education that aligns with educational standards and best practices. The study also sought to proactively address the needs through the formulation and implementation of a strategic development plan.

Statement of the Problem

This study determined the influence of professional learning communities on learners' academic achievement and used this as a basis for crafting a strategic development plan in Naga North District I for SY 2024-2028.

Specifically, it answered the following questions:

1.   What is the level of practice in the teachers' professional learning communities along:

    a. Shared values and vision;
    b. Collective learning and application;
    c. Supportive Condition; and
    d. Shared practice?

2.   What is the level of management in the teachers' professional learning communities along:

    a. Learner diversity and inclusion;
    b. Lesson content and pedagogy;
    c. Assessment and reporting; and
    d. Curriculum contextualization, localization, and indigenization?

3.   What is the level of leadership in the teachers' professional learning communities along:

    a. Instructional innovation;
    b. Collaboration;
    c. Advocating a culture of professional learning;
    d. Modeling effective teaching and learning?

4.   What is the level of learners' academic achievement?

5.   Are there significant differences in the level of practice, management, and leadership in the teachers' professional learning communities among the group of respondents?

6.   Are there significant relationships between the level of practice, management, and leadership in the teachers' professional learning communities to learners' academic achievement?

7.   Are there significant influences on the level of practice, management, and leadership of teacher's professional learning communities to learners' academic achievement?

8.   What strategic development plan may be proposed to enhance the level of practice, management, and leadership of teachers in professional learning communities based on the result of the study?

Methods Used

The descriptive-comparative-correlational method was used to achieve the purpose of the study, which was to assess the influence of professional learning communities on learners' academic achievement and used this as a basis for crafting a strategic development plan in Naga North District I, Naga City Division school year 2024-2025.

The descriptive method was used to determine the level of practices in terms of shared values and vision, collective learning and application, supportive condition and shared practice; the level of management in the teachers' professional learning communities along the aspects of learner diversity and student inclusion, lesson content and pedagogy and assessment and reporting and curriculum contextualization, localization, and indigenization; the level of leadership in the teachers professional learning communities along instructional innovation, collaboration, advocating culture of professional learning and modeling effective teaching and learning; and the level of learners' academic achievement.

The comparative method was used to look for the significant differences in the levels of practice, management, and leadership of teachers professional learning communities among group of respondents.

On the other hand, the correlational method was utilized to determine the significant relationships among the level of practice, management, and leadership when grouped according to variables. Likewise, the significant influences on the level of practice, management, and leadership of teachers' professional learning communities among the group of respondents.

Results and Discussion

Practice in the Teachers' Professional Learning Communities

The four aspects: shared values and vision, supportive conditions, shared personal practice, and collective learning application are compared, offering valuable insights into the strengths and areas for growth of School Heads and Master Teachers in their professional practices.

Master Teachers declared that shared values and vision and shared personal practice obtained the highest average weighted mean of 3.88, interpreted as very high; followed by collective learning application with an average weighted mean of 3.86, also very high; the lowest was on supportive condition with an average weighted mean of 3.83, described as very high, too. The overall average weighted mean of 3.85 confirmed that the level of practice in the teachers' PLCs of Master Teachers was very high.

Level of Practice in the Teachers
Professional Learning Communities

Aspects	Master Teachers	School Heads	OAWM	Int	Rank
Shared Values and vision	3.88	3.93	**3.91**	VH	**1**
Supportive condition	3.83	3.96	**3.90**	VH	**3**
Shared personal practice	3.88	3.93	**3.90**	VH	**3**
Collective learning application	3.86	3.93	**3.90**	VH	**3**
Grand Average Weighted Mean	**3.85**	**3.95**	3.90	VH	
Interpretation	**VH**	**VH**	**Very High**		
Rank	**2**	**1**			

These results showed that Master Teachers had reflected strengths and stretches along the domains indicating a strong sense of unity and purpose. The shared understanding of goals and values, and shared personal practice were crucial for effective collaboration and decision-making within the PLCs. Further, this suggests that Master Teachers were actively engaged in reflecting on their teaching practices and sharing their experiences with their colleagues. This promoted continuous improvement and fostered a culture of learning; Supportive conditions indicated that the PLCs provided a generally supportive environment for its members, which was essential for open communication and collaboration. These findings confirmed that the level of practice in the teachers' PLCs was functioning effectively and contributing to the professional growth and development of its members.

On the other hand, for the school heads, supportive condition was the highest with an average weighted mean of 3.96, described as very high. Shared values and vision, shared personal practice, and collective learning application were lower with an average weighted mean of 3.93, interpreted as very high, too. The average weighted mean of 3.95 completed the level of practice in the teachers' PLCs was very high. This meant that supportive conditions were superior which included factors such as providing resources, encouragement, guidance, and creating a positive environment for teachers. The other domains still indicated a high level of shared values and vision, shared personal practice, and collective learning application within the professional learning community. This implied that while these aspects were slightly lower, they were still considered very positively within the context of the PLCs. Completely, this suggested the level of practice within the teachers' PLCs was at a very high standard. It implied that teachers were effectively engaging in professional development activities, collaborating with colleagues, and implementing best teaching practices.

In its entirety, shared values and vision obtained the highest overall average weighted mean of 3.91, interpreted as very high. The three domains supportive condition, shared personal practice and collective learning application got a lower overall average weighted mean of 3.90, all interpreted as very high, too. This suggested that both School Heads and Master Teachers were strong in sharing values and vision which contributed significantly to their performance. There was a solid sense of alignment and agreement regarding school values and mission. On the other hand, the shared personal practice, supportive condition, and collective learning application had the same value and were still very high. This indicated that their performance was still exceptional. This suggested that within the PLCs, there

was a high level of support from leadership, a commitment to sharing personal teaching practices, and a dedication to applying collective learning to improve teaching effectiveness.

The grand average weighted mean of 3.90 confirmed a very high level of practice in the teachers' PLCs. The importance of collaboration and continuous learning among teachers towards a common goal was emphasized. They also highlighted continuous development and professional development within the educational environment. Further, it reflected their facilitating on sharing of best practices and strategies and an enabling environment where they supported teachers.

Moreover, it can be deduced that the significance of shared values and vision is a key factor contributing to the success of School Heads and Teacher PLCs. Additionally, all aspects evaluated were performing at a very high level, showcasing the commitment to excellence in these educational environments. These findings suggested a strong and positive professional culture within the school, characterized by a clear alignment of values and vision, strong support from leadership, active sharing of teaching practices among colleagues, and a commitment to collective learning and improvement.

Management in the Teachers' Professional Learning Communities

The level of management in the teachers' professional learning communities. It discussed the four indicators which include learners' diversity and inclusion; lesson content pedagogy; assessment and reporting; and curriculum contextualization, localization, and indigenization.

Level of Management in the Teachers Professional Learning Communities

Aspects	Master Teachers	School Heads	OAWM	Int	Rank
Assessment and reporting	3.86	3.97	**3.92**	VH	1
Curriculum contextualization, localization, and indigenization	3.85	3.95	**3.90**	VH	2
Learners' diversity and learners' inclusion	3.81	3.95	**3.88**	VH	3
Lesson Content and Pedagogy	3.84	3.90	**3.87**	VH	4
Grand Average Weighted Mean	**3.84**	**3.94**	3.89		
Interpretation	**VH**	**VH**	**Very High**		
Rank	**2**	**1**			

For the master teachers, the highest was on assessment and reporting with an average weighted mean of 3.86; followed by curriculum contextualization, localization, and indigenization with an average weighted mean of 3.85; next was lesson content and pedagogy with an average weighted mean of 3.84; and the last was learners' diversity and learners' inclusion with an average weighted mean of 3.81; all defined as very high. The overall average weighted mean of 3.84 revealed that the level of management in the teachers' Professional Learning Communities for the Master Teachers was very high.

As for the School Heads, their highest was also on assessment and reporting with an average weighted mean of 3.97; followed by curriculum contextualization, localization, and indigenization; and

learners' diversity and inclusion, both with an average weighted mean of 3.95; the lowest on lesson content and pedagogy with an average weighted mean of 3.90; all were described as very high, also. The overall average weighted mean of 3.94, discovered that the level of management in the teachers' Professional Learning Communities for the school heads was very high, as well.

As a whole, assessment and reporting obtained the highest overall average weighted mean of 3.92; followed by curriculum contextualization, localization, and indigenization with an overall average weighted mean of 3.90; next was learners' diversity and inclusions with an overall average weighted mean of 3.88; the lowest was on lesson content and pedagogy with an overall average weighted mean of 3.87; all described as very high. The grand average weighted mean of 3.89 manifested that the level of management in the teachers' Professional Learning Communities was very high.

Between respondents, school heads had an overall average weighted mean of 3.94; while master teachers got an overall average weighted mean of 3.84; both were interpreted as very high. In its entirety, the grand average mean of 3.89 bared that the level of management in the teachers' Professional Learning Communities was indeed very high. It can be inferred that Master Teachers and School Heads excel in assessment and reporting. However, Master Teachers struggled more with learners' diversity and inclusion, On the other hand, school heads faced challenges in lesson content and pedagogy. Thus, there may be opportunities for improvement in addressing learners' diversity and inclusion for Master Teachers and enhancing lesson content and pedagogy for school heads. All these can be developed through classroom observation and giving feedback that focuses on those aspects. This indicated that the school heads and master teachers in the Naga City Division have shown a very high level of management in the teachers' PLCs in terms of their assessment and reporting as they were often responsible for the overall academic performance and progress of the learners in their schools. As such, they were accountable for ensuring that assessment and reporting processes were carried out effectively and accurate reporting was done to stakeholders.

On the other hand, the level of management in the teachers' PLCs in dealing with lesson content and pedagogy suggests that school heads and master teachers may not have access to sufficient training and professional development opportunities to enhance their knowledge and skills in this aspect. Furthermore, school heads displayed a particularly very high level of management in the teachers' PLCs. On the other hand, the master teachers were a bit lower but still very high, this can be due to their roles in ensuring accountability, leveraging expertise, policy implementation, decision-making, stakeholders' communication, and professional development within the educational system.

These findings can be related to the study of Brown (2018) that professional learning communities when successfully instituted by school leaders and embraced by participants, have been shown to improve students' achievement as well as teacher perception. Professional Learning Communities (PLCs), when effectively established by school leaders and embraced by participants, improve learners' achievement and positively influence teacher perception. These collaborative groups foster knowledge sharing, align teaching practices, and create a culture of continuous improvement. As teachers collaborate, they boost confidence and job satisfaction, impacting their perception of teaching effectiveness.

Likewise, Usop et al. (2017) emphasized that teachers develop work performance style characteristics to relate to the world perceptually and cognitively. Teachers' positive attitude toward teaching and higher aspiration levels determines their positive perception of the environment. Expanding on these findings' teachers' work performance styles are shaped by their interactions with the world. When educators approach their work with enthusiasm and a growth mindset, they not only enhance their own experiences but also contribute positively to the overall educational environment. Additionally, teachers who set ambitious goals tend to notice opportunities for improvement and innovation, fostering a constructive perception of their surroundings.

Bandura's Social Cognitive Theory is considered to have been applied in this study. This theory emphasizes how individuals learn from observing others and how self-efficacy influences behavior. In the context of PLCs, it suggests that teachers' perceptions and actions are influenced by observing successful practices within their community. It focuses on how people learn through observation,

imitation, and modeling. Teachers learn by observing successful practices within their Professional Learning Communities (PLCs). They believe that their abilities are influenced by observing effective strategies from colleagues. Their actions and perceptions interact with the PLC community, creating a dynamic learning process.

Leadership in the Teachers' Professional Learning Communities

The level of leadership in the teachers' professional learning communities. It discussed the four domains which included instructional innovation; collaboration; advocating a culture of professional learning; and modeling effective teaching and learning.

Based on the results, for the master teachers, their highest was on advocating a culture of professional learning with an average weighted mean of 3.88; followed by collaboration with an average weighted mean of 3.87; next was modelling effective teaching and learning with an average weighted mean of 3.86' and last was instructional innovation with an average weighted mean of 3.85; all were interpreted as very high.

Level of Leadership in the Teachers Professional Learning Communities

Aspects	Master Teachers	School Heads	OAWM	Int	Rank
Advocating a culture of professional learning	3.88	4.00	**3.93**	VH	1
Collaboration	3.87	3.94	**3.91**	VH	2
Modelling effective teaching and learning	3.86	3.93	**3.90**	VH	3.5
Instructional innovation	3.85	3.93	**3.90**	VH	3.5
Grand Average Weighted Mean	**3.86**	**3.95**	3.91		
Interpretation	**VH**	**VH**	**Very High**		
Rank	**2**	**1**			

The overall average weighted mean of 3.86 confirmed that the level of leadership in the Teachers' Professional Learning Communities for the master teachers was very high. These results highlighted that master teachers demonstrated strong leadership within their Professional Learning Communities (PLCs). Their commitment to advocating a culture of professional learning underscores collaborative growth. Additionally, their effective collaboration, modeling of successful teaching practices, and openness to instructional innovation contributed to their very high leadership level in PLCs.

As to the school heads, they agreed with the master teachers that the highest was on advocating a culture of professional learning which got a perfect rating of 4.00; followed by collaboration with an average weighted mean of 3.94; then, modelling effective teaching and learning; and instructional innovation, both had an average weighted mean of 3.90; all were interpreted as very high. The overall average weighted mean of 3.95 manifested that the level of leadership in the Teachers' Professional Learning Communities was very high. This envisioned that school heads' have a strong emphasis on advocating a culture of professional learning and their collaborative approach underscores their

commitment to fostering a supportive environment. Their effective modeling of teaching practices and openness to innovation contributed to the overall very high leadership level within Teachers' Professional Learning Communities.

These findings were linked with Manoco (2017) when he explored the concept of teacher leadership within the professional learning communities and its impact on teacher professional development and student outcomes. It discussed various models of teacher leadership in PLCs and their effectiveness. This exploration sheds light on the multifaceted role of teacher leadership within professional learning communities (PLCs). By examining diverse leadership models, his work contributed valuable insights into how teacher-led initiatives can enhance professional development and ultimately benefit student achievement

Similarly, DiBiase (2019) discovered the roles of leaders within the PLCs, their impact on teacher collaboration and professional growth, and strategies to support effective leadership practices within these communities. The research investigated the complex roles of leaders within Professional Learning Communities (PLCs). By examining their impact on teachers' collaboration and professional growth. It sheds light on strategies that effectively support leadership practices within these communities. His work underscores the critical link between leadership, collaboration, and improved educational outcomes for both teachers and students

Moreover, Smith (2020) investigated how teacher leadership within PLCs influenced teachers' professional growth and development. It examined the relationship between teacher leadership, collaboration, and professional learning outcomes. The exploration of teacher leadership within Professional Learning Communities (PLCs) enlightened on its impact. By investigating the intricate relationship between teachers' leadership, collaboration, and professional learning outcomes, Smith underscores the critical role that informed teacher leaders play in fostering growth among their peers. His work emphasizes the need for conscious analysis, support, and a habit of inquiry to enhance teaching practices and promote sustained professional development within PLCs.

Given these results, Burns' Transformational Leadership Theory provides a powerful lens through which to understand the exceptional leadership observed in Teachers' Professional Learning Communities (PLCs). By inspiring and motivating educators to surpass expectations, this theory cultivates commitment and job satisfaction. The alignment of goals between leaders and their teams fosters a collaborative environment, where individual growth and collective success thrive. In essence, the transformative influence of this theory resonates deeply with the very high leadership levels demonstrated by both school heads and master teachers within PLCs.

Level of Learners' Academic Achievement School Year 2022-2023

The level of academic achievement of learners is the extent of knowledge, skills, and competencies that learners have acquired in a particular subject. It is typically assessed through tests, exams, projects, and other evaluations that measure learners' understanding and performance of specific learning objectives. Academic achievement indicators such as grades may differ greatly among learners. It is crucial to grasp and back learners' academic successes to enhance their educational journey. Table 5 shows the level of Grades 1-6 learners' academic achievements in the learning areas, Edukasyon sa Pagpapakatao (EsP), Edukasyong Pangkabuhayan at Pantahanan (EPP), Filipino, Araling Panlipunan, Science English, and Mathematics.

As reflected in the table, Edukasyon sa Pagpapakatao (EsP) obtained a mean score of 86.46, with an SD of 2.22, ranked first, based on the mean; followed by Edukasyong Pantahanan at Pangkabuhayan which got a mean of 85.49, an SD of 2.58, ranked second; both interpreted as approaching proficiency, which means strong understanding with minor gaps; next was Filipino with a mean of 84.35, an SD of 1.74, interpreted as developing, which means there is progress with noticeable areas for improvement; ranked third; and, last was Mathematics with a mean score of 82.75, an SD of 2.54, likewise interpreted as developing, ranked seventh. The data presented in the table revealed the mean scores and standard deviations for different subjects. Edukasyon sa Pagpapakatao (EsP) achieved the highest mean score

indicating strong performance in this subject. The relatively low standard deviation (SD) suggests consistency among students' scores. Edukasyong Pantahanan at Pangkabuhayan follows closely; although its SD was slightly higher, the overall performance remains strong.

Level of Learner's Academic Performance
School Year 2022-2023

Subject	Mean	Standard deviation	Rank (based on the Mean)
Edukasyon sa Pagpapakatao (EsP)	86.46	2.22	1
Edukasyong Pantahanan at Pangkabuhayan (EPP)	85.49	2.58	2
Filipino	84.35	1.74	3
Araling Panlipunan	84.21	1.74	4
Science	83.04	2.84	5
English	82.97	2.91	6
Mathematics	82.75	2.54	7
Average	84.18		

The Filipino subject ranked third, the lower SD indicated less variability in scores compared to the other subjects. Mathematics lags behind, this suggests greater variability in learners' performance. In summary, these results highlighted the relative strengths and weaknesses of each subject based on the mean scores and consistency. EsP and Edukasyong Pantahanan at Pangkabuhayan stand out, while Mathematics faces more variability in student achievement. As a whole, the level of learners' academic performance in Naga North District I for the school year 2022-2023 was approaching proficiency, interpreted as a strong understanding with minor gaps. This means that students have a strong understanding of the subjects, but there were still some minor gaps or areas for improvement. Essentially, they were close to meeting the highest standards but may need further refinement in certain aspects. It was a positive assessment, indicating progress and competence, with room for growth.

This can be associated with the study of Osokoya (2018) who proved that achievement is the product of a learning experience. Attaining a high level of academic performance is what every parent or guardian as well as teacher wishes for their children, wards, and learners. Schools and teachers are graded qualitatively by achievement based on the performance of their learners. Building upon these insights, it is essential to recognize that achievement is not solely about test scores or grades. True achievement encompasses holistic growth, including character development, critical thinking, and creativity. Moreover, fostering a supportive learning environment and personalized teaching strategies can significantly impact student achievement.

For Colmar et al. (2019), the capacity of elementary school learners to respond to academic setbacks, and academic buoyancy, was not predictive of academic achievement. These findings challenge the direct link between academic buoyancy and achievement, it is important to consider additional factors. Firstly, individual differences in resilience and coping mechanisms may play a role. Secondly, the quality of support systems, such as teacher encouragement and parental involvement,

can significantly impact a student's ability to bounce back from setbacks. Lastly, fostering a growth mindset that emphasizes effort, learning, and adaptability can contribute to long-term achievement.

Bandura's Social Cognitive Theory is considered to apply most in this study. This theory is particularly relevant because it focuses on how individuals learn from observing others (vicarious learning) and how their behavior is influenced by cognitive processes, self-regulation, and environmental factors. People learn by observing others. People imitate behaviors as seen in the environment, especially if they are rewarded or positively reinforced. Bandura introduced the concept of self-efficacy, the belief in one's ability to perform specific tasks. High self-efficacy leads to greater effort and persistence. Behavior, environment, and personal factors interact dynamically. Actions influence the environment, which, in turn, affects behavior. In educational settings, understanding how students learn through observation can inform teaching methods. Teachers can model desired behaviors and provide positive reinforcement. Self-efficacy plays a crucial role in academic achievement. Students with high self-efficacy are more likely to set ambitious goals and persist in their studies. By considering reciprocal determinism, educators can create supportive environments that enhance learning outcomes. Critics argue that Bandura's theory does not fully account for individual differences or the role of biology. Some behaviors may not be learned solely through observation; innate factors also play a part.

In summary, Bandura's Social Cognitive Theory provides valuable insights into how students learn, their self-beliefs, and the interplay between behavior and the environment. It is a relevant lens for understanding educational outcomes. In addition to its relevance in education, Bandura's theory has also been applied to fields beyond academia. It informs behavior modification programs, self-help strategies, and even organizational training. Understanding how observational learning and self-efficacy impact human behavior can lead to more effective interventions and positive outcomes. This theory emphasized the reciprocal relationship between cognitive processes, behavior, and environmental factors, offering a comprehensive framework for understanding human learning and behavior across various contexts.

Differences in the Level of Practices, Management, and Leadership of Teachers Professional Learning Communities among Group of Respondents

The differences in the level of practice among master teachers had an F-value equal to 3.89, and a p-value equal to 0.021. It represents the ratio of variance between groups, in this case, different levels of practices among master teachers to variance within groups. A higher F-value suggests greater variability between the groups. The p-value indicates the probability of observing the given F-value, or a more extreme one, if there were no true differences between the groups. A small p-value, suggests that the observed differences are statistically significant. Since the p-value is less than 0.05 level of significance, this meant that there is a statistically significant difference in the level of practice among master teachers. The data suggests that there are meaningful variations in teaching practices among master teachers. This examination delved into the nuanced levels of involvement by these key stakeholders.

Differences in the Level of Practices among Master Teachers

Statistical Measure	Statistical Value
F-value	3.89
p-value	0.021
Interpretation	**Significant**

After the test on the significant differences in the level of practice among aspects resulted to shared values and vision and supportive condition showed significant difference at Q=4.05 and p=0.039

and shared values and vision and shared personal practice showed significant difference at Q=4.05 and p=0.039. By examining these differences, master teachers can gain insights into what practices are more effective and how they can enhance professional learning communities to better support teachers and improve outcomes.

The findings by Wilson (2016) indicated teachers have varying perceptions and experiences that both promote and hinder their growth as teacher leaders. Wilson's research sheds light on the multifaceted nature of teacher leadership development. Teachers perceive leadership differently. Some view it as an opportunity for growth, collaboration, and impact, while others may see it as an additional burden or responsibility. Certain experiences enhance teacher leadership. Effective teacher leadership involves positive experiences like mentorship, participation in learning communities, and exposure to successful leaders. However, challenges such as time constraints and systemic barriers can hinder growth. Supportive school environments, clear pathways, and recognition play a crucial role in encouraging teachers to embrace leadership roles. Ultimately, addressing these factors benefits both educators and students.

Given the results and the context of examining differences in teaching practices among master teachers, the theory that aligns most closely is Burns' Transformational Leadership Theory. This theory emphasizes leaders who inspire and motivate followers to achieve exceptional outcomes. They serve as role models, earning trust and respect from their followers. They communicate a compelling vision and inspire commitment. They encourage creativity, critical thinking, and innovation. They support individual growth and development. In the context of master teachers, applying transformational leadership principles can lead to positive changes in teaching practices, collaboration, and overall educational outcomes.

The differences in the level of practice among School Heads. The data in the table shows the analysis of variance resulted in an F-value equal to 2.17, and a p-value equal to 0.117. It represents the ratio of variance between groups, in this case, different levels of practice among school heads. A lower F-value suggests less variability between the groups. The p-value indicates the probability of observing the given F-value, or a more extreme one if there were no true differences between the groups.

Differences in the Level of Practice among School Heads

Statistical Measure	Statistical Value
F-value	2.17
p-value	0.117
Interpretation	Not Significant

Since the p-value is greater than 0.05 level of significance, there is no statistically significant difference in the level of practice among school heads. In other words, the variations observed are likely due to random chance rather than meaningful differences. The data suggests that the differences in practice among school heads are not statistically significant. It indicated that there was no significant difference observed when considering the level of practice in the teachers' professional learning communities among school heads. It suggested that there was not enough evidence to reject the null hypothesis, indicating no significant difference in this case.

These findings were linked with the research of Chen (2018) when he aimed to understand the key factors contributing to effective professional learning communities in the Taiwanese educational context. He mentioned that Structural equation modeling revealed that collegial trust played some significant roles in linking supportive and shared leadership, shared vision, and shared practices. This

suggested that fostering shared vision and supportive leadership, alongside building collegial trust, facilitates collaborative learning, innovation, inquiry, reflection, and feedback among school members within PLCs.

The significant differences in the Level of Management among Master Teachers. It disclosed an f-value of 7.56 and a p-value of 0.000, interpreted as significant.

**Significant Differences in the Level of Management
among Master Teachers**

Statistical Measure	Statistical Value
F-value	7.56
p-value	0.000
Interpretation	**Significant**

This means that there was a significant difference in the level of management in the teachers' professional learning communities among respondents. It suggested that there was a significant difference in the level of management within the Teachers' professional learning communities employed by master teachers in Naga City. It could be inferred that significant differences in the level of management among Master Teachers within professional learning communities (PLCs). The calculated f-value suggested that these differences were significant while the p-value further supports this, indicating that there was indeed a significant distinction in the level of management among Master Teachers in Naga City's PLCs. This implied that Master Teachers within these communities vary significantly in their approaches or styles of management, which could impact the effectiveness or functioning of the PLC they were involved in.

It indicated that the level of management among Master Teachers in Professional learning communities varies significantly. The computed F-value, along with the low p-value, suggested that there were meaningful differences in how these communities were managed and operated by Master Teachers in Naga City. This implied that the professional learning communities led by Master Teachers were not uniform in their practices and likely offered diverse experiences to the teachers involved. Further examination of these variations could provide valuable insights into optimizing the effectiveness of these communities for professional development.

After the test on the significant differences in the level of management among aspects resulted in Learner diversity and student inclusion together with assessment and reporting showed significant differences at Q=6.39 and p=0.000 while Learner diversity and learner inclusion together with curriculum contextualization, localization, and indigenization showed significant difference at Q=4.98 and p=0.008.

The results showed that there were significant differences in the level of management across different aspects related to learners' diversity and learners' inclusion. This indicated that the management indicators differed significantly when it came to these areas. Similarly, when it was tested alongside curriculum, contextualization, localization, and indigenization, another significant difference was found with the presented values. This suggested that the management practices differed significantly concerning how curriculum aspects were tailored to diverse learner populations. These findings highlighted the importance of considering management strategies to create a more equitable and effective educational environment.

The study by Zhang (2021), contributed to the knowledge base of system teacher leaders and how they lead cross-school leadership. Practical implications: The MTS initiative described in this article showed the power of central system leadership to spread and embed effective teacher-learning practices

at schools. It provided implications for understanding and practicing teacher system leadership to support teacher professional learning in different societies. Highlighting the importance of collaboration among teacher leaders across schools, it underscored how fostering knowledge-sharing, joint problem-solving, and collective decision-making enhances the educational ecosystem. This approach creates a more cohesive and impactful learning environment for teachers and learners alike.

The differences in the level of management among School Heads. It revealed that when the level of management among school heads was treated, the computed F-value was equal to 5.84. This means that there was a significant difference in the level of management in the teachers' professional learning communities among respondents.

Differences in the Level of Management among School Heads

Statistical Measure	Statistical Value
F-value	5.84
p-value	0.003
Interpretation	**Significant**

The p-value was equal to 0.003, this suggests that there was a significant difference in the level of management within the teachers' professional learning communities employed by school heads in Naga City.   The findings indicate a significant difference in management levels among school heads concerning teachers' professional learning communities. The calculated F-value confirms a significant difference in management levels among school heads within this context. Moreover, the low p-value underscores the substantial significance of the management differences within teachers' professional learning communities, as implemented by school heads in Naga City.

After the test on the significant differences in the level of management among aspects resulted in learners' diversity and learners' inclusion together with lesson content and pedagogy showed significant differences at Q=4.23 and p=0.030; and Lesson content and pedagogy together with assessment and reporting showed significant differences at Q=5.67 and p=0.002. Based on the results of the test, it appeared that there were significant differences in the level of management among aspects. Specifically, the differences in learners' inclusion together with lesson content and pedagogy were significant at such values. Additionally, the differences in lesson content and pedagogy together with assessment and reporting were also significant at mentioned values.

These findings suggested that there were varying levels of management required for different aspects such as learners' diversity and learners' inclusion; lesson content and pedagogy; and assessment and reporting. It is important to consider these significant differences when implementing management strategies in an educational context to effectively address the diverse needs of learners and ensure successful teaching and learning outcomes. Overall, these results indicated that the management practices among school heads play some crucial roles in shaping the professional learning communities in the educational setting of Naga City.

The study by Alsaleh (2022) contributed to understanding the way that instructional leadership, cooperation, and school administration support interact and contribute to teachers' school-based professional learning. The research sheds light on the intricate dynamics between instructional leadership, collaboration, and school administration support in shaping teachers' professional learning within the school context. By examining these interrelated factors, educators can better navigate the complexities of fostering effective learning environments. Furthermore, the findings underscore the need for targeted strategies that empower both instructional leaders and administrators to facilitate continuous growth and development among teachers.

The differences in the Level of Leadership among master teachers. It revealed that when the level of leadership among master teachers was treated, the computed F-value was equal to 2.27, and the p-value was equal to 0.105.

Differences in the Level of Leadership among Master Teachers

Statistical Measure	Statistical Value
F-value	2.27
p-value	0.105
Interpretation	**Not Significant**

This means that there was no significant difference in the level of leadership in the teachers' professional learning communities among respondents. This suggested that there was no significant difference in the level of leadership within the Teachers' professional learning communities employed by master teachers in Naga City.

These findings can be associated with the study by Avila (2023), it was mentioned that teachers should always be professional, and innovative; continue to implement new ideas, and take risks with confidence; one must be creative, open-minded, a lifelong learner; proactive; and equally important is act as a motivational leader. They should always engage and encourage collaboration; promote shared decision-making; and develop the leadership potential of others.

The differences in the level of leadership among school heads.

Differences in the Level of Leadership among School Heads

Statistical Measure	Statistical Value
F-value	6.19
p-value	0.002
Interpretation	**Significant**

It revealed that when the level of leadership among school heads was computed, it resulted in an F-value equal to 6.19, and the p-value was equal to 0.002. This means that there was a significant difference in the level of leadership in the teachers' professional learning communities among respondents. Also, this suggested that there was a significant difference in the level of leadership within the teachers' professional learning communities employed by the school heads in Naga City.

After the test on the significant differences in the level of leadership among aspects, instructional innovation together with advocating a culture of professional learning showed a significant difference at Q=5.51 and p=0.003; collaboration together with advocating a culture of professional learning showed a significant difference at Q=4.55 and p=0.018; and advocating a culture of professional learning together with modelling effective teaching and learning showed significant difference at Q=4.66; p=0.015.

In the context of instructional innovation, collaboration, and modeling effective teaching and learning, leadership levels exhibited significant variations. Specifically, the interaction between instructional innovation and advocating a culture of professional learning had a notable impact on leadership. Additionally, when collaboration and a culture of professional learning were integrated,

leadership approaches were diverse. Furthermore, the joint influence of advocating a culture of professional learning and modeling effective teaching and learning played a pivotal role in shaping leadership behaviors. These findings highlighted the importance of considering the combined effects of these different aspects on leadership within educational contexts, emphasizing the significance of professional learning culture in impelling leadership practices related to instructional innovation, collaboration, and effective teaching and learning.

These can be linked with the study of Auli (2018) when he looked into the primary goals of establishing professional learning communities (PLCs) in enhancing the professionalism of teachers as well as impacting student learning outcomes. In the quantitative study, he assessed the maturity level of schools as PLCs across various dimensions such as school culture, leadership, teaching, and professional development. Participants' perceptions highlighted strengths such as a culture of collegiality, trust, and commitment, across all schools, fostering professional collaboration among teachers who possessed the necessary knowledge, skills, and attitudes for effective engagement. Notably, significant differences were observed among the clusters in terms of organizational and operational characteristics, indicating varying levels of development and implementation of PLC principles.

Further, Extremera (2024) highlighted that to achieve professional learning communities with sustainable leadership, it is necessary to distribute responsibilities, reflect jointly on what is taught and why, establish external relations with other institutions and schools, and care about the emotional well-being of members of a school community. Effective leadership involves delegating tasks and responsibilities among team members. By sharing the load, leaders can create a collaborative and supportive environment. Regular collective reflection on teaching methods and curriculum ensures alignment and continuous improvement. It encourages a shared vision and enhances teaching quality. Building connections with other institutions and schools enriches the learning community. Collaborating externally brings fresh perspectives, resources, and opportunities. Leaders must actively care for the emotional health of all community members. A supportive atmosphere fosters growth, resilience, and sustained leadership.

Based on the findings in this study, Bandura's Social Cognitive Theory would be the most applicable. Social cognitive theory emphasizes the learning that occurs within a social context. It views people as active agents who both influence and are influenced by their environment. According to Bandura, people learn new behaviors by observing others and the consequences of their actions. Positive or negative reinforcement influences our likelihood of imitation. This theory considers personal factors, environmental influences, and behavioral patterns. It highlighted the role of observational learning, social experience, and reciprocal determinism in shaping behavior. Social cognitive theory has been used to explain various human behaviors, including aggression, substance abuse, and mental health issues. Thus, this theory aligns well with the study's focus on leadership, learning, and behavior within a social context. In summary, social cognitive theory provides a valuable lens for understanding how individuals learn, adapt, and interact within their social environment, influencing their leadership behaviors and overall functioning.

**Relationships on the Level of Practice, Management
and Leadership to Academic Achievement**

The relationship between the level of practice in the teachers' professional learning communities and academic achievement.

**Relationship between Level of Practice in the Teachers' Professional
Learning Communities and Academic Achievement**

Domains	Academic Achievement	r-value	p-value	Interpretation
Shared values and vision	Academic Achievement	0.32	0.481	Not Significant
Collective learning and application	Academic Achievement	-0.53	0.219	Not Significant
Supportive condition	Academic Achievement	0.62	0.135	Not Significant
Shared personal practice	Academic Achievement	0.57	0.184	Not Significant

As revealed in the table, a computed r-value of 0.32 between shared values and vision and academic achievement is interpreted as a low correlation, and a p-value of 0.481, is interpreted as a bit significant. The positive r-value showed a low correlation or relationship which means that when shared values and vision are low, the academic achievement is low, too. Hence, the results revealed a not significant relationship between the shared values and vision, and academic achievement. This meant that the master teachers and school heads must uphold a set of core values and a cohesive vision to guide their actions, ensuring a strong foundation for the educational community. This alignment nurtured a harmonious environment that fosters both individual growth and collective success. By maintaining a focus on shared values and vision, they cultivated a sense of unity and purpose among all stakeholders.

Concurrently, upholding a high academic achievement standard underscores their commitment to excellence in education, driving learners toward their full potential. Striking a delicate balance between these elements is essential for sustaining a dynamic and thriving learning environment. It was through this synergy of shared values, vision, and academic excellence that the educational institution can truly flourish and make a lasting impact on its students and the community at large.

In the study of Haggquiest (2018), he mentioned that PLCs have provided means by which schools have used structured collaboration to improve student outcomes. Two of his conclusions were teachers and administrators were unclear about the link between actions and results. This statement was parallel to the result of this study having no significant relationship. Educators need to grow themselves in practicing the values and visions of their schools.

The same table revealed that the computed r-value of -0.53 between collective learning application and academic achievement was interpreted as a moderate correlation and the p-value of 0.219, was interpreted as not significant. The negative r-value showed a moderate correlation or relationship which means that when collective learning application is moderate, the academic achievement is low, too. Hence, the results revealed a not significant relationship between the collective learning application and academic achievement. It is important for both the master teachers and school heads to focus not only on academic achievement but also on promoting a culture of collective learning. Striking a balance between these two aspects can lead to a more holistic educational environment where

students can thrive academically while also developing important collaboration and communication skills. This approach can help ensure that students are not only successful academically but also well-prepared for the challenges of the future.

This can be related to the results of the study of Yusra (2023) underscored the importance of recognizing the advantageous effects that collaborative teaching methodologies can have on the academic achievements of students. This necessitated the provision of adequate time for collaborative activities, encouraging supportive leadership within educational institutions, and allocating sufficient resources for collaboration. Encouraging collaboration across disciplines allows educators to pool their expertise and create a richer learning experience for students. Interdisciplinary projects foster critical thinking and holistic understanding. When institutions prioritize shared learning objectives, teachers collaborate more effectively. Aligning goals ensures consistency and coherence in teaching practices, benefiting student outcomes.

The same table revealed that the computed r-value of 0.62 between supportive condition and academic achievement was interpreted as a moderate correlation and the p-value of 0.135, was interpreted as not significant. The positive r-value showed a moderate correlation or relationship which means that when the supportive condition is moderate, the academic achievement is low, too. Hence, the results revealed a significant relationship between the supportive condition and academic achievement. By maintaining a high level of supportive environment and fostering strong academic performance, master teachers and school heads can create a harmonious balance conducive to effective learning outcomes. This ensured that learners not only excel academically but also thrive in a nurturing environment that supports their personal and intellectual growth. A concerted effort from both respondents will provide necessary academic rigor and support needed for learners to succeed. Ultimately, maintaining this supportive condition and academic achievement serve as cornerstone for fostering wee-rounded learners.

These results can be linked to the study by Lin (2022) that the interactive domain in which PLC teachers work collaboratively in sharing teaching lessons and developing assessment items, plays a critical role in promoting their professional development. It provided support that the advancement of teachers' professional development is beneficial to student learning outcomes. These results strengthened our understanding of the essential supportive conditions and mechanisms that an effective model must have for teachers' professional development, which can lead to better student learning outcomes.

The same table revealed that the computed r-value of 0.57 between shared personal practice and academic achievement was interpreted as a moderate correlation and the p-value of 0.184, was interpreted as not significant. The positive r-value showed a moderate correlation or relationship which means that when shared personal practice is moderate, the academic achievement is low, too. Hence, the results revealed a not significant relationship between the shared personal practice, and academic achievement. Master Teachers and School Heads should demonstrate a harmonious balance that resonates throughout the school by embodying a commitment to maintaining a robust shared personal practice alongside fostering high academic achievement. This dedication not only underscored the importance of personal growth and reflective practice but also emphasized the value of academic excellence within the learning environment.

These findings can be associated with the study by Yin (2023) it was mentioned that principal leadership practices facilitated the development of professional learning communities at school and teacher levels, and exerted a direct effect on teacher commitment at the teacher level. Principal leadership practices played a pivotal role in nurturing PLCs within schools and among teachers. Their guidance and support fostered collaborative learning environments. Principals' leadership practices directly influenced teacher commitment. Their effective leadership contributed to a more dedicated and engaged teaching workforce. Notably, different components of PLCs acted as mediators. These components uniquely influenced the relationship between leadership practices and teacher commitment. In summary, effective leadership practices positively impact both PLCs and teacher commitment in educational settings

This implies that the computed r-value and p-value between supportive condition and academic achievement suggested that the relationship between the two variables was not significant. The correlation observed is likely due to random chance and does not provide strong evidence of a meaningful connection between them. Similarly, shared personal practice and academic achievement with computed r-vale and p-value considered not to have a significant relationship suggested that while there was a moderate correlation observed, it is not significant at the given threshold. Also, in the computed r-value and p-value between shared values and vision and academic achievement, this means that the relationship observed could have occurred due to random chance. Correspondingly, the collective learning application implied that it increased and academic achievement tends to decrease moderately. The intricate relationship between these variables suggested that any observed changes have not merely happened by random chance. The interactive nature of learning applications seemed to play a pivotal role in shaping academic outcomes.

These findings are supported by Vesico et al. (2014) when they provided an in-depth analysis of professional learning competencies in teaching practices. The study reviewed various factors that influence the effectiveness of PLCs and highlighted significant differences in the level of practice among educators. Their research underscored the importance of recognizing advantageous effects when educators have an agency based on their professional values, ethics, experience, and competencies. The social-political arrangements that foster agency are rooted in mutual trust and recognition.

Additionally, Daly et al (2010) mentioned in their study how differentiated professional learning communities can impact the learning of the students. Her studies explored the role of teachers in contributing to student achievement and highlighted the importance of varying levels of practice within PLCs. They emphasized the potential impact of differentiated professional learning communities (PLCs) on student learning. Their research delved into the pivotal role teachers play in student achievement and underscored the significance of diverse practice levels within PLCs. By tailoring approaches to individual needs, PLCs can positively influence both educators and students.

These results can be supported by Bruner's theory suggesting that the performance of school heads and master teachers can have a significant impact on students' learning outcomes. They can create engaging and interactive learning experiences, facilitate critical thinking, and provide supportive guidance can help students develop a deeper understanding of the subject matter and achieve higher academic success.

The relationship between the level of management in the teachers' professional learning communities and academic achievement. The same table revealed that the computed r-value of -0.184 between Learner Diversity and learner and academic achievement was interpreted as a negligible correlation and the p-value of 0.692, was interpreted as not significant.

Relationship between Level of Management in Teachers Professional Learning Communities and Academic Achievement

Domains	Academic Achievement	r-value	p-value	Interpretation
Learner Diversity and student inclusion	Academic Achievement	-0.184	0.692	Not Significant
Lesson content and pedagogy	Academic Achievement	-0.58	0.172	Not Significant
Assessment and reporting	Academic Achievement	-0.51	0.239	Not Significant
Curriculum contextualization, localization, and indigenization	Academic Achievement	0.72	0.064	Not Significant

The negative r-values showed a negligible correlation or relationship which means that when learner diversity and learner inclusion are moderate, the academic achievement is low, too. Hence, the results revealed a not significant relationship between learner diversity learner inclusion, and academic achievement. Master Teachers and School Heads should uphold equilibrium on ensuring that every learner's unique needs are met while simultaneously promoting a culture of excellence in academic performance. They must strike a delicate balance of learner diversity and inclusion to enhance a solid foundation of learning.

This can be linked with the study by Walton (2022) which supported situated learning that values collaboration to develop social and inclusive cultures and practices in schools. The findings also have the potential to inform planning for professional learning for inclusive education. The research underscores the significance of situated learning, which prioritizes collaboration to foster social inclusivity and positive school cultures. These findings offer valuable insights for designing effective professional learning programs that promote inclusive education practices

The same table revealed that the computed r-value of -0.58 between lesson content and pedagogy and academic achievement was interpreted as a moderate correlation and the p-value of 0.172, was interpreted as not significant. The negative r-value showed a moderate correlation or relationship which means that when lesson content and pedagogy are moderate, the academic achievement is low, too. Hence, the results revealed a not significant relationship between the lesson content and pedagogy, and academic achievement.

Master Teachers and School Heads were tasked with the crucial responsibility of maintaining a high standard of lesson content and pedagogy while simultaneously upholding strong academic achievement among learners. They needed to strike a delicate balance between the depth and quality of the lesson content they delivered and the effectiveness of their teaching methods. By doing so, they ensured that learners not only excelled academically but also developed a deep understanding of the subjects being taught, fostering a lasting impact on their learning journey.

This can be associated with the study by Gore (2022) which argued that pedagogy-focused professional development, using quality teaching rounds, is an important mechanism for improving teaching on a large scale, not just for this grade or subject, but for teaching in general. With a global push for better teaching as foundational to improved student outcomes, building teaching capacity across the entire teacher workforce remains a challenge. QTR offers a way forward. Gore's assertion

highlights the significance of pedagogy-focused Professional Development, particularly through Quality Teaching Rounds (QTR). By emphasizing collaborative practices and scaling up effective teaching strategies, QTR provides a promising avenue for enhancing teaching quality across diverse contexts.

The same table revealed that the computed r-value of -0.51 between assessment and reporting and academic achievement was interpreted as a moderate correlation and the p-value of 0.239, was interpreted as not significant. The negative r-value showed a moderate correlation or relationship which means that when assessment and reporting is moderate, the academic achievement is low, too. Hence, the results revealed a not significant relationship between the assessment and reporting, and academic achievement. Master Teachers and School heads should maintain high standards in assessment and reporting while prioritizing academic achievement to accurately track learners' progress, identify areas for improvement, and provide timely support. Emphasizing this empowers them both to make informed decisions, adjust instructional strategies, and enhance the learning experience.

The results can be related to the study by Javed (2023) which recommended that consideration of learning style and needs of students while designing the learning and assessment content can bring better learning outcomes. The results also showed that there is a moderately positive correlation between bimodal learning style and a moderately negative correlation between auditory learning style with the academic achievement of students. It is recommended that the learning style and individual needs of the students should be addressed during the learning and assessment phase.

The same table revealed that the computed r-value of 0.72 between curriculum contextualization, localization and indigenization, and academic achievement was interpreted as a high correlation and the p-value of 0.172, was interpreted as not significant. The positive r-value showed a high correlation or relationship which means that when curriculum contextualization, localization, and indigenization are high, academic achievement is low, too. Hence, the results revealed a not significant relationship between curriculum contextualization, localization and indigenization, and academic achievement. Meaning, that the master teachers and school heads should keep a high curriculum contextualization, localization, and indigenization while keeping a high academic achievement. This is to make sure that they show a balance between curriculum contextualization, localization and indigenization, and academic achievement.

The paper of Matano (2023), can be linked to this study as he argued that strengthening curriculum contextualization and localization through indigenization, is critical for groups with cultural practices that differ from those of the majority of people in the same area. Teachers and school systems must ensure that the IP community is engaged in indigenization procedures and that the curriculum is accurate and authentic to the culture in consideration.

In summary, the correlation analysis indicates that as curriculum contextualization, localization, and indigenization increase, learners' academic achievement tends to improve. However, further research is needed to validate this relationship using alternative methodologies. In examining the relationships between various factors and academic achievement, several noteworthy patterns emerge. Firstly, the computed r-value and p-value for assessment and reporting reveal a negative sign and no significant meaning, implying that the observed correlation between these variables may lack conclusive context. Secondly, a moderate negative relationship exists between lesson content, pedagogy, and academic achievement. As the quality of lesson content and pedagogical approaches increases, academic achievement tends to decrease slightly. However, the associated p-value suggests that this relationship could be due to chance. Lastly, a weak negative relationship is observed between learner diversity and learner inclusion, indicating that as learner diversity increases, learner inclusion decreases slightly. Again, the p-value underscores the possibility of random correlation. These nuanced findings prompt further exploration and consideration in educational contexts

The relationship between the level of leadership in the teachers' professional learning communities and academic achievement. It was revealed that the computed r-value of -0.01 between instructional innovation and academic achievement was interpreted as no influence and a p-value of 0.00, was interpreted as not significant. The negative r-value showed a negligible correlation or

relationship which means that when instructional innovation is negligible, the academic achievement is low, too.

Relationship between Level of Leadership in the Teachers' Professional Learning Communities and Academic Achievement

Domains	Academic Achievement	r-value	p-value	Interpretation
Instructional innovation	Academic Achievement	-0.01	0.977	Not Significant
Collaboration	Academic Achievement	-0.36	0.426	Not Significant
Advocating a culture of professional learning	Academic Achievement	0.18	0.684	Not Significant
Modelling effective teaching and learning	Academic Achievement	0.26	0.568	Not Significant

Hence, the results revealed the relationship between instructional innovation and academic achievement was not significant. Meaning, that the master teachers and school heads should maintain a commitment to fostering a culture of continuous instructional innovation alongside sustaining a high level of academic achievement. They have to strive to ensure that learners receive a well-rounded education that blends innovative teaching approaches with rigorous academic standards.

The study by Stevens (2024) showed that educational innovations and teacher PLD were typically configured in three ways: the focus is on implementing a new form of education and teacher learning is used as a means to this end; the focus is on teachers' professional learning and the educational innovations are spin-offs; and the focus is on stimulating innovations and teacher learning is a side-effect. These types of configurations differed regarding educational innovation, required teacher expertise, professional development initiatives, teacher learning, and outcome measures.

It also revealed that the computed r-value of -0.36 between collaboration and academic achievement was interpreted as a low correlation and the p-value of 0.426, was interpreted as not significant. The negative r-value low correlation or relationship which means that when collaboration is low, the academic achievement is low, too. Hence, the results revealed a relationship between collaboration and academic achievement was not significant. Master Teachers and School Heads must maintain a strong collaboration to ensure a harmonious balance between teamwork and academic excellence within schools. By fostering a close partnership, they enable a seamless exchange of ideas, resources, and strategies to enhance learning outcomes. This collaborative effort not only supports academic achievement but also cultivates a supportive and innovative educational setting.

The findings of Voelkel (2017) can be related to the findings in this study. It showed that higher functioning PLCs predict higher levels of teacher collective efficacy (TCE). This suggested that engaging and supporting teachers in PLC work, as this district did, can lead to enhanced collective efficacy, which in turn can contribute to improved student achievement. The research provided valuable insights into the relationship between higher-functioning Professional Learning Communities (PLCs) and teacher collective efficacy (TCE). By actively involving and supporting teachers in PLC activities, educational

districts can foster a sense of efficacy among educators, ultimately positively impacting student achievement.

Moreover, it was revealed that the computed r-value of 0.18 between advocating a culture of professional learning and academic achievement was interpreted as a negligible correlation, and the p-value of 0.684, was interpreted as not significant. The positive r-value low correlation or relationship which means that when collaboration is low, the academic achievement is low, too. Hence, the results revealed a not significant relationship between the advocating culture of professional learning, and academic achievement.

Master Teachers and School Heads should ensure that they are continuously upskilling themselves while also focusing on the academic success of their learners. By prioritizing both aspects, they can create an environment where educational growth and excellence go hand-in-hand, enriching the learning experience for all stakeholders involved.

Similar to the study of Pitner (2023) it was reported the importance of the process of PLCs, although observations of the PLCs did not consistently support this belief; meaning their behaviors during the PLCs did not consistently align with the definition of a functioning PLC. The study highlighted the significance of the PLC process, even though direct observations of PLCs did not consistently align with the expected functioning. This discrepancy underscores the need for further exploration and refinement in implementing effective PLC practices.

Likewise, Lee (2023) added that PLCs are seen as a policy measure to sustain and scale up school improvement internationally, the authors' review provides a better understanding of what and how researchers have measured the effect of PLCs on school improvement. Lee's perspective aligns with the global recognition of Professional Learning Communities (PLCs) as a strategic policy for enhancing school improvement. By reviewing existing research, we gain valuable insights into the specific metrics and methodologies used to assess the impact of PLCs on educational outcomes. This understanding informs effective implementation and scalability of PLC practices across diverse contexts, ultimately benefiting students and educators alike.

Further, it was revealed that the computed r-value of 0.26 between modeling effective learning and teaching and academic achievement interpreted as negligible correlation and p-value of 0.568, interpreted as not significant. The positive r-value low correlation or relationship which means that when modeling effective learning and teaching is negligible, the academic achievement is low, too. Hence, the results revealed a not significant relationship between modeling effective learning and teaching, and academic achievement.

Meaning, that the master teachers and school heads must strive to set a standard of excellence by actively demonstrating effective learning practices and maintaining a strong focus on academic achievement. By showing a commitment to both modelling effective learning strategies and fostering an environment conducive to teaching and learning, they can strike a balance that ensures holistic educational development. Through consistent demonstration of effective teaching methods and a relentless pursuit of academic excellence, they can inspire and empower learners to reach their full potential.

This can be supported by the study of Kazak (2021) who presented an argument about teaching probability through an integrated modelling approach could offer important educational benefits, but this would be an immense challenge to the skills and knowledge of teachers and would demand increased levels of resources for teacher development. The implication is that research needs to identify suitable forms of teacher development and designs for tasks and curricula.

In summary, between modelling effective and academic achievement having a weak positive relationship, it means that there was a slight tendency for academic achievement to improve when effective methods are modelled. However, the relationship was not significant indicating that it could be due to chance rather than a true effect. Correspondingly, between advocating culture of professional learning and academic achievement there was a weak positive correlation which suggested that there might be a slight tendency for academic achievement to improve when a culture of professional learning is encouraged, but the relationship is not very strong. Closely between collaboration and academic

achievement which indicated that as collaboration increases, academic achievement tends to decrease. However, similar to the other findings, this relationship was not significant, suggesting that it may not hold true in a broader context. In like manner between instructional innovation and academic achievement which suggested that there was hardly any relationship between the them. Generally, the findings suggested that while there were some correlations between aspects of leadership in teachers' professional learning communities and academic achievement, these correlations were weak and not significant. This means that the observed relationships could be due to random chance rather than indicating a true effect in the population.

One well-known theory that discussed the relationship among practice, management, and leadership was the Competing Values Framework (CVF) by Robert Quinn. This dealt with the organizations need to balance competing values flexibility over stability and control, and internal focus and integration values versus external focus and differentiation. With the PLCs, this could provide a valuable lens for understanding its complexities and guiding educators in building strong collaborative cultures that drive positive outcomes for both educators and learners.

Influences on the Level of Practice, Management, and Leadership of Teachers' Professional Learning Communities on Academic Achievement

Professional learning communities are groups of educators who collaborate to improve their practice and enhance learners' learning outcomes. Within PLCs, teachers engage in various levels of practice, management, and leadership

The influence of the Level of Practice in the Teachers' Professional Learning Communities on Academic Achievement. It showed that shared values and vision influence on the academic achievement revealed the computed r^2-value was equal to 0.10, interpreted very weak.

Influence of the Level of Practice in the Teachers Professional Learning Communities on Academic Achievement

Domains	Academic Achievement	r-value	r^2-value	Interpretation
Shared values and vision	Academic Achievement	0.32	0.10	Very Weak
Collective learning application	Academic Achievement	-0.53	0.28	Very Weak
Supportive condition	Academic Achievement	0.62	0.38	Weak
Shared personal practice	Academic Achievement	0.57	0.32	Weak

This meant that the shared values and vision had a very weak influence on academic achievement. This entailed that the shared values and vision was not the primary determinants of academic achievement. Further, though school heads and master teachers had involved all stakeholders to support shared values and visions through aligning decisions, policies, and programs to the school's vison, these seemed that it was not practiced. They need to emphasize the importance of considering other factors and conducting further analysis to gain a more comprehensive understanding of the influence of shared values and vision on academic achievement.

The study by Martin (2014) discussed that having a vision helped leaders and their teams to become inspired and committed to a shared goal which can be associated with this study. Moreover, the vision was a strong driving force for ongoing and systematic practice development and thus established a culture that favored quality and safety improvement in patient care. However, the strategic direction needed to be tempered; the positive impact on teams and their care practices generated a great deal of enthusiasm, which had the potential to overload the organization by taking on more than could reasonably be accomplished.

On the other hand, it revealed that the influence of learning application on academic achievement resulted in the computed r^2-value equal to 0.28, interpreted as very weak. This meant that the influence between collective learning and application and academic achievement appeared to be negative, indicating that as the use of collecting learning applications increases, academic achievement tends to decrease. However, it is essential to note that their influence is considered very weak based on computation. Further, though school heads and master teachers had very high interpretations as they incorporated collective application learning in professional learning, however, this endeavor appeared unpracticed and devoid of refined expertise.

The study by Waege (2023) can be linked to the findings in the present study as it revealed that Teacher Time Outs (TTOs) provided opportunities for teachers' collective learning of key practices of ambitious teaching and that the TTOs supported the teachers' collective pedagogical reasoning and decision-making in-the-moment of teaching and with connecting pedagogical reasoning to pedagogical actions and responsibilities.

On the other hand, it examined the influence of supportive conditions on academic achievement and had an r^2-value equal to 0.38, interpreted as weak. This meant that the influence of supportive conditions on academic achievement appeared weak. Further, while supportive conditions may have some impact on academic success, the effect is not substantial. Interventions and support programs could be designed to enhance the impact of supportive conditions on academic achievement for learners.

The study by Parham (2023) communicated the results from this study where it indicated that the supportive conditions for PLCs have a strong correlation with the studied district's current PLC model and each specific supporting condition elicits a targeted aspect of professional learning that has a significant impact on teacher instructional practices. Recommendations for future studies included the expansion of this study to include elementary and high school participants and to extend this study to a larger scope of interested districts seeking to improve their PLC structures for improved teacher instructional practices.

Moreover, it bared that the influence of shared personal practice on academic achievement got an r^2-value of 0.32, interpreted as weak, also. This meant that the influence between shared personal practice and academic achievement appeared weak. Further, while shared personal practice can play a role in shaping a well-rounded learner, the direct impact on academic achievement may not always be strong or easily measurable.

The result of the study by Curtis (2017) can be related with the findings in this study as it expressed that building strong relationships and an emphasis on collective creativity were strong predictors of sharing personal practice. Collective clarity on PLT practices and the purpose of sharing personal practice increased the success and occurrence of sharing personal practice. The results also revealed that the copious tasks of teaching and negative perceptions of being observed by colleagues hindered the consistent sharing of personal practice.

The study revealed that within professional learning communities (PLCs), several factors exhibited weak influences on academic achievement. While supportive conditions impact academic achievement, their influence was not particularly strong. When teachers shared teaching practices within the community, there is some impact on academic achievement, though not very strong. Alignment in values and vision among teachers within PLCs has minimal impact on academic achievement. When teachers collectively apply what they have learned, there was a modest impact on academic achievement, but it remains relatively weak. In conclusion, while correlations exist, they need to explore

additional factors that could significantly contribute to academic achievement within these communities.

These findings were links with Chen (2018) when he investigated key factors for effective professional learning communities (PLCs) in Taiwan. Through confirmatory factor analysis and structural equation modeling, the study confirmed four factors in PLC conception: supportive and shared leadership, shared visions, collegial trust, and shared practices. The findings suggested that collegial trust significantly influences shared practices and acts as a mediator between other factors, ultimately promoting collaborative learning and innovation within PLCs and success in academic achievement.

The influence of the Level of Management in the Teachers' Professional Learning Communities on Academic Achievement revealed that the influence of learners' diversity and learners' inclusion on academic achievement got an r^2-value equal to 0.03, interpreted as very weak. This meant that the learners' diversity and learners' inclusion influence on academic achievement was very weak. This entailed that there was a lack of effective strategies for addressing diversity and prompting inclusion in the school. Additionally, systematic barriers like resources and inadequate support contributed to weak academic achievement. Thus, it is necessary to evaluate and improve existing practices to ensure that all learners have the opportunity to thrive and succeed in the learning environment.

Influence of the Level of Management in the Teachers Professional Learning Communities on Academic Achievement

Domains	Academic Achievement	r-value	r^2-value	Interpretation
Learner diversity and student inclusion	Academic Achievement	-0.184	0.03	Very Weak
Lesson content and pedagogy	Academic Achievement	-0.58	0.33	Weak
Assessment and reporting	Academic Achievement	-0.51	0.26	Very Weak
Curriculum contextualization, localization, and indigenization	Academic Achievement	0.72	0.52	Moderate

This can be supported by Messenger (2017) who said that diversity and differences between learners were a fundamental consideration for educators and present many opportunities for a rich learning experience for all. It can be seen that external drivers, as well as frames of thinking and pedagogical considerations, influence how inclusive policies and practices are implemented.

Conversely, the table exposed that the influence of lesson content and pedagogy on academic achievement obtained an r^2-value of 0.03, interpreted as weak. This meant that the lesson content and pedagogy influence on academic achievement was weak. This meant that the way a subject is taught and the content of the lesson may not always directly correlate with academic achievement. It is important that master teachers and school heads consider this nuance by designing teaching strategies. It is also important to re-evaluate the management of both respondents on this aspect.

In the paper by Avner (2014), he argued that teacher education's focus on pedagogical content knowledge should move beyond the idea of teaching students how to strategize pedagogically free content to help them recognize the inherently pedagogical nature of content and its implications for and in teaching. He advocated for a shift in teacher education. Rather than merely teaching strategies for pedagogically neutral content, educators should help students recognize the pedagogical aspects

inherent in content. This awareness enables more effective teaching practices and enhances the connection between subject matter and instructional methods.

On the other hand, it was noted that the influence of assessment and reporting on academic achievement got an r^2-value of 0.26, interpreted as weak, as well. This meant that the assessment and reporting and academic achievement had a very weak influence between variables. The alignment between assessment and reporting is essential for a strong influence on academic achievement. This having a very weak result may be of the minimal impact. Further, it could be the quality of the feedback provided. If feedback is generic and only for some time, leaners would not able to make necessary improvements.

The result of the study of Rodriguez (2016) can be related to the present study as it showed both positive and negative trends and provide a baseline for setting short- and long-term goals. This study recommended to institutionalize annual sustainability assessment and reporting to enhance its position as a leading educational institution. Challenges encountered during this study generated other recommendations, including commitment from school leadership to champion the process, wider involvement of internal and external stakeholders in framework and indicator refinement, and the creation of a centralized sustainability assessment entity.

Furthermore, the influence of curriculum contextualization, localization, and indigenization on academic achievement reflected an r^2-value equal to 0.52, interpreted as weak, also. This meant that the curriculum contextualization, localization, and indigenization influence on academic achievement was moderate. This can be because the curriculum was not tailored to fit the local context. Further, this was not overwhelmingly considered. Master teachers and school heads did not gather enough feedback from students, adapt teaching methods to suit diverse learning styles and collaborate to the community.

The results of the study by Manuel (2018) showed that contextualized and localized instructional materials played a vital role in educational reform relevant to the present study. It does not only address the local needs of the students but elicits an increased academic performance. It showed positive effects in the performance of the learners as an effective strategy of imparting life-long learning abilities among students. The study highlighted the crucial role of contextualized and localized instructional materials in educational reform. These materials not only cater to local student needs but also positively impact academic performance. By effectively imparting lifelong learning abilities, they contribute significantly to student success.

In totality, the influence of curriculum contextualization, localization, and indigenization on academic achievement was moderate which indicated that when teachers adapted the curriculum to fit the local context and incorporate indigenous knowledge, there was a relatively strong impact on academic achievement. Meanwhile, there was a weak influence of the management of lesson content and pedagogy within PLCs on academic achievement, recommended that while there was some influence on academic achievement when teachers manage the content and teaching methods of lessons, it was not as strong as the influence of curriculum contextualization. To add, a very weak influence was found between the management aspect of assessment and reporting within PLCs and academic achievement that indicates that how assessment id managed within these communities has a minimal impact on academic achievement. Lastly, the influence of managing learner diversity and inclusion on academic achievement was extremely weak which suggested that efforts to management diversity and ensure inclusion of all learners within PLCs have almost no discernible impact on academic achievement.

This is in consonance with the study of Glickman et al. (2014) which investigated the influence of PLC on student achievement in a specific region, providing empirical evidence of the relationship between PLC implementation and academic outcomes. Additionally, this research by Weir (2020) investigated the interactions among school leaders, teacher leaders, and teachers within professional learning communities (PLCs) and their impact on collective efficacy, which is linked to student achievement. Adopting a distributed leadership framework, the study analyzed data from interviews,

observations, and document reviews in a Southeastern school district. The research identified four types of interactions in PLCs: people-focused, purpose-focused, work-focused, and instruction-focused. Through celebrating success, modeling, creating instructional work, commitment to continuous improvement, and shared experiences, these interactions contributed to the development of collective efficacy. The findings offered insights into how leaders and teachers collaborate in PLCs, potentially informing best practices to enhance student achievement.

The significant influence of the Level of Leadership in the Teachers' Professional Learning Communities on Academic Achievement. The table revealed that the influence of instructional innovation on academic achievement got an r^2-value of 0.000, interpreted as no influence.　　This meant that instructional innovation had no influence on academic achievement. This entailed that master teachers and school heads may not be sufficiently engaged in fostering a deep understanding of how learning environment influences learning outcomes and experience. They have to prioritize PLCs opportunities that deepen on instructional innovation and the impact of academic achievement.　They also had half-hearted implementation of new teaching methods or tools necessary to lead to improved academic performance among learners.

Influence of the Level of Leadership in the Teachers Professional Learning Communities on Academic Achievement

Domains	Academic Achievement	r-value	r^2-value	Interpretation
Instructional innovation	Academic Achievement	-0.01	0.00	No Influence
Collaboration	Academic Achievement	-0.36	0.13	Very Weak
Advocating culture of professional learning	Academic Achievement	0.18	0.03	Very Weak
Modelling effective teaching and learning	Academic Achievement	0.26	0.06	Very Weak

The results can be related to the study by Fahy (2014) whose major conclusions were that while instructors accept the potential value of some educational innovations, they tend to resist them when policies are vague, training is ineffective (or lacking), or when consultation is perceived as inadequate. These reactions are especially common concerning educational technologies. Recommendations include acknowledgment and use of in-house instructor expertise, careful attention to communication and consultation, and appointment of a credible individual to act as coordinator of curriculum change efforts.

Furthermore, it was revealed that the influence of collaboration on academic achievement had an r^2-value equal to 0.013, interpreted as very weak.　This meant that collaboration had very weak influence on academic achievement.　This could mean that despite of the high collaboration result happening, the ultimate effect on academic achievement may not always translate into notable collaboration outcomes.

The study by Tallman (2021) can be linked to this study as it marked that collaboration has been found to be a powerful tool for professional development and central for creating opportunities for teachers to reflect on their practice. In the investigation experience of the teacher in a creative, instructional collaboration. They found that teacher-initiated collaboration offered them trust and they were more open with their partners. The results also supported the claim that teacher collaboration can facilitate school reform. Participating teachers felt less isolation and developed more teacher knowledge.

For all that, it was further revealed that the influence of advocating a culture of professional learning on academic achievement obtained an r^2-value equal to 0.03, interpreted as very weak. This meant that advocating a culture of professional learning had a very weak influence on academic achievement. The promotion of a culture emphasizing continuous learning did not significantly influence academic success or the outcome being studied. It could have been due to the individual differences of the respondents and varying levels of engagement.

This was related to the article by Womack (2024) which emphasized the importance of creating a learning community and advocating for a community approach to professional development. He suggested that instead of simply measuring classes offered and attendees present, it is more effective to cultivate a collaborative culture of improvement focused on the organization's future needs. By valuing adaptation, enthusiasm, and purposeful action, the author believes that innovation can be driven, the learning culture can be impacted, and the purpose of learning professionals can be magnified.

Consequently, the influence of modelling effective teaching and learning on academic achievement got an r^2-value equal to 0.06, interpreted as very weak. This meant that the influence of modelling effective teaching and learning on academic achievement was very weak. It could be due to the perceived effective teaching may not be as impactful in promoting academic achievement. The quality of instruction, classroom dynamics, and alignment with curriculum objectives were crucial in determining the effectiveness of teaching and learning.

The argument of Kazak (2021) presented that teaching probability through an integrated modeling approach can be related to the present study as it offered important educational benefits, but this would be an immense challenge to the skills and knowledge of teachers and would demand increased levels of resources for teacher development. It underscores the potential benefits of teaching probability using an integrated modeling approach. However, implementing such an approach would indeed require substantial teacher expertise and additional resources for effective teacher development

These findings showed a very weak influence of leadership's promotion of collaboration within PLCs on academic achievement which indicated that despite efforts to foster collaboration among teachers, its impact on academic achievement was minimal. Similarly, there was a very weak influence of leadership's modelling of effective teaching and learning on academic achievement that suggested that when leaders demonstrated effective teaching methods, its impact on academic achievement was also minimal. Further, the influence of leadership's advocacy for a culture of professional learning on academic achievement was extremely weak which implied that despite leadership's efforts to promote a culture of continuous learning among teachers, its impact on academic achievements was almost negligible. Lastly, no influence was found between leadership's promotion of instructional innovation on academic achievement suggesting that despite any initiatives or encouragement from leadership to innovate instructional practices, there was no discerned impact on academic achievement.

In light of these findings, Social Cognitive Theory by Bandura applies to this study. It suggests that modeling effective practices, management techniques, and leadership behaviors within a community can inspire others to emulate these approaches. As community members observe and adopt these behaviors, the overall level of practice, management, and leadership improves. This reciprocal process fosters continuous growth and enhancement within the educational context. As teachers observe, emulate, and adopt effective practices, the entire community benefits, leading to sustained growth and enhanced outcomes.

Proposed Strategic Development Plan

In response to the evolving educational landscape, the proposed strategic development plan aims to enhance the effectiveness of the teachers' professional learning community. This plan is designed to promote collaboration, continuous learning, and the sharing of best practices among educators to elevate teaching standards and improve learners' outcomes. By fostering a culture of ongoing professional growth and support, the teachers' professional learning community will play a pivotal role in empowering educators to meet the diverse needs of their learners and adapt to the challenges of

21st-century education. This strategic plan outlines initiatives, objectives, and action steps to enhance the professional learning community in Naga North District I.

The plan will respond to changes in education, recognizing the need for improvement. It will enhance the effectiveness of the teachers' professional learning community (PLC). Encourage educators to work together, share insights, and learn collectively. Promote ongoing professional growth through workshops, training, and reflective practices. Facilitate the exchange of successful teaching methods among educators. Elevate teaching standards for the direct benefit of learners. Improved outcomes result from better-prepared educators. The plan will empower teachers to address diverse learner needs. This will equip them to navigate the challenges posed by modern education. This strategic plan will create a dynamic, supportive environment for educators, ultimately enhancing teaching quality and student success.