

Curricular Integration, School Effectiveness, and Student Achievement in Public Elementary Schools in Cluster 9, City Schools Division of Dasmariñas: Basis for a Localized Improvement Plan

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Publication Date: September 8, 2026

DOI: [10.5281/zenodo.22661822](https://doi.org/10.5281/zenodo.22661822)

Abstract

This study examined curricular integration, school effectiveness, and student achievement in selected public elementary schools in Cluster 9, City Schools Division of Dasmariñas, as a basis for a localized improvement plan. Specifically, it assessed curricular integration in terms of collaboration, teacher expertise and training, school leadership and support, and cross-disciplinary learning activities. It also assessed school effectiveness in terms of school leadership, school resources and facilities, classroom environment, and classroom management. The study further determined differences between the assessments of school heads and teachers, examined student achievement over two school years, identified challenges encountered, tested the relationships of curricular integration and school effectiveness with student achievement, and determined the acceptability of the proposed intervention program.

A descriptive-correlational research design was employed. The respondents consisted of three school heads and ninety-seven teachers from three public elementary schools in Cluster 9, for a total of 100 respondents. Data were gathered through a validated researcher-made questionnaire, while documentary analysis of Mean Percentage Scores in Technology and Livelihood Education was used to determine student achievement. Weighted mean, independent-samples t-test, and Pearson correlation were used in analyzing the data.

Results showed that curricular integration was evident, with an overall weighted mean of 4.11, while school effectiveness was likewise rated evident, with an overall weighted mean of 4.13. Significant differences were found between the assessments of school heads and teachers in the dimensions of curricular integration. Student achievement across the three schools had an overall average of 55.26, interpreted as Average Mastery, although one school demonstrated a higher level of performance with an average of 67.98. Challenges in curricular integration were encountered, while challenges in school effectiveness were highly encountered, particularly those related to teacher-student interaction in large classes, leadership capacity, classroom management, instructional support, and resources. Curricular integration had a very weak positive but statistically insignificant relationship with student achievement ($r = 0.1095$, $p = 0.278$). School effectiveness likewise had a very weak positive and statistically insignificant

relationship with student achievement ($r = 0.0122$, $p = 0.904$). Based on the findings, the T.E.A.M.–TLE intervention program was developed and rated highly acceptable, with an overall mean of 4.31.

The study concludes that although curricular integration and school effectiveness were generally evident, important gaps in teacher capacity, collaboration, resources, leadership support, and implementation remain. The findings support the adoption of a localized and systematic improvement program to strengthen integrated instruction, teacher development, collaboration, leadership involvement, and resource support.

Keywords: *curricular integration, school effectiveness, student achievement, Technology and Livelihood Education, elementary schools, localized improvement plan*

Introduction

Education plays a fundamental role in national development and human capital formation. Contemporary educational systems increasingly emphasize the development of practical, technical, academic, and life skills that prepare learners for the demands of the twenty-first century. In the Philippine basic education context, Technology and Livelihood Education (TLE) is intended to develop practical competencies, entrepreneurial skills, work readiness, and other capabilities that may support learners' future education, employment, and livelihood opportunities.

The effective implementation of TLE may be strengthened through curricular integration. Curricular integration refers to the intentional connection of concepts, skills, and learning experiences across different disciplines to promote meaningful and holistic learning. Through integrated learning experiences, learners may establish connections between theoretical knowledge and practical applications, apply competencies in authentic situations, and develop higher-order thinking and problem-solving skills.

Successful curricular integration, however, depends on several conditions within the school. Collaboration among teachers, adequate expertise and professional training, leadership support, and opportunities for cross-disciplinary learning are important elements of integrated instruction. When these conditions are strengthened, TLE competencies may be connected more meaningfully with other learning areas and with learners' real-life experiences.

Another important factor is school effectiveness. School effectiveness refers to the capacity of a school to achieve its educational goals through effective leadership, adequate resources, positive learning environments, sound classroom management, and efficient organizational practices. Effective schools provide conditions that support teaching, learning, teacher development, and continuous improvement.

Despite the recognized importance of curricular integration and school effectiveness, challenges continue to affect their implementation. Teachers may experience limited time for collaborative planning, difficulties in coordinating with colleagues from other learning areas, gaps in professional preparation, and problems in assessing interdisciplinary learning. Schools may also encounter constraints related to instructional materials, facilities, class size, leadership capacity, classroom management, technology, and stakeholder support.

The existing literature reviewed in the study indicates that curricular integration, teacher collaboration, professional competence, leadership, instructional resources, classroom environment, and management practices are relevant to educational quality and learner outcomes. However, the thesis identifies limited localized evidence examining curricular integration, school effectiveness, and student achievement together within the context of public elementary schools in Cluster 9, City Schools Division of Dasmariñas.

The study was anchored on Tyler's Basic Principles of Curriculum and Instruction, Stenhouse's Process Model of Curriculum, and Bertalanffy's Systems Theory. Tyler's framework emphasizes

the alignment of educational objectives, learning experiences, organization, and evaluation. Stenhouse's perspective views curriculum as a dynamic process in which teachers actively adapt and develop learning experiences according to learners' needs and contexts. Systems Theory provides an organizational perspective in which teachers, learners, curriculum, leadership, resources, and the school environment function as interrelated components that contribute to educational outcomes. Together, these perspectives provide the conceptual basis for examining how curricular practices and school conditions relate to student achievement and school improvement.

The study therefore aimed to assess curricular integration and school effectiveness in selected public elementary schools in Cluster 9, City Schools Division of Dasmariñas, and to determine their relationship with student achievement. Specifically, it sought to:

1. assess curricular integration in terms of:
 - collaboration;
 - teacher expertise and training;
 - school leadership and support; and
 - cross-disciplinary learning activities;
2. assess school effectiveness in terms of:
 - school leadership;
 - school resources and facilities;
 - classroom environment; and
 - classroom management;
3. determine whether significant differences existed between the assessments of school heads and teachers;
4. determine student achievement during the last two school years;
5. identify the challenges encountered in curricular integration and school effectiveness;
6. determine whether curricular integration and school effectiveness were significantly related to student achievement;
7. develop an intervention program based on the findings; and
8. determine the acceptability of the proposed intervention program.

The study tested the null hypotheses that there was no significant difference between the assessments of school heads and teachers regarding curricular integration and school effectiveness and that no significant relationship existed between curricular integration, school effectiveness, and student achievement.

The findings were expected to provide useful information for school heads, teachers, learners, parents, curriculum coordinators, education supervisors, and other stakeholders. In particular, the findings were intended to serve as a basis for strengthening instructional leadership, teacher collaboration, professional development, curriculum implementation, school management, and learner support.

Methods

Research Design

The study employed a descriptive-correlational research design. The descriptive component was used to determine the status of curricular integration and school effectiveness, identify challenges encountered, and describe student achievement based on available school records. The correlational component was used to determine whether significant relationships existed between curricular integration and student achievement and between school effectiveness and student achievement.

The design was appropriate because the study examined existing conditions and relationships among variables without manipulating them. The results were intended to provide empirical information that could serve as the basis for a localized improvement program.

Research Setting and Respondents

The study was conducted in three public elementary schools in Cluster 9, City Schools Division of Dasmariñas, during School Year 2025–2026. The participating schools were Sta. Cristina Elementary School, Piela Elementary School, and Victoria Reyes Elementary School.

The respondents consisted of three school heads and ninety-seven teachers, for a total of 100 respondents. School heads were included because of their responsibilities in curriculum implementation, instructional supervision, leadership, and school management. Teachers represented the larger group because of their direct involvement in instructional delivery and curricular implementation.

Sampling Procedure

The study identified school heads as key respondents because of their administrative and instructional responsibilities. Teachers were selected from the participating schools based on the sampling procedure described in the original study. The final respondent group consisted of all three school heads and ninety-seven teachers, resulting in a total of 100 respondents.

Research Instrument

A researcher-made survey questionnaire was used to gather the data. The instrument was developed based on the objectives of the study, relevant literature, and the identified variables.

The questionnaire consisted of four parts. Part I gathered the respondents' profile information. Part II assessed curricular integration and school effectiveness. Curricular integration was measured in terms of collaboration, teacher expertise and training, school leadership and support, and cross-disciplinary learning activities. School effectiveness was measured in terms of school leadership, school resources and facilities, classroom environment, and classroom management.

Part III identified challenges encountered in curricular integration and school effectiveness. Part IV measured the acceptability of the proposed improvement program.

The instrument underwent content validation by a language expert, two school heads, and a research expert. Their comments and recommendations were incorporated into the revision of the questionnaire. Pilot testing was conducted among respondents who were not included in the actual study, consisting of two school heads and ten teachers from public elementary schools outside Cluster 9. Reliability and internal consistency were assessed using Cronbach's alpha, with a coefficient of at least 0.70 considered acceptable.

Data Gathering Procedure

After approval of the research proposal and validation of the instrument, permission to conduct the study was secured from the appropriate Schools Division and school authorities. The researcher coordinated with the school heads and designated focal persons regarding the schedule and conduct of data collection.

The purpose, objectives, procedures, and ethical considerations of the study were explained to the respondents. Participation was voluntary, and the information gathered was treated confidentially and used solely for research purposes.

The survey questionnaires were administered during the respondents' available time to minimize disruption of classes and school operations. After retrieval, the completed questionnaires were reviewed for completeness and accuracy.

Documentary analysis was also conducted using the Mean Percentage Scores in Technology and Livelihood Education for the last two school years. These records were used as the basis for determining student achievement.

Statistical Treatment

The study used weighted mean to determine the level of curricular integration, school effectiveness, challenges encountered, and acceptability of the proposed intervention program.

Independent-samples t-tests were used to determine significant differences between the assessments of school heads and teachers.

Pearson correlation analysis was used to determine the relationships between curricular integration and student achievement and between school effectiveness and student achievement.

The level of significance was set at 0.05.

Results

Level of Curricular Integration

The overall assessment showed that curricular integration was **evident**, with an overall weighted mean of **4.11**. This indicates that practices related to collaboration, teacher expertise and training, school leadership and support, and cross-disciplinary learning were generally present in the participating schools.

Collaboration was generally evident, with an overall mean of **4.13**. Sharing of TLE-focused teaching strategies and instructional resources and teamwork among subject teachers were among the stronger indicators. However, more structured collaborative planning, interdepartmental communication, co-development of instructional materials, and sustained partnerships remained areas for improvement.

The overall findings indicate that curricular integration was being practiced but had not yet reached a consistently high level across all indicators. The results suggest the need to strengthen formal mechanisms for teacher collaboration, professional development, interdisciplinary planning, and systematic implementation.

Differences in the Assessment of Curricular Integration

Significant differences were found between the assessments of school heads and teachers regarding curricular integration.

The differences were significant for:

- Collaboration ($t = 9.58, p < 0.0001$);
- Teacher Expertise and Training ($t = 9.77, p < 0.0001$);
- School Leadership and Support ($t = 2.62, p = 0.009$); and
- Cross-Disciplinary Activities ($t = 9.07, p < 0.0001$).

The overall assessment also showed a significant difference ($t = 7.86, p < 0.0001$). Thus, the null hypothesis concerning the assessments of school heads and teachers regarding curricular integration was rejected.

The findings indicate that school heads generally viewed curricular integration more favorably, whereas teachers tended to provide lower assessments based on their direct experiences with classroom implementation. The results highlight the need for improved communication, collaborative planning, mentoring, and professional development.

Student Achievement

Student achievement was assessed using the Mean Percentage Scores in TLE for School Years 2024–2025 and 2025–2026.

The results showed the following:

School	2024–2025	2025–2026	Average	Interpretation	Rank
School A	47.16	45.84	46.50	Average Mastery	3
School B	51.30	51.30	51.30	Average Mastery	2
School C	67.59	68.37	67.98	Moving Toward Mastery	1
Overall Average	55.35	55.17	55.26	Average Mastery	—

The overall average student achievement was **55.26**, interpreted as **Average Mastery**. School C obtained the highest average of 67.98 and was interpreted as Moving Toward Mastery. Schools A and B remained at the Average Mastery level.

Challenges Encountered in Curricular Integration

The study found that curricular integration continued to encounter practical and instructional challenges. These included limited time for collaborative planning, insufficient structured communication among teachers, difficulties in engaging learners in integrated tasks, and challenges in assessing learning outcomes across subject areas.

The results suggest that successful curricular integration requires more systematic scheduling of collaborative planning, clearer communication structures, sustained professional development, and assessment frameworks that support interdisciplinary learning.

Challenges Encountered in School Effectiveness

Challenges related to school effectiveness were rated **Highly Encountered**, with an overall weighted mean of **4.23**.

The highest-ranked challenge was **limited teacher-student interaction due to large class sizes**, with a composite mean of **4.29**. Other important concerns included limited capacity of school heads to address academic and operational issues, disruptive learner behavior, inadequate supervision and feedback, insufficient instructional materials and equipment, inadequate classroom space, delays in budget and logistical support, and limited use of positive reinforcement techniques.

These findings indicate that challenges in school effectiveness were not limited to one area. Instead, they involved interconnected concerns related to classroom conditions, leadership capacity, instructional support, resources, learner behavior, and stakeholder involvement.

Relationship Between Curricular Integration and Student Achievement

The relationship between curricular integration and student achievement yielded a Pearson correlation coefficient of **0.1095**, indicating a **very weak positive relationship**. The computed p -value was **0.278**, which was greater than the 0.05 level of significance.

Therefore, the relationship between curricular integration and student achievement was **not statistically significant**. The null hypothesis regarding this relationship was retained.

The result indicates that differences in curricular integration, within the context and measures of the study, were not strongly associated with differences in student achievement.

Relationship Between School Effectiveness and Student Achievement

The relationship between school effectiveness and student achievement yielded a Pearson correlation coefficient of **0.0122**, indicating a **very weak positive relationship**. The computed p -value was **0.904**, which was greater than the 0.05 level of significance.

Therefore, the relationship between school effectiveness and student achievement was also **not statistically significant**. The null hypothesis regarding this relationship was retained.

Proposed Intervention Program

Based on the findings, the study developed the **T.E.A.M.–TLE Intervention Program**, which stands for **Teacher Enhancement and Academic Mastery for Technology and Livelihood Education**.

The program was designed to strengthen teacher collaboration, professional competence, instructional innovation, leadership support, and resource availability. It was developed in response to identified gaps in collaborative planning, interdepartmental coordination, instructional material development, teacher preparation, technology integration, industry-related knowledge, leadership involvement, and school resources.

The proposed budget estimate in the original intervention program was **₱140,000**, allocated to professional development, instructional materials, collaboration activities, resource enhancement, and monitoring and evaluation.

Acceptability of the Proposed Intervention Program

The proposed intervention program was rated **Highly Acceptable**, with an overall weighted mean of **4.31**.

The respondents particularly recognized the program's potential to improve learners' performance and outcomes in TLE, support school improvement, align with curriculum goals

and competencies, and provide structured activities for implementation. Areas that received relatively lower ratings included practicality, sustainability, and responsiveness to real-world skills and industry needs, suggesting areas for refinement during implementation.

Discussion

The findings show that curricular integration was generally evident in the participating schools. Teachers and school heads recognized the presence of collaborative practices, professional expertise, leadership support, and cross-disciplinary learning activities. However, the overall result also suggests that implementation was not uniformly strong across all indicators.

The findings on collaboration indicate that teachers were already sharing instructional strategies and working together on TLE-related activities. Nevertheless, regular collaborative planning, structured communication, co-development of instructional materials, and sustained interdisciplinary coordination require further strengthening. Informal or occasional collaboration may not be sufficient to sustain curricular integration as an institutional practice. Schools therefore need formal structures that provide teachers with time and opportunities to plan, implement, and evaluate integrated learning experiences.

The significant differences between the assessments of school heads and teachers are also important. School heads generally rated curricular integration more favorably, while teachers provided assessments that reflected the realities of classroom implementation. These differences may indicate a gap between intended school policies and teachers' day-to-day experiences. The results emphasize the importance of participatory leadership, regular consultation, mentoring, and feedback mechanisms that allow teachers and administrators to develop a shared understanding of implementation conditions.

Student achievement remained at the Average Mastery level overall. Although one participating school performed at the Moving Toward Mastery level, the overall results indicate continuing opportunities for improvement. The variation among schools suggests that localized conditions, instructional practices, learner engagement, and available resources may influence student achievement differently across school settings.

The challenges identified in curricular integration reinforce the importance of institutional support. Limited planning time, communication difficulties, learner engagement concerns, and problems in interdisciplinary assessment can make integration difficult even when teachers and administrators support the concept. Curricular integration therefore requires more than teacher willingness; it also requires schedules, professional development, leadership support, appropriate assessment systems, and sufficient instructional resources.

The challenges related to school effectiveness were more strongly encountered. Large class sizes, limited teacher-student interaction, leadership capacity, classroom management concerns, inadequate materials, and budget or logistical constraints can affect the quality of teaching and learning. These findings demonstrate that school effectiveness is influenced by interconnected organizational and instructional conditions.

The correlation analysis found no statistically significant relationship between curricular integration and student achievement. Likewise, school effectiveness was not significantly related to student achievement. These findings should not be interpreted to mean that curricular integration and school effectiveness are unimportant. Rather, within the specific data, measures, respondents, and context of the present study, the variations in these variables were not significantly associated with variations in the documented student achievement scores.

Student achievement may be influenced by multiple factors beyond the two main variables measured in the study. The study itself identified the relevance of instructional quality, teacher competence, learner engagement, classroom management, and learning resources. Because learners were not direct respondents and the study focused on TLE achievement based on documentary records, the findings should be interpreted within these boundaries.

The results support the development of the T.E.A.M.–TLE Intervention Program. The program provides a localized response to the identified gaps by emphasizing teacher enhancement, academic mastery, collaboration, instructional improvement, leadership involvement, resource enhancement, and monitoring. Its high acceptability suggests that the respondents recognized its relevance and potential usefulness in addressing the needs identified in the study.

Conclusion

Based on the findings, the following conclusions are drawn:

1. Curricular integration was generally evident in the participating public elementary schools, indicating that collaboration, teacher expertise and training, leadership support, and cross-disciplinary learning activities were present, although some areas require more consistent and systematic implementation.
2. School heads and teachers differed significantly in their assessments of curricular integration. The differences suggest a gap between administrative perceptions and teachers' experiences in implementing integrated instruction.
3. Student achievement during School Years 2024–2025 and 2025–2026 was generally at the Average Mastery level, with an overall mean of 55.26. One participating school demonstrated a higher level of achievement and was categorized as Moving Toward Mastery.
4. Curricular integration encountered implementation challenges, particularly those associated with collaborative planning, communication, learner engagement, and interdisciplinary assessment.
5. Challenges in school effectiveness were highly encountered. Large class sizes, limited teacher-student interaction, leadership capacity, classroom management, instructional support, and resource constraints were among the major concerns.
6. Curricular integration had a very weak positive but statistically insignificant relationship with student achievement.
7. School effectiveness also had a very weak positive and statistically insignificant relationship with student achievement.

8. The findings demonstrate that student achievement should be addressed through a multifaceted approach rather than through curricular integration or school effectiveness alone.
9. The T.E.A.M.–TLE Intervention Program was developed as a localized response to the identified needs and gaps and was rated highly acceptable by the respondents.

Recommendations

Based on the findings and conclusions, the following recommendations are offered:

1. **School administrators should consider adopting the T.E.A.M.–TLE Intervention Program** and integrating its activities into school improvement and instructional development initiatives.
2. **School heads should strengthen instructional leadership and supervision** by providing regular monitoring, constructive feedback, mentoring, and support for integrated teaching practices.
3. **Schools should institutionalize collaborative planning mechanisms** by providing regular schedules for teachers to plan interdisciplinary lessons, co-develop instructional materials, and evaluate integrated learning activities.
4. **Professional development programs should be strengthened**, particularly in integrated curriculum design, interdisciplinary assessment, TLE pedagogy, technology integration, classroom management, and updated practical competencies.
5. **School heads and education supervisors should establish regular consultation and feedback mechanisms** to reduce differences between administrative and teacher perceptions and to ensure that school policies respond to actual classroom conditions.
6. **Resource enhancement should be prioritized**, particularly the provision and maintenance of TLE tools, instructional materials, technology, internet access, and appropriate learning spaces.
7. **Schools should address challenges related to large classes and limited teacher-student interaction** through appropriate classroom organization, differentiated instruction, support mechanisms, and strategies that promote meaningful learner engagement.
8. **Classroom management support should be strengthened** through coaching, mentoring, positive discipline strategies, and more consistent behavior management practices.
9. **The implementation of the intervention program should include systematic monitoring and evaluation** using clear performance indicators, documentation, periodic assessment, and stakeholder feedback.
10. **The Schools Division and other education stakeholders may provide technical, financial, and administrative assistance** to support the sustainability and expansion of effective intervention activities.
11. **Future researchers may conduct parallel or comparative studies** involving different schools, respondents, learning areas, and additional variables that may influence student achievement. Further research may also include learners as direct respondents and examine factors such as learner engagement, instructional quality, home support, and other contextual influences.

References

The complete reference list from the original thesis should be retained and reformatted according to the required citation style of the target journal or institution. The manuscript conversion preserves the source base and does not add outside references.

The original thesis reference list includes books, journal articles, theses and dissertations, legal bases, and official online sources relevant to curricular integration, school effectiveness, Technology and Livelihood Education, leadership, classroom environments, and student achievement.

Proposed Intervention Program

T.E.A.M.–TLE

Teacher Enhancement and Academic Mastery for Technology and Livelihood Education

The T.E.A.M.–TLE Program is the localized intervention developed from the findings of the study. It is designed to strengthen collaboration, teacher capacity, instructional innovation, leadership support, learning resources, and monitoring systems in TLE implementation.

The program is based on the finding that curricular integration and school effectiveness were generally evident but continued to face gaps in planning, teacher development, coordination, resources, and implementation consistency.

Program Components

Key Area	Major Activities	Intended Outcome
Teacher Enhancement	Training, workshops, coaching, and mentoring	Improved teacher expertise and instructional competence
Collaborative Planning	Learning Action Cell sessions and interdisciplinary planning	More systematic curricular integration
Instructional Innovation	Development of integrated lessons and learning materials	Improved relevance and quality of TLE instruction
Leadership Support	Monitoring, feedback, recognition, and instructional supervision	Stronger implementation and accountability
Resource Enhancement	Provision and improvement of tools, materials, and technology	Better conditions for practical and integrated learning
Monitoring and Evaluation	Documentation, assessment, feedback, and periodic review	Sustainable and evidence-based program implementation

The proposed intervention was rated highly acceptable, with an overall weighted mean of 4.31, indicating strong respondent support for its implementation.