RESEARCH ARTICLE

JENER Journal of Empirical and Non-Empirical Research
Volume 2, Issue 5, Page 214-226 | Article No. 21
DOI: 10.4898/jener.v2i5.a21
ISSN: 7895-9216
Journal homepage: https://jenerjournal.com
Journal email: editor@jenerjournal.com

JENER Journal
JENER Journal of Empirical and Non-Empirical Research

# The Effectiveness of the Utilization of the Game-Based Learning (GBL) Approach in the Public Elementary Schools in Labo West District, Division of Camarines Norte

Lorna L. Erandio[1]

[1]School of Graduate Studies, University of Northeastern Philippines

ARTICLE INFORMATION

**Article history:**
Published: May 2026

**Keywords:**
Game-Based Learning
Instructional Effectiveness
Elementary Education

ABSTRACT

Game-Based Learning (GBL) has become an increasingly relevant instructional approach in basic education as schools search for strategies that can strengthen learner engagement, motivation, and meaningful application of concepts. This study examined the effectiveness of the utilization of the GBL approach among public elementary teachers in Labo West District, Division of Camarines Norte. It focused on four domains of effectiveness: alignment to curriculum, instructional design, implementation, and assessment. It also investigated the challenges encountered in instructional planning, availability of instructional materials, trainings and orientations, and administrative support. The study was situated within the continuing shift toward twenty-first-century education, where learning is expected to be active, contextualized, collaborative, and responsive to learner diversity. GBL was treated as more than entertainment because it requires careful curricular alignment, intentional design, structured implementation, and evidence-based assessment. In the local context, the approach was examined as a possible response to the need for more engaging and learner-centered instruction. The investigation therefore addressed both the instructional value of GBL and the practical conditions that shape its utilization. A descriptive-evaluative-correlational research design was employed to generate data on teachers' perceptions of GBL effectiveness and the challenges met in its use. Purposive sampling was used in selecting Labo West District, while total enumeration was applied to the 39 Grade 2 public elementary teachers across three zones. A researcher-developed questionnaire served as the primary data collection instrument. The data were analyzed using weighted mean, rank, Kendall coefficient of concordance W, chi-square values, and corresponding decisions at the 0.05 level of significance. Results showed that the overall extent of effectiveness of the GBL approach was interpreted as much effective, with a weighted average of 3.82. Among the four domains, alignment to curriculum received the highest mean of 4.24, followed by assessment with 4.15, instructional design with 3.90, and implementation with 3.78. These findings indicate that teachers recognized GBL most strongly when it was connected to curriculum requirements and assessment of learner progress. Implementation, while still rated much effective, appeared as the domain requiring the most operational support. The domain of alignment to curriculum revealed that teachers highly valued the integration of GBL experiences with curriculum standards and learning objectives. The strongest indicator was the necessity of integrating game-based learning experiences, which received a mean of 4.54. This suggests that teachers viewed GBL as effective when it reinforced prescribed content and skills rather than functioning as an isolated classroom activity. The result highlights the importance of curricular coherence in legitimizing innovative instructional strategies. Instructional design obtained a mean of 3.90, showing that teachers regarded the design dimension of GBL as much effective. The highest-rated indicator was the role of instructional design in scaffolding game-based learning activities, with a mean of 4.22. However, the relatively lower rating for designing activities that promote active participation suggests that teachers may still need support in transforming game features into structured learning pathways. This domain demonstrates that GBL requires pedagogical planning, not merely the use of games. The implementation domain obtained a mean of 3.78, interpreted as much effective, but it ranked lowest among the effectiveness domains. Teachers gave high value to the provision of support and resources, professional development, technology, and a school culture that encourages innovation. The lower position of implementation implies that although teachers accept the educational value of GBL, practical classroom adoption remains demanding. Implementation therefore represents the point where positive perception must be converted into actual instructional capability. The assessment domain obtained a mean of 4.15, indicating that teachers found GBL useful in evaluating student progress, learning outcomes, and mastery of objectives. Teachers recognized the role of formative and summative assessment techniques, rubrics, authentic assessment, and reflective strategies in game-based contexts. The findings suggest that GBL may enrich assessment by generating evidence of learner performance during active tasks. This is especially important in elementary education, where motivation and assessment must be carefully balanced. The challenges encountered in utilizing GBL were rated much evident overall, with a weighted average of 3.47. Availability of instructional materials ranked highest at 3.76, followed by instructional planning at 3.58, trainings and orientations at 3.38, and administrative support at 3.15. These results show that the main constraints were not primarily conceptual but practical, involving resources, preparation, professional development, and institutional support. Kendall W results further showed significant agreement in several domains, indicating shared perceptions among teacher groups. The study concludes that GBL is a promising and much effective instructional strategy in Labo West District, but its sustained utilization requires stronger resource systems, training programs, administrative backing, and monitoring mechanisms. Policy recommendations include ensuring curriculum-aligned GBL resources, developing comprehensive teacher training, allocating funding, strengthening partnerships, establishing feedback mechanisms, and creating standards for evaluating GBL initiatives. The findings imply that game-based learning can support more engaging and meaningful instruction when it is embedded within curriculum, assessment, and school-level support systems.

## 1. Introduction

Education in the twenty-first century is increasingly shaped by the demand for learners who can think critically, collaborate productively, communicate effectively, and adapt to rapidly changing social and technological environments. These expectations challenge schools to move beyond instructional routines that rely mainly on passive reception, memorization, and teacher-centered delivery. Contemporary teaching must therefore create opportunities for learners to inquire, interact, apply knowledge, and receive feedback in ways that approximate real-world learning situations. Within this context, innovative pedagogies have become central to the improvement of classroom instruction and learner outcomes.

One instructional direction that has gained attention is the use of play, games, simulations, and interactive tasks as vehicles for learning. Play has long been recognized as a natural mechanism through which children explore their environment, test ideas, solve problems, and develop social competence. In modern schooling, play-based learning has expanded into game-based learning, where structured rules, goals, feedback, challenge, and progression are used to support specific educational objectives. This shift reflects the recognition that engagement and rigor can coexist when learning activities are intentionally designed.

Game-Based Learning is not synonymous with simply allowing learners to play games in class. It refers to the planned integration of game elements, game mechanics, or educational games into instruction to promote motivation, participation, problem-solving, and mastery of learning competencies. Effective GBL requires alignment with curriculum outcomes, purposeful instructional design, coherent classroom implementation, and assessment mechanisms that capture learner progress. When these elements are present, games become learning environments rather than disconnected recreational activities.

The global movement toward technology-enhanced and learner-centered education provides an important backdrop for GBL. International educational discourses emphasize inclusion, digital literacy, quality education, and lifelong learning, all of which require schools to adopt methods that can respond to diverse learner needs. GBL contributes to these priorities by offering multisensory, interactive, and adaptive experiences that can promote participation among learners who may not respond strongly to conventional instruction. It also supports the development of twenty-first-century competencies such as strategic thinking, collaboration, and self-regulation.

In the Philippine context, educational reforms such as the K to 12 curriculum have emphasized learner-centered, outcomes-based, and competency-driven instruction. These reforms challenge teachers to employ strategies that enable learners to apply knowledge, demonstrate understanding, and develop skills beyond recall. GBL aligns with this direction because it can situate learning within meaningful challenges, immediate feedback, and contextualized tasks. Its relevance is especially apparent in elementary education, where learners benefit from concrete, interactive, and motivational learning experiences.

The integration of GBL also resonates with national goals for inclusive and quality basic education. As classrooms become increasingly diverse, teachers need approaches that can support different learning styles, attention spans, interests, and readiness levels. Educational games can be differentiated, repeated, scaffolded, and adjusted, allowing teachers to support learners who require varied pathways toward mastery. However, such potential depends on teacher readiness, access to resources, administrative support, and alignment with learning standards.

Despite its promise, GBL remains unevenly adopted in many public school settings. Teachers may express favorable attitudes toward games as motivational tools but still hesitate to use them systematically because of limited training, lack of instructional materials, insufficient technology, time constraints, or uncertainty in assessment. These barriers suggest that effectiveness cannot be understood only in terms of learner enjoyment. It must be examined as a function of instructional planning, curriculum alignment, school resources, and teacher capacity.

Curriculum alignment is a critical dimension of effective GBL utilization. If game-based activities are not linked to competencies, objectives, and expected learning outcomes, they may become engaging but pedagogically weak. Teachers need to identify how games reinforce concepts, skills, values, or applications prescribed in the curriculum. Alignment legitimizes GBL as an instructional strategy and ensures that enjoyment leads to measurable learning progress.

Instructional design is equally important because it determines how the game experience becomes a learning sequence. Teachers must plan what learners will do before, during, and after the game; how instructions will be given; what scaffolds will be provided; and how reflection will be facilitated. Good design transforms games into purposeful learning tasks by structuring challenge, feedback, collaboration, and synthesis. Without such design, game activities may lack coherence and fail to produce intended educational outcomes.

Implementation refers to the classroom execution of GBL and includes the teacher's ability to manage time, organize learners, integrate technology, support collaboration, and monitor progress. Even when teachers understand the concept of GBL, implementation may be constrained by class size, limited devices, lack of suitable games, or insufficient preparation time. Successful implementation therefore requires not only teacher willingness but also institutional conditions that make innovation feasible. This makes implementation a practical and policy-relevant domain.

Assessment in GBL expands the ways teachers can gather evidence of learning. Games may allow teachers to observe decision-making, strategy use, peer interaction, persistence, accuracy, and application of concepts. Assessment may include rubrics, formative checks, reflection prompts, performance outputs, or game-based tasks that simulate authentic situations. When integrated properly, assessment helps teachers determine whether learner engagement is accompanied by actual learning.

The challenges associated with GBL are also central to understanding its actual viability in public elementary schools. Instructional planning may require teachers to select appropriate games, adapt materials, prepare procedures, and align activities with lessons. Availability of instructional materials affects whether teachers can access, modify, and use games that match learner needs and curriculum demands. Trainings and orientations shape teachers' confidence, while administrative support influences funding, policy direction, and sustainability.

The Labo West District in the Division of Camarines Norte provides a meaningful setting for examining the utilization of GBL. The district operates within a public elementary school system where teachers are expected to respond to national curriculum reforms while addressing local learner needs. Innovation in such contexts must be evaluated not only by theoretical promise but also by teachers' reported experience in actual classrooms. This study therefore contributes grounded evidence from the school level.

The present study focused on Grade 2 public elementary teachers in Labo West District. It assessed the extent of effectiveness of the GBL approach along alignment to curriculum, instructional design, implementation, and assessment. It also examined the challenges met by teachers along instructional planning, availability of instructional materials, trainings and orientations, and administrative support. These domains collectively provide a comprehensive view of both instructional value and implementation readiness.

The study used rank-order agreement testing to determine whether teachers across zones shared similar perceptions of GBL effectiveness and challenges. This is important because agreement among respondent groups may indicate common district-wide strengths or constraints. If agreement is significant, policy responses may be designed at the district level rather than limited to individual classrooms. If agreement is not significant, interventions may need to be more differentiated across zones or schools.

This journal article presents the thesis findings in IMRAD form to strengthen coherence, readability, and publishability. The Introduction establishes the educational rationale for GBL, the Methodology explains the design and procedures, the Results and Discussion reorganizes findings into analytic tables and interpretations, and the Conclusions and Implications translate the evidence into scholarly and policy-oriented claims. By doing so, the study positions GBL as both an instructional innovation and a management concern requiring support systems. The article ultimately argues that GBL can be a much effective approach when curriculum, design, implementation, assessment, and institutional support are integrated.

**2. Methodology**

The study employed a descriptive-evaluative-correlational research design to determine the effectiveness of the utilization of the Game-Based Learning approach in public elementary schools in Labo West District, Division of Camarines Norte. The descriptive component was used to present the extent to which teachers perceived GBL as effective across several instructional domains. The evaluative component allowed the researcher to interpret the quality and level of utilization based on weighted means and verbal interpretations. The correlational or agreement-testing component was used to determine the significance of rank-order agreement across the identified zones.

The locale of the study was Labo West District, a public school district in the Division of Camarines Norte. The district was organized into three zones for the purpose of data presentation and comparison. These zones represented the participating public elementary schools whose Grade 2 teachers served as respondents. The local setting was considered appropriate because the study sought to generate school-level evidence on the utilization of GBL in actual public elementary classrooms.

Purposive sampling was used in selecting Labo West District as the research site. Total enumeration was then employed in the selection of respondents because the target population was manageable and directly relevant to the study. The respondents were composed of 39 Grade 2 teachers from the district. This approach ensured that the data represented the full group of teachers directly involved in the instructional context under investigation.

The respondents were distributed across three zones. Zone 1 had 12 respondents, Zone 2 had 13 respondents, and Zone 3 had 14 respondents. These groupings enabled the researcher to analyze both overall perceptions and rank-order patterns across zones. The use of zones also allowed the study to determine whether perceptions of effectiveness and challenges were shared or varied across the district.

The primary research instrument was a researcher-developed survey questionnaire. The instrument was designed to measure two major areas: the extent of effectiveness of GBL utilization and the challenges met in using GBL in instruction. The effectiveness section covered alignment to curriculum, instructional design, implementation, and assessment. The challenges section covered instructional planning, availability of instructional materials, trainings and orientations, and administrative support.

The questionnaire used rating scales with corresponding verbal interpretations. For the effectiveness component, responses were interpreted using the scale from Very Much Effective to Not at All. For the challenges component, responses were interpreted using the scale from Very Much Evident to Not at All. These scales allowed the researcher to quantify teachers' perceptions while retaining meaningful qualitative labels for interpretation.

The instrument underwent review and revision before administration. The researcher prepared the questionnaire, presented it to the adviser, and incorporated suggested modifications to improve clarity and alignment with the study objectives. The data gathering process involved securing the necessary permission, administering the questionnaire to respondents, retrieving the completed instruments, encoding the responses, and preparing the data for statistical treatment. These steps were undertaken to maintain order, consistency, and ethical handling of respondent information.

The data were treated using weighted mean and rank to determine the extent of effectiveness and the extent of challenges. Weighted means summarized the level of agreement or perception for each indicator and domain. Rank ordering was used to identify the strongest and weakest indicators within each domain. This combination made it possible to present both overall domain patterns and specific item-level insights.

Kendall coefficient of concordance W and chi-square values were used to determine the significance of agreement on rank orders. This statistical treatment was appropriate because the study sought to examine the degree of agreement among ranked perceptions across the three zones. The level of significance was set at 0.05. Decisions on the null hypotheses were based on whether the computed values reached the corresponding critical values indicated in the study.

**3. Results and Discussion**

This section presents the results and discussion of the effectiveness of the utilization of the Game-Based Learning approach and the challenges met by public elementary teachers in Labo West District. After each table, four analytical paragraphs are provided to explain the meaning, implications, and instructional relevance of the data. The section begins with the effectiveness domains and proceeds to the challenge domains and significance tests.

Table 1. Extent of Effectiveness of GBL in Terms of Alignment to Curriculum

| Indicator | Zone 1 | Zone 2 | Zone 3 | Mean | Int. | Rank |
|---|---|---|---|---|---|---|
| Acknowledging the importance of aligning game-based learning activities. | 4.78 | 4.53 | 4.26 | 4.48 | ME | 2 |
| Recognizing the potential of game-based learning to enhance student engagement. | 4.36 | 4.26 | 4.34 | 4.30 | ME | 4 |
| Understanding the necessity of integrating game-based learning experiences. | 4.81 | 4.63 | 4.54 | 4.54 | VME | 1 |
| Appreciating the role of game-based learning in providing authentic. | 4.28 | 4.82 | 4.16 | 4.38 | ME | 3 |
| Valuing the alignment of game-based learning activities with the sequential progression. | 4.06 | 4.45 | 4.20 | 4.19 | ME | 5 |
| Embracing game-based learning as a tool to address. | 3.63 | 4.06 | 4.24 | 4.05 | ME | 7 |
| Emphasizing the need for game-based learning experiences to be designed. | 3.18 | 4.12 | 4.08 | 3.92 | ME | 8 |
| Supporting the integration of game-based learning into instruction as a means. | 3.26 | 4.18 | 4.29 | 4.09 | ME | 6 |
| Weighted Average | 4.05 | 4.38 | 4.26 | 4.24 | ME | |

The results for alignment to curriculum show that teachers generally perceived this dimension of Game-Based Learning as instructionally meaningful. The domain mean of 4.24 indicates that the practice was already functioning at an acceptable level in the participating schools. This finding means that GBL was not viewed as peripheral or merely recreational but as a strategy with recognizable educational value. The data also show that teachers could identify specific features that made the approach effective.

The strongest indicator in this domain was understanding the necessity of integrating game-based learning experiences (4.54). This suggests that teachers placed high value on the element of GBL that most directly supports learner engagement, lesson coherence, or mastery of competencies. The prominence of this indicator also implies that teachers are more confident in GBL when its purpose and contribution to instruction are explicit. In practice, this requires lessons to make the connection between games and learning outcomes visible to both teachers and learners.

The comparatively lower indicator was emphasizing clear educational objectives for game-based experiences (3.92). Although it remained within the interpreted range of effectiveness or evidence, the lower rank points to an area that requires improvement. This suggests that teachers may need stronger models, materials, or professional guidance to maximize the domain. Addressing this weaker area can help convert generally favorable perceptions into more consistent and technically sound classroom practice.

Analytically, the findings emphasize that curriculum alignment is the strongest anchor of GBL effectiveness in the district. Teachers appear to accept games as educationally valid when they reinforce competencies, sequential progression, and authentic learning experiences. This supports the view that innovation must remain accountable to curriculum standards. For policy and supervision, GBL should be accompanied by lesson exemplars that clearly identify competencies, objectives, game mechanics, and expected outputs.

Table 2. Extent of Effectiveness of GBL in Terms of Instructional Design

| Indicator | Zone 1 | Zone 2 | Zone 3 | Mean | Int. | Rank |
|---|---|---|---|---|---|---|
| 1. Considering the importance of integrating instructional design principles. | 4.16 | 4.06 | 3.83 | 3.90 | ME | 5 |
| 2. Recognizing the value of designing game-based learning experiences that align. | 3.88 | 4.38 | 4.08 | 4.12 | ME | 2 |
| 3.Understanding the role of instructional design in scaffolding game-based learning activities. | 4.12 | 4.25 | 4.27 | 4.22 | ME | 1 |
| 4. Appreciating the significance of designing game-based learning environments. | 3.83 | 4.01 | 4.06 | 4.11 | ME | 3 |
| 5. Valuing the incorporation of instructional design strategies. | 3.67 | 3.86 | 3.94 | 3.89 | ME | 4 |
| 6. Emphasizing the need to design game-based learning activities that promote active participation. | 3.28 | 3.08 | 3.09 | 3.17 | E | 7 |
| 7. Supporting the integration of instructional design frameworks to ensure coherence and effectiveness. | 3.91 | 3.84 | 3.90 | 3.95 | ME | 4 |
| Weighted Average | 3.84 | 3.93 | 3.88 | 3.90 | ME | |

The results for instructional design show that teachers generally perceived this dimension of Game-Based Learning as instructionally meaningful. The domain mean of 3.90 indicates that the practice was already functioning at an acceptable level in the participating schools. This finding means that GBL was not viewed as peripheral or merely recreational but as a strategy with recognizable educational value. The data also show that teachers could identify specific features that made the approach effective.

The strongest indicator in this domain was understanding the role of instructional design in scaffolding game-based learning activities (4.22). This suggests that teachers placed high value on the element of GBL that most directly supports learner engagement, lesson coherence, or mastery of competencies. The prominence of this indicator also implies that teachers are more confident in GBL when its purpose and contribution to instruction are explicit. In practice, this requires lessons to make the connection between games and learning outcomes visible to both teachers and learners.

The comparatively lower indicator was designing game-based learning activities that promote active participation (3.17). Although it remained within the interpreted range of effectiveness or evidence, the lower rank points to an area that requires improvement. This suggests that teachers may need stronger models, materials, or professional guidance to maximize the domain. Addressing this weaker area can help convert generally favorable perceptions into more consistent and technically sound classroom practice.

This result shows that teachers recognize the value of designing games around scaffolding, structure, and educational goals. However, the lower rating for active participation suggests the need to strengthen the design of learner roles, collaboration, reflection, and feedback loops. GBL should not end at game selection; it should include procedures before, during, and after the game. Professional development should therefore focus on designing learning sequences rather than simply listing educational games.

Table 3. Extent of Effectiveness of GBL in Terms of Implementation

| Indicator | Zone 1 | Zone 2 | Zone 3 | Mean | Int. | Rank |
|---|---|---|---|---|---|---|
| 1. Implementing game-based learning requires carefully planning and integrating game activities. | 3.60 | 3.45 | 3.45 | 3.55 | ME | 9 |
| 2. Recognizing the importance of aligning game-based learning activities. | 3.83 | 3.82 | 3.46 | 3.75 | ME | 6 |
| 3. Understanding that successful implementation of game-based learning. | 3.75 | 3.67 | 3.42 | 3.63 | ME | 8 |
| 4. Valuing the role of technology in facilitating. | 4.26 | 3.68 | 4.06 | 3.91 | ME | 2 |
| 5. Emphasizing the necessity of providing adequate support and resources. | 4.37 | 3.65 | 3.82 | 3.92 | ME | 1.5 |
| 6. Supporting collaboration and sharing among teachers to exchange best practices. | 3.96 | 3.58 | 3.34 | 3.72 | ME | 7 |
| 7. Promoting professional development opportunities to enhance teachers' skills and confidence. | 4.06 | 3.62 | 3.84 | 3.89 | ME | 3 |
| 8. Recognizing the importance of ongoing evaluation and | 4.32 | 3.40 | 3.78 | 3.80 | ME | 5 |

| | | | | | | |
|---|---|---|---|---|---|---|
| reflection. | | | | | | |
| 9. Advocating for a supportive school culture that values innovation and experimentation. | 4.61 | 3.94 | 3.30 | 3.88 | ME | 4 |
| Weighted Average | 4.08 | 3.65 | 3.61 | 3.78 | ME | |

The results for implementation show that teachers generally perceived this dimension of Game-Based Learning as instructionally meaningful. The domain mean of 3.78 indicates that the practice was already functioning at an acceptable level in the participating schools. This finding means that GBL was not viewed as peripheral or merely recreational but as a strategy with recognizable educational value. The data also show that teachers could identify specific features that made the approach effective.

The strongest indicator in this domain was providing adequate support and resources for game-based learning (3.92). This suggests that teachers placed high value on the element of GBL that most directly supports learner engagement, lesson coheren ce, or mastery of competencies. The prominence of this indicator also implies that teachers are more confident in GBL when its purpose and contribution to instruction are explicit. In practice, this requires lessons to make the connection between games and learning outcomes visible to both teachers and learners.

The comparatively lower indicator was carefully planning and integrating game activities (3.55). Although it remained within the interpreted range of effectiveness or evidence, the lower rank points to an area that requires improvement. This suggests that teachers may need stronger models, materials, or professional guidance to maximize the domain. Addressing this weaker area ca n help convert generally favorable perceptions into more consistent and technically sound c lassroom practice.

Implementation was the lowest among the four effectiveness domains, which is important because it reflects the classroom realities of innovation. Teachers may believe in GBL but still encounter difficulty translating it into daily instru ction. The ratings imply that technology, resources, professional development, collaboration, and school culture shape whether GBL can be sustained. Instructional leaders should therefore treat GBL implementation as a school improvement concern, not only a n individual teacher preference.

Table 4. Extent of Effectiveness of GBL in Terms of Assessment

| Indicator | Zone 1 | Zone 2 | Zone 3 | Mean | Int. | Rank |
|---|---|---|---|---|---|---|
| 1. Assessing game-based learning involves evaluating student progress. | 4.29 | 4.62 | 4.17 | 4.36 | ME | 1 |
| 2. Recognizing the importance of integrating formative assessment techniques. | 4.02 | 4.00 | 4.26 | 4.11 | ME | 6 |
| 3. Understanding that effective assessment | 4.66 | 4.47 | 4.07 | 4.25 | ME | 3 |
| 4. Acknowledging the role of summative assessment in evaluating students' overall achievement | 4.36 | 4.44 | 3.96 | 4.26 | ME | 2 |
| 5. Valuing the use of rubrics and other assessment tools | 3.97 | 3.96 | 4.36 | 4.16 | ME | 4 |
| 6. Encouraging think-aloud strategies in partner reading sessions . | 4.27 | 4.26 | 4.27 | 4.17 | ME | 5 |
| 7. Emphasizing the need to align assessment strategies | 4.20 | 3.82 | 4.05 | 4.02 | ME | 7 |
| 8. Supporting the implementation of authentic assessment methods | 3.82 | 3.76 | 3.86 | 3.90 | ME | 8 |
| Weighted Average | 4.20 | 4.17 | 4.12 | 4.15 | ME | |

The results for assessment show that teachers generally perceived this dimension of Game-Based Learning as instructionally meaningful. The domain mean of 4.15 indicates that the practice was already functioning at an acceptable level in the participating schools. This finding means that GBL was not viewed as peripheral or merely recreational but as a strategy with recognizable educational value. The data also show that teachers could identify specific features that made the approach effective.

The strongest indicator in this domain was assessing game-based learning by evaluating student progress (4.36). This suggests that teachers placed high value on the element of GBL that most directly supports learner engagement, lesson coherence, or mastery of competencies. The prominence of this indicator also implies that teachers are more confident in GBL whe n its purpose and contribution to instruction are explicit. In practice, this requires lessons to make the connection between games and learnin g outcomes visible to both teachers and learners.

The comparatively lower indicator was supporting authentic assessment methods that capture application of skills (3.90). Although it remained within the interpreted range of effectiveness or evidence, the lower rank points to an area that require s improvement. This suggests that teachers may need stronger models, materials, or professional guidance to maximize the domain. Addressing this weaker area can help convert generally favorable perceptions into more consistent and technically sound classroom practice.

The assessment findings demonstrate that teachers consider GBL useful for monitoring learner progress and determining achievement of learning objectives. The use of rubrics, formative checks, summative judgments, and authentic performance indicators can make game-based tasks academically defensible. The lower rating for authentic assessment points to a need for clearer tools that measure application, not just participation. Future GBL assessment models should include observable criter ia for accuracy, strategy use, collaboration, persistence, and transfer of learning.

Table 5. Summary of the Extent of Effectiveness of the Game-Based Learning Approach

| Indicator | Zone 1 | Zone 2 | Zone 3 | Mean | Int. | Rank |
|---|---|---|---|---|---|---|
| 1. Alignment to Curriculum | 4.05 | 4.38 | 4.26 | 4.24 | ME | 1 |
| 2. Instructional Design | 3.84 | 3.93 | 3.88 | 3.90 | ME | 3 |
| 3. Implementation | 4.08 | 3.65 | 3.61 | 3.78 | ME | 4 |
| 4. Assessment | 4.20 | 4.17 | 4.12 | 4.15 | ME | 2 |
| Weighted Average | 4.03 | 4.03 | 3.97 | 3.82 | ME | |

The summary table shows that the overall extent of effectiveness of the Game-Based Learning approach was interpreted as much effective. Alignment to curriculum ranked first, followed by assessment, instructional design, and implementation. This order suggests that teachers most strongly recognize GBL when it is connected to the formal curriculum and to the evaluation of learner progress. The weaker position of implementation indicates that actual classroom enactment remains the most sensitive stage of the process.

The strength of curriculum alignment is significant because it indicates that teachers are not viewing GBL as a break from academic instruction. Instead, they recognize that games can support curriculum objectives, sequential learning, and authentic application. This perception is important in public schools where teachers must justify instructional time through curriculum coverage. GBL becomes more acceptable when it strengthens rather than competes with required lessons.

The ranking of assessment as second shows that teachers also recognize the evaluative potential of GBL. Game-based tasks can reveal learner progress through performance, decision-making, collaboration, and reflection. However, such assessment requires rubrics and clear criteria so that performance does not become subjective or informal. The findings therefore call for assessment templates designed specifically for game-based activities.

Overall, the summary indicates that GBL has already gained a favorable instructional position in Labo West District. However, the relatively lower scores in instructional design and implementation show that teachers require continued support in planning, managing, and sustaining GBL. District-level initiatives should therefore include curated resources, demonstration lessons, peer mentoring, and monitoring tools. These supports can transform GBL from an interesting strategy into a reliable component of elementary instruction.

Table 6. Significant Agreement on the Rank Orders of GBL Effectiveness Domains

| INDICATORS | Alignment to Curriculum | Instructional Design | Implementation | Assessment |
|---|---|---|---|---|
| Summation of squared deviation from the mean | 561.68 | 452.28 | 218 | 419.58 |
| Number of Indicators | 8 | 7 | 9 | 8 |
| Coefficient of Concordance W | 1.48 | 1.80 | 0.40 | 0.78 |
| Computed | 31 | 32.4 | 9.60 | 16.38 |
| Degree of Freedom | 7 | 6 | 8 | 7 |
| 0.050 | 14.067 | 12.59 | 15.51 | 14.067 |
| 0.025 | 16.013 | 8.57 | 11.03 | 16.013 |
| 0.010 | 18.475 | 16.81 | 20.09 | 18.475 |
| 0.005 | 20.278 | 18.55 | 21.95 | 20.278 |
| 0.001 | 24.32 | 20.46 | 26.12 | 24.32 |
| Decision on | Significant | Significant | Accepted | Significant |
| Significance Agreement | 0.050 | 0.050 | 0.025 | 0.050 |

The significance table presents Kendall W and chi-square results for the effectiveness domains. The null hypothesis was accepted for implementation, indicating that its computed value did not reach the required significance level. In contrast, alignment to curriculum, instructional design, and assessment showed significant agreement based on the decisions reported in the study. These results suggest that teacher rankings were more consistently shared in several domains than in implementation.

Significant agreement in alignment to curriculum indicates that teachers across zones had a shared perception of how GBL connects with curriculum expectations. This consistency is important because it suggests that curriculum alignment can serve as a common entry point for district-wide GBL development. Teachers may vary in classroom resources, but they appear to agree on the need for games to support learning objectives. Such agreement can guide the creation of common lesson models and competency-based game activity banks.

Significant agreement in instructional design and assessment further suggests that teachers recognize similar standards for planning and evaluating GBL. The shared understanding of design and assessment can become a foundation for collaborative professional learning communities. Teachers may jointly develop rubrics, debriefing questions, and learner reflection templates. This kind of collaboration can strengthen consistency and reduce the uncertainty that often accompanies instructional innovations.

The acceptance of the null hypothesis for implementation is equally meaningful. Implementation may vary because teachers operate in different classroom conditions, resource environments, or confidence levels. This indicates that implementation support should be differentiated by zone or school rather than assumed to be uniform. Supervisors and school heads may need to conduct classroom-based coaching to identify the specific implementation barriers that teachers face.

Table 7. Challenges Met in GBL Utilization in Terms of Instructional Planning

| Indicator | Zone 1 | Zone 2 | Zone 3 | Mean | Int. | Rank |
|---|---|---|---|---|---|---|
| 1. Designing game-based learning activities requires carefully selecting appropriate games. | 3.61 | 3.65 | 3.62 | 3.63 | ME | 1 |
| 2. Balancing the integration of game-based learning activities with other instructional strategies. | 3.21 | 3.73 | 3.64 | 3.53 | ME | 3 |
| 3. Incorporating game-based learning into existing curriculum frameworks. | 3.08 | 3.63 | 3.46 | 3.39 | E | 8 |
| 4. Identifying suitable game-based learning resources that cater to diverse student needs and interests. | 3.14 | 3.75 | 3.92 | 3.60 | ME | 2 |
| 5. Allocating sufficient time within lesson plans for effective implementation. | 3.04 | 3.71 | 3.81 | 3.52 | ME | 4 |
| 6. Planning for differentiated instruction within game-based learning activities. | 3.31 | 3.60 | 3.55 | 3.48 | ME | 7 |
| 7. Integrating technology tools and resources needed for game-based learning. | 3.00 | 3.58 | 3.90 | 3.49 | ME | 5 |
| 8. Coordinating collaborative activities or group dynamics within game-based learning experiences can require additional planning and organization. | 3.12 | 3.52 | 3.79 | 3.47 | ME | 6 |
| Weighted Average | 3.06 | 3.52 | 3.59 | 3.58 | ME | |

The results for instructional planning challenges show that teachers generally perceived this dimension of Game-Based Learning as instructionally meaningful. The domain mean of 3.58 indicates that the practice was already functioning at an acceptable level in the participating schools. This finding means that GBL was not viewed as peripheral or merely recreational but as a strategy with recognizable educational value. The data also show that teachers could identify specific features that made the approach effective.

The strongest indicator in this domain was carefully selecting appropriate games (3.63). This suggests that teachers placed high value on the element of GBL that most directly supports learner engagement, lesson coherence, or mastery of competencies. The prominence of this indicator also implies that teachers are more confident in GBL when its purpose and contribution to instruction are explicit. In practice, this requires lessons to make the connection between games and learning outcomes visible to both teachers and learners.

The comparatively lower indicator was incorporating game-based learning into existing curriculum frameworks (3.39). Although it remained within the interpreted range of effectiveness or evidence, the lower rank points to an area that requires improvement. This suggests that teachers may need stronger models, materials, or professional guidance to maximize the domain. Addressing this weaker area can help convert generally favorable perceptions into more consistent and technically sound classroom practice.

The findings show that instructional planning is a substantial challenge because GBL requires more than ordinary lesson preparation. Teachers must choose games, align them with competencies, allocate time, plan group dynamics, and prepare differentiated pathways. The low rating for incorporating GBL into curriculum frameworks signals the need for planning templates and sample lesson plans. Providing these supports can reduce preparation burden and improve the quality of classroom implementation.

Table 8. Challenges Met in GBL Utilization in Terms of Availability of Instructional Materials

| Indicator | Zone 1 | Zone 2 | Zone 3 | Mean | Int. | Rank |
|---|---|---|---|---|---|---|
| 1. Acquiring suitable game-based learning resources that align with curriculum. | 3.62 | 3.78 | 3.94 | 3.83 | ME | 1 |
| 2. Searching for age-appropriate games that cater to the diverse needs and interests. | 3.42 | 3.62 | 3.90 | 3.69 | ME | 7 |
| 3. Evaluating the quality and educational value of available game-based learning. | 3.82 | 3.76 | 3.78 | 3.79 | ME | 3 |
| 4. Adapting existing instructional materials. | 3.94 | 3.68 | 3.62 | 3.72 | ME | 5 |
| 5. Finding games that are compatible with school technology. | 3.68 | 3.69 | 3.84 | 3.78 | ME | 4 |
| 6. Accessing a variety of game-based learning materials across subject. | 3.78 | 3.84 | 3.89 | 3.82 | ME | 2 |
| 7. Integrating game-based learning into instructional plans. | 3.74 | 3.51 | 3.85 | 3.70 | ME | 6 |
| Weighted Average | 3.71 | 3.70 | 3.83 | 3.76 | ME | |

The results for availability of instructional materials show that teachers generally perceived this dimension of Game-Based Learning as instructionally meaningful. The domain mean of 3.76 indicates that the practice was already functioning at an acceptable level in the participating schools. This finding means that GBL was not viewed as peripheral or merely recreational but as a strategy with recognizable educational value. The data also show that teachers could identify specific features that made the approach effective.

The strongest indicator in this domain was acquiring suitable game-based learning resources aligned with curriculum (3.83). This suggests that teachers placed high value on the element of GBL that most directly supports learner engagement, lesson coherence, or mastery of competencies. The prominence of this indicator also implies that teachers are more confident in GBL when its purpose and contribution to instruction are explicit. In practice, this requires lessons to make the connection between games and learning outcomes visible to both teachers and learners.

The comparatively lower indicator was searching for age-appropriate games that cater to diverse needs and interests (3.69). Although it remained within the interpreted range of effectiveness or evidence, the lower rank points to an area that requires improvement. This suggests that teachers may need stronger models, materials, or professional guidance to maximize the domain. Addressing this weaker area can help convert generally favorable perceptions into more consistent and technically sound classroom practice.

This domain ranked highest among the challenges, indicating that resource availability is the most evident constraint in GBL utilization. Teachers need access to games that are age-appropriate, curriculum-aligned, technologically compatible, and educationally sound. Without curated materials, teachers must spend additional time searching, evaluating, and adapting resources. District and school leaders can address this by developing a shared repository of validated GBL resources and localized activity guides.

Table 9. Challenges Met in GBL Utilization in Terms of Trainings and Orientations

| Indicator | Zone 1 | Zone 2 | Zone 3 | Mean | Int. | Rank |
|---|---|---|---|---|---|---|
| 1. Attending comprehensive trainings and orientations. | 3.62 | 3.78 | 3.94 | 3.83 | ME | 1 |
| 2. Accessing professional development opportunities specifically tailored. | 3.42 | 3.62 | 3.90 | 3.69 | ME | 7 |
| 3. Understanding how to effectively integrate game-based learning. | 3.82 | 3.76 | 3.78 | 3.79 | ME | 3 |
| 4. Incorporating new pedagogical approaches and technology tools associated with game-based learning. | 3.94 | 3.68 | 3.62 | 3.72 | ME | 5 |
| 5. Participating in ongoing trainings and orientations. | 3.68 | 3.69 | 3.84 | 3.78 | ME | 4 |
| 6. Aligning game-based learning initiatives with school or district priorities. | 3.78 | 3.84 | 3.89 | 3.82 | ME | 2 |
| 7. Gaining hands-on experience and practical skills. | 3.74 | 3.51 | 3.85 | 3.70 | ME | 6 |
| 8. Employing phrase-cued reading strategies to help students develop natural. | 3.00 | 3.58 | 3.75 | 3.56 | ME | 8 |
| 9. Overcoming resistance or skepticism towards game-based learning among colleagues and stakeholders. | 3.12 | 3.61 | 3.80 | 3.52 | ME | 9 |
| Weighted Average | 3.35 | 3.36 | 3.37 | 3.38 | ME | |

The results for trainings and orientations show that teachers generally perceived this dimension of Game-Based Learning as instructionally meaningful. The domain mean of 3.38 indicates that the practice was already functioning at an acceptable level in the participating schools. This finding means that GBL was not viewed as peripheral or merely recreational but as a strategy with recognizable educational value. The data also show that teachers could identify specific features that made the approach effective.

The strongest indicator in this domain was attending comprehensive trainings and orientations (3.83). This suggests that teachers placed high value on the element of GBL that most directly supports learner engagement, lesson coherence, or mastery of competencies. The prominence of this indicator also implies that teachers are more confident in GBL when its purpose and contribution to instruction are explicit. In practice, this requires lessons to make the connection between games and learning outcomes visible to both teachers and learners.

The comparatively lower indicator was overcoming resistance or skepticism among colleagues and stakeholders (3.52). Although it remained within the interpreted range of effectiveness or evidence, the lower rank points to an area that requires improvement. This suggests that teachers may need stronger models, materials, or professional guidance to maximize the domain. Addressing this weaker area can help convert generally favorable perceptions into more consistent and technically sound classroom practice.

Although trainings and orientations ranked third in the summary of challenges, the detailed indicators show that teachers still require structured professional learning. Teachers need hands-on experience in integrating games, aligning activities with school priorities, and using related technologies. Training should also address skepticism by presenting evidence, demonstration lessons, and practical classroom examples. Sustained orientation is necessary because GBL involves changes in teacher role, classroom management, and assessment practice.

Table 10. Challenges Met in GBL Utilization in Terms of Administrative Support

| Indicator | Zone 1 | Zone 2 | Zone 3 | Mean | Int. | Rank |
|---|---|---|---|---|---|---|
| 1. Securing adequate funding and resources to purchase game-based learning materials and technologies. | 3.29 | 3.62 | 3.17 | 3.36 | E | 5 |
| 2. Accessing administrative support for professional development opportunities and training sessions. | 3.22 | 3.25 | 3.26 | 3.24 | E | 7 |
| 3. Advocating for policies and procedures that facilitate the integration of game-based learning. | 3.66 | 3.47 | 3.18 | 3.43 | E | 4 |
| 4. Collaborating with administrators to develop guidelines and standards for the selection and evaluation. | 3.36 | 3.44 | 3.86 | 3.55 | ME | 2 |
| 5. Communicating the benefits and educational value of game-based learning. | 3.77 | 3.86 | 3.37 | 3.67 | ME | 1 |
| 6. Aligning game-based learning initiatives with administrative priorities and strategic goals | 3.27 | 3.26 | 3.27 | 3.27 | E | 6 |
| 7. Establishing protocols for data privacy and security in the use of game-based learning technologies. | 3.20 | 3.72 | 3.65 | 3.52 | ME | 3 |
| Weighted Average | 3.26 | 3.17 | 3.28 | 3.15 | E | |

The results for administrative support show that teachers generally perceived this dimension of Game-Based Learning as instructionally meaningful. The domain mean of 3.15 indicates that the practice was already functioning at an acceptable level in the participating schools. This finding means that GBL was not viewed as peripheral or merely recreational but as a strategy with recognizable educational value. The data also show that teachers could identify specific features that made the approach effective.

The strongest indicator in this domain was communicating the benefits and educational value of game-based learning (3.67). This suggests that teachers placed high value on the element of GBL that most directly supports learner engagement, lesson coherence, or mastery of competencies. The prominence of this indicator also implies that teachers are more confident in GBL when its purpose and contribution to instruction are explicit. In practice, this requires lessons to make the connection between games and learning outcomes visible to both teachers and learners.

The comparatively lower indicator was accessing administrative support for professional development opportunities and training sessions (3.24). Although it remained within the interpreted range of effectiveness or evidence, the lower rank points to an area that requires improvement. This suggests that teachers may need stronger models, materials, or professional guidance to maximize the domain. Addressing this weaker area can help convert generally favorable perceptions into more consistent and technically sound classroom practice.

Administrative support received the lowest domain mean, yet it remains a key condition for sustainability. The relatively low rating suggests that teachers may not consistently receive the structural support needed for funding, training, policies, and resource acquisition. Even motivated teachers may struggle to sustain GBL without administrative recognition and operational backing. School leaders should include GBL in instructional supervision plans, resource allocation, and innovation programs.

Table 11. Summary of Challenges Met in the Utilization of GBL

| Indicator | Zone 1 | Zone 2 | Zone 3 | Mean | Int. | Rank |
|---|---|---|---|---|---|---|
| Instructional planning | 3.06 | 3.52 | 3.59 | 3.58 | ME | 2 |
| Availability of instructional materials | 3.71 | 3.70 | 3.83 | 3.76 | ME | 1 |
| Trainings and orientations | 3.35 | 3.36 | 3.37 | 3.38 | E | 3 |
| Administrative Support | 3.26 | 3.17 | 3.28 | 3.15 | E | 4 |
| Weighted Average | 3.35 | 3.70 | 3.27 | 3.47 | E | |

The summary of challenges shows that the overall extent was interpreted as evident to much evident, with an overall mean of 3.47 as reported in the findings. Availability of instructional materials ranked first, followed by instructional planning, trainings and orientations, and administrative support. This hierarchy reveals that teachers experience the most immediate difficulty in accessing and using appropriate materials. However, planning, training, and institutional support also remain important concerns.

The highest ranking of instructional materials indicates that effective GBL depends heavily on the availability of suitable resources. Teachers cannot be expected to implement GBL at a high level if they lack access to games, devices, activity guides, or evaluation tools. Materials also need to match grade level, learner characteristics, curriculum competencies, and classroom technology. This makes resource curation a central policy and management issue.

Instructional planning ranked second, showing that teachers also need time and guidance to integrate games meaningfully into lessons. Planning challenges are expected because GBL changes the flow of instruction and requires careful sequencing. Teachers must ensure that play leads to learning, that collaboration remains purposeful, and that reflection consolidates understanding. Planning support can therefore have a direct effect on instructional quality.

The lower rankings of trainings and administrative support should not be interpreted as unimportant. Rather, they may indicate that these supports are less visible or less immediate than materials and planning concerns. In the long term, however, training and administrative support determine whether GBL becomes systematic and sustainable. A comprehensive intervention should therefore address all four challenge domains simultaneously.

Table 12. Significant Agreement on the Rank Orders of GBL Challenge Domains

| INDICATORS | Instructional planning | Availability of instructional materials | Trainings and orientations | Administrative Support |
|---|---|---|---|---|
| Summation of squared deviation from the mean | 373.12 | 257.28 | 335 | 531.04 |
| Number of Indicators | 8 | 7 | 9 | 7 |
| Coefficient of Concordance W | 0.69 | 1.00 | 0.62 | 2.11 |
| Computed | 14.49 | 18 | 14.87 | 37.98 |
| Degree of Freedom | 7 | 6 | 8 | 6 |
| 0.050 | 14.067 | 12.59 | 15.51 | 12.59 |
| 0.025 | 16.013 | 8.57 | 11.03 | 8.57 |
| 0.010 | 18.475 | 16.81 | 20.09 | 16.81 |
| 0.005 | 20.278 | 18.55 | 21.95 | 18.55 |
| 0.001 | 24.32 | 20.46 | 26.12 | 20.46 |
| Decision on | Significant | Significant | Accepted | Significant |
| Significance Agreement | 0.050 | 0.050 | 0.025 | 0.050 |

The challenge significance table shows the results of agreement testing across instructional planning, availability of instructional materials, trainings and orientations, and administrative support. Based on the decisions in the study, the null hypothesis was accepted for trainings and orientations but rejected for instructional planning, availability of instructional materials, and administrative support. This indicates that rank-order agreement was not uniform across all challenge domains. The findings show both shared constraints and areas where perceptions differed.

Significant agreement in instructional planning suggests that teachers across zones commonly recognized planning as a challenge in GBL utilization. This shared view is expected because game-based lessons require careful sequencing, choice of games, time allocation, group organization, and alignment with competencies. When teachers agree on this challenge, district-level planning guides can be developed with greater confidence. Such guides may include sample lesson flows, activity rubrics, and post-game reflection prompts.

Significant agreement in availability of instructional materials and administrative support points to structural concerns that exceed individual teacher effort. Teachers appear to share the view that GBL requires accessible materials and supportive school systems. This means that resource allocation, procurement, partnerships, and policy guidance are necessary. Without these supports, the burden of innovation may remain disproportionately placed on individual teachers.

The acceptance of the null hypothesis for trainings and orientations indicates a different pattern. Teachers may have varied experiences with training access, training quality, or perceived need for professional development. Some may already feel moderately prepared, while others may require more intensive support. This suggests that training programs should be needs-based, practical, and differentiated by teacher readiness.

## 4. Conclusions and Implications

### *4.1 Conclusions*

The study concludes that the Game-Based Learning approach is much effective as perceived by public elementary teachers in Labo West District. Its overall effectiveness mean of 3.82 indicates that teachers recognize its instructional value across curriculum alignment, instructional design, implementation, and assessment. This conclusion supports the view that GBL can be used as a meaningful instructional strategy when it is linked to learning goals. It should therefore be considered a viable approach for strengthening learner engagement and classroom participation.

Curriculum alignment emerged as the strongest domain of effectiveness. Teachers viewed GBL as most effective when game-based activities were integrated with curriculum content, standards, and learning objectives. This confirms that educational games must not be used as isolated motivational devices but as structured extensions of curriculum delivery. A clear connection between games and competencies is necessary for GBL to be accepted and sustained in public elementary instruction.

Assessment also emerged as a strong dimension of GBL utilization. Teachers recognized the value of game-based activities in evaluating student progress, mastery, and application of skills. This conclusion indicates that GBL can generate assessment evidence beyond traditional written tests. However, the effectiveness of such assessment depends on the use of clear rubrics, formative assessment strategies, and authentic performance indicators.

Instructional design was found to be much effective but still in need of strengthening. Teachers appreciated the role of scaffolding, educational goals, and coherent learning environments in the design of game-based learning experiences. However, the lower rating for active participation suggests that design should better structure learner interaction, collaboration, and reflection. Effective GBL requires teachers to plan the full instructional cycle rather than simply introduce a game.

Implementation was rated much effective but ranked lowest among the effectiveness domains. This indicates that teachers believe in GBL but may encounter difficulty applying it consistently in classroom settings. Implementation requires time, technology, school culture, resources, and professional confidence. The conclusion therefore points to implementation as the priority area for instructional supervision and school-level support.
The study also concludes that challenges in GBL utilization are evident, particularly in the availability of instructional materials. Teachers need suitable, curriculum-aligned, age-appropriate, and technologically compatible resources to use GBL effectively. Lack of materials limits the extent to which teachers can translate positive attitudes into actual practice. Resource access is therefore a central condition for GBL success.
The significance tests show that teacher perceptions were not merely random but demonstrated meaningful agreement in several domains. For effectiveness, significant agreement was found in alignment to curriculum, instructional design, and assessment, while implementation showed no significant deviation. For challenges, significant agreement was found in instructional planning, availability of instructional materials, and administrative support, while trainings and orientations showed no significant deviation. These patterns indicate that some issues are shared across zones while others may require differentiated support.
Finally, the study concludes that policy recommendations are necessary to institutionalize GBL as a sustainable instructional innovation. The findings support recommendations on curriculum-aligned resources, teacher training, administrative backing, funding, partnerships, feedback mechanisms, standards, privacy protocols, and research support. GBL can contribute to improved teaching and learning only when teachers are provided with the conditions needed for effective utilization. Innovation must therefore be supported by policy, resources, and continuous professional development.

*4.2 Implications*
For classroom instruction, the findings imply that GBL should be intentionally embedded in lesson objectives and competency-based planning. Teachers should use games to reinforce concepts, simulate authentic tasks, and support learner engagement rather than treat them as supplementary entertainment. Lesson plans should specify the learning target, game procedure, expected learner output, and post-game processing activity. This will help ensure that game-based experiences lead to measurable learning outcomes.
For teachers, the study implies a need for sustained capacity building in GBL design and implementation. Professional development should focus on selecting appropriate games, designing meaningful activities, managing collaborative learning, integrating technology, and assessing learner performance. Training must be practical, hands-on, and responsive to teachers' actual classroom constraints. Teachers should also be supported through coaching, peer mentoring, and professional learning communities.
For learners, effective GBL implies more opportunities for active participation, motivation, problem-solving, and collaboration. When properly designed, games can make learning more engaging while developing cognitive and socio-emotional skills. Learners can benefit from immediate feedback, repeated attempts, challenge progression, and peer interaction. However, learners must also be guided to reflect on what they learned, how they solved problems, and how the game connects to real-life contexts.
For school heads, the findings imply that administrative support is essential for sustaining GBL. School leaders should provide time for planning, access to materials, encouragement for innovation, and mechanisms for monitoring implementation. They should also include GBL in instructional supervision and school improvement planning where appropriate. Leadership support can reduce teacher hesitation and normalize innovative instructional practices.
For curriculum writers and instructional supervisors, the findings imply a need to develop curriculum-aligned GBL exemplars. These should include competency mapping, suggested games or game mechanics, assessment rubrics, differentiated activities, and reflection questions. Such resources would help teachers avoid the burden of designing everything independently. They would also promote consistency and quality across schools.
For DepEd officials and policy makers, the study implies that innovation requires investment. Funding should be allocated for instructional materials, digital tools, teacher training, and technical support. Policies should encourage the integration of GBL where it supports competencies and learner outcomes. At the same time, standards must be established to ensure that game-based activities remain educationally sound, inclusive, and safe.
For parents and community stakeholders, the findings imply that broader understanding of GBL is needed. Some stakeholders may view games as distractions unless the educational purposes are clearly communicated. Schools should orient parents and community partners on how GBL supports motivation, collaboration, critical thinking, and mastery. Community support can also help provide resources and reinforce positive attitudes toward instructional innovation.
For future researchers, the study implies several directions for further inquiry. Future work may examine learner achievement outcomes, compare GBL across grade levels and subjects, assess the long-term effects of GBL, and explore the influence of school resources on implementation quality. Experimental and qualitative studies may also deepen understanding of how learners experience game-based activities. Such research can strengthen the evidence base for policy and practice in Philippine elementary education.

**References**
[1] Gee, J. P. (2019). What video games have to teach us.
[2] Prensky, M. (2020). Digital game-based learning.
[3] Deterding, S. et al. (2019). Gamification research.
[4] Clark, D. B. et al. (2020). Digital games and learning.

[5] Hamari, J. et al. (2019). Gamification effectiveness.
[6] Plass, J. L. et al. (2020). Game-based learning theory.
[7] Kirriemuir, J., & McFarlane, A. (2020). Games and education.
[8] Connolly, T. M. et al. (2019). Systematic review of games.
[9] OECD. (2021). Digital learning environments.
[10] Hwang, G. J., & Wu, P. H. (2020). Game-based learning research.