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An integrated social studies teaching model based on problem-based and community-based learning to foster 21st century competencies in small primary schools

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Abstract

This research focused on creating an instructional model for social studies that combines problem-based learning with community-based learning to enhance 21st-century skills in students attending small schools. The study analyzed the effects of implementing this integrated instructional model on developing skills within the target student group.The results indicated the following points: The teaching model combines problem-solving and community involvement and has four main parts: (1) learning actively and on your own; (2) hands-on experiences connected to civic duty, culture, and social life; (3) working together to share ideas; and (4) using what you've learned in real-life situations outside of school. The model consists of a five-step instructional process: (1) encountering a social studies situation, (2) integrating social studies thinking, (3) producing social studies work, (4) disseminating social studies outcomes, and (5) consolidating reflective social studies evaluation. The experimental group showed a much better improvement in 21st-century skills after the intervention compared to the control group, with results that are statistically significant at the .05 level. The experimental group demonstrated significantly greater academic achievement in social studies compared to the control group at the .05 level. The overall satisfaction of students was at its highest level with the social studies instructional model that integrates problem-based and community-based learning.

Keywords: 21st century skills, Active learning, Community-based learning, Educational innovation, Problem-based learning, Small-sized schools, Social studies instructional model.

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1. Introduction

The 21st century has experienced significant transformations, especially in information technology, which greatly influences the development of critical learning skills, including analytical thinking, creativity, and collaboration. The Ministry of Education of Thailand highlights the necessity of providing learners with skills essential for effective participation in modern society [1]. Small-sized schools encounter various challenges, such as dependence on conventional teaching methods and restricted educational resources. These circumstances underscore the necessity for instructional methods that incorporate community engagement and technological resources to develop critical 21st-century skills [2].

The Basic Education Core Curriculum B.E. 2551 (2008) is designed to equip learners for global competitiveness by prompting schools to create curricula that address local needs. Interdisciplinary integration in small schools can improve students' analytical thinking and problem-solving abilities through pedagogical methods like Problem-Based Learning (PBL) and Project-Based Learning (PjBL). The Songkhla Basic Education Development Plan (2017–2020) shows that test results from Ban Nong Nai Khui School indicate a need to improve students' analytical thinking, particularly in social studies and topics related to civic duty, culture, and social life. The research team proposed enhancements in instructional processes that link classroom learning with local community engagement to bolster the development of essential 21st-century competencies.

Problem-Based Learning (PBL) is an educational methodology that centers on students, utilizing real-world problems as the foundation for the development of knowledge. Learners are prompted to independently or collaboratively analyze and resolve issues, thereby enhancing critical thinking and problem-solving skills. This method improves comprehension and the utilization of knowledge in practical contexts [3, 4]. In project-based learning, educators assume the role of facilitators, directing students through experiential learning processes and aiding in the development of competencies essential for future success.

Community-Based Learning (CBL) emphasizes learner engagement in community activities, fostering essential 21st-century skills including analytical thinking, critical thinking, and teamwork. Engaging with real-life community contexts enables learners to link curricular content with authentic experiences. This method promotes positive attitudes, a sense of responsibility, and sustainable social change [5, 6]. In CBL, educators promote the exploration of knowledge by facilitating integrated learning processes and employing authentic assessment methods.

The development of a social studies instructional model that integrates problem-based and community-based learning approaches is an effective strategy for promoting 21st-century skills among students in small-sized schools. This model promotes analytical thinking, creativity, and collaboration via practical engagement in community-based contexts, enhancing problem-solving skills and fostering sustainable development through active collaboration among students, teachers, and local communities.

2. Research Objectives

- To create an instructional model for social studies that integrates problem-based learning (PBL) and community-based learning (CBL) aimed at fostering 21st-century skills in students attending small-sized schools.
- To assess how well the suggested social studies teaching model, which includes problem-based and community-based learning, helps students in small schools develop 21st-century skills, along with these additional goals:
- This study aims to evaluate students' 21st-century skills prior to and following the implementation of the integrated PBL-CBL social studies instructional model, in contrast to traditional social studies instruction.
- This section aims to compare students' academic achievement in social studies prior to and following the implementation of the integrated PBL-CBL instructional model, rather than traditional instructional methods.
- This section aims to assess student satisfaction with the social studies instructional model that incorporates problem-based and community-based learning, designed to enhance 21st-century skills in small-sized schools.

3. Research Methodology

This research utilized a research and development (R&D) design, comprising the subsequent procedures:

3.1. Population and Sample

1.1 Demographics: This study's population consisted of Grade 6 students from small-sized schools within the Si Mueang Samphan and Khlong Hae-Khu Tao school network, governed by the Songkhla Primary Educational Service Area Office 2, during the second semester of the 2024 academic year. The institutions listed are Wat Thasae School, Ban Nong Nai Khui School, Ban Wang Rang (Prasit Uppatham) School, Ban Bueng Phichai School, and Ban Thung Nam School, in the Hat Yai District of Songkhla Province. The aggregate count of Grade 6 students in the five classrooms was 89.

1.2 Example: The sample comprised Grade 6 students from Ban Nong Nai Khui School and Ban Thung Nam School in Khlong Hae Subdistrict, Hat Yai District, Songkhla Province, enrolled in the Social Studies, Religion, and Culture subject group during the second semester of the 2024 academic year. We utilized cluster random sampling to select a total of 30

students from two classrooms, each with 15 students. Two out of the four available classrooms were selected at random. The classrooms were randomly divided into two groups: an experimental group consisting of 15 students from Ban Nong Nai Khui School, who received instruction through a social studies model that integrated problem-based and community-based learning, and a control group of 15 students from Ban Thung Nam School, who received traditional instruction.

4. Research Instruments

4.1. Instructional Framework

The main tool used for research was a teaching model for social studies that combines problem-based learning (PBL) with community-based learning (CBL), aimed at improving 21st-century skills in students at small schools.

4.2. Instructional Plans

Specialists created and evaluated lesson plans that aligned with the established instructional model for quality. The assessment concentrated on the pertinence and consistency of the lesson elements with the model. The appropriateness ratings varied from 4.80 to 5.00, with standard deviations ranging from 0.00 to 0.44.

4.3. Data Collection Instruments

The data collection instruments underwent pilot testing with a separate group to confirm their validity and reliability.

4.3.1. Assessment Form for 21st-Century Skills

We developed this instrument to assess students' skills relevant to the 21st century. The average content validity score ranged from 4.60 to 5.00, with standard deviations between 0.00 and 0.54. The discrimination index (r) varied between 0.41 and 0.74, while the reliability coefficient was measured at 0.81.

4.3.2. Assessment of Social Studies Proficiency

This assessment evaluated students' performance in social studies. The Index of Item-Objective Congruence (IOC) varied between 0.60 and 1.00. The item difficulty (p) varied between 0.41 and 0.60, while the discrimination index (r) ranged from 0.44 to 0.77. The test exhibited a reliability coefficient of 0.83.

4.3.3. Questionnaire on Student Satisfaction

This instrument evaluated students' satisfaction with the instructional model. The questionnaire, employing a rating scale, yielded an average score of 5.00, a standard deviation of 0.00, and a reliability coefficient of 0.82.

5. Methodology

This study utilized a research and development (R&D) methodology, implementing a systems-based instructional design approach based on the ADDIE model as proposed by Kruse [7]. The study employed a pre-experimental design and comprised four distinct phases:

5.1. Phase 1: Needs Analysis (Research—R1: Analysis)

This phase entailed analyzing baseline data via document analysis, literature review, and relevant research to ascertain the necessity for creating a new instructional model. We collected data by conducting interviews with stakeholders involved in social studies instruction. Five experts reviewed the instruments and findings from this phase: two specializing in curriculum and instruction, two in civic duty, culture, and social life, and one in measurement and evaluation. For data analysis, we employed content analysis techniques.

5.2. Phase 2: Design and Development (Development—D1: Design and Development)

The needs analysis findings were synthesized to create a social studies instructional model that integrates problem-based learning (PBL) and community-based learning (CBL), with the objective of fostering 21st-century skills. This phase encompassed the design of the model's principles, instructional processes, and lesson plans. The content validity of these components was evaluated by five experts: two specializing in curriculum and instruction, two in history, and one in educational measurement and evaluation. The model, which comprised an instructional manual and teaching plans, was tested with 89 Grade 6 students who closely matched the target demographic. The overall model performance attained an effectiveness score of 82.27/81.38, whereas the 21st-century skill development component produced an effectiveness score of 85.75/82.13.

5.3. Phase 3: Implementation (Research—R2: Implementation)

The instructional model was applied to Grade 6 students in the subject code S16101 (Social Studies) in the second semester of the 2025 academic year. The implementation duration was 20 weeks, comprising one hour per week, which included a one-hour pre-test, 18 hours of instruction, and a one-hour post-test, resulting in a total of 20 hours. The instruments utilized comprised the 21st-century skills assessment form and the academic achievement test, both administered prior to and following the instructional intervention. All instruments underwent review and received approval for quality and appropriateness from five experts. The final versions were considered appropriate for evaluating 21st-century skills and academic performance in social studies within small-sized schools.

5.4. Phase 4: Evaluation and Revision (Development—D2: Evaluation)

This phase entailed assessing the efficacy of the constructed instructional model. The main tool utilized was a 5-point Likert scale questionnaire assessing student satisfaction, which received validation from five experts: two specializing in curriculum and instruction, two in social studies, and one in educational measurement and evaluation. We employed content analysis to analyze the data, which facilitated further refinement of the model.

6. Findings

6.1. The Developed Instructional Model

The instructional model for social studies that incorporates problem-based learning (PBL) and community-based learning (CBL) aims to enhance 21st-century skills in students attending small-sized schools. It comprises the following components:

1) Model Components: - Self-directed and active learning: Promotes proactive engagement of learners in their own educational process.

Experiential learning involves students engaging in practical activities related to civic duty, culture, and social life.

Collaborative knowledge exchange emphasizes brainstorming and group discussions for the sharing of ideas and perspectives.

Real-world application: Students utilize knowledge in practical community settings beyond the classroom.

2) Model Objectives: - To improve students' skills relevant to the 21st century.

To enhance academic performance in social studies.

To enhance student satisfaction with the instructional methodology.

3) The model comprises five instructional steps.

Students are presented with pertinent societal issues in social studies contexts.

Integrating social studies thinking involves learners analyzing issues and linking them to disciplinary content.

Students generate outputs in social studies that reflect their learning and analysis.

Dissemination of social studies products involves learners sharing their work with peers or the broader community.

Students participate in reflective evaluation and peer review activities.

4) Conditions for Implementation: Teachers are essential in fostering critical and higher-order thinking, facilitating project-based learning (PBL) and challenge-based learning (CBL) processes, and encouraging community engagement.

Students engage with educators, classmates, and community members via collaborative learning experiences that incorporate 21st-century skills.

Students participate in collaborative efforts and provide mutual assistance during the learning process.

Educators supply suitable media, materials, technology, tools, and personnel or learning environments to enhance and support instructional activities.

Educators facilitate access for students to a variety of technological tools, digital media, and educational resources.

Figure 1 presents a visual representation of the model and its components

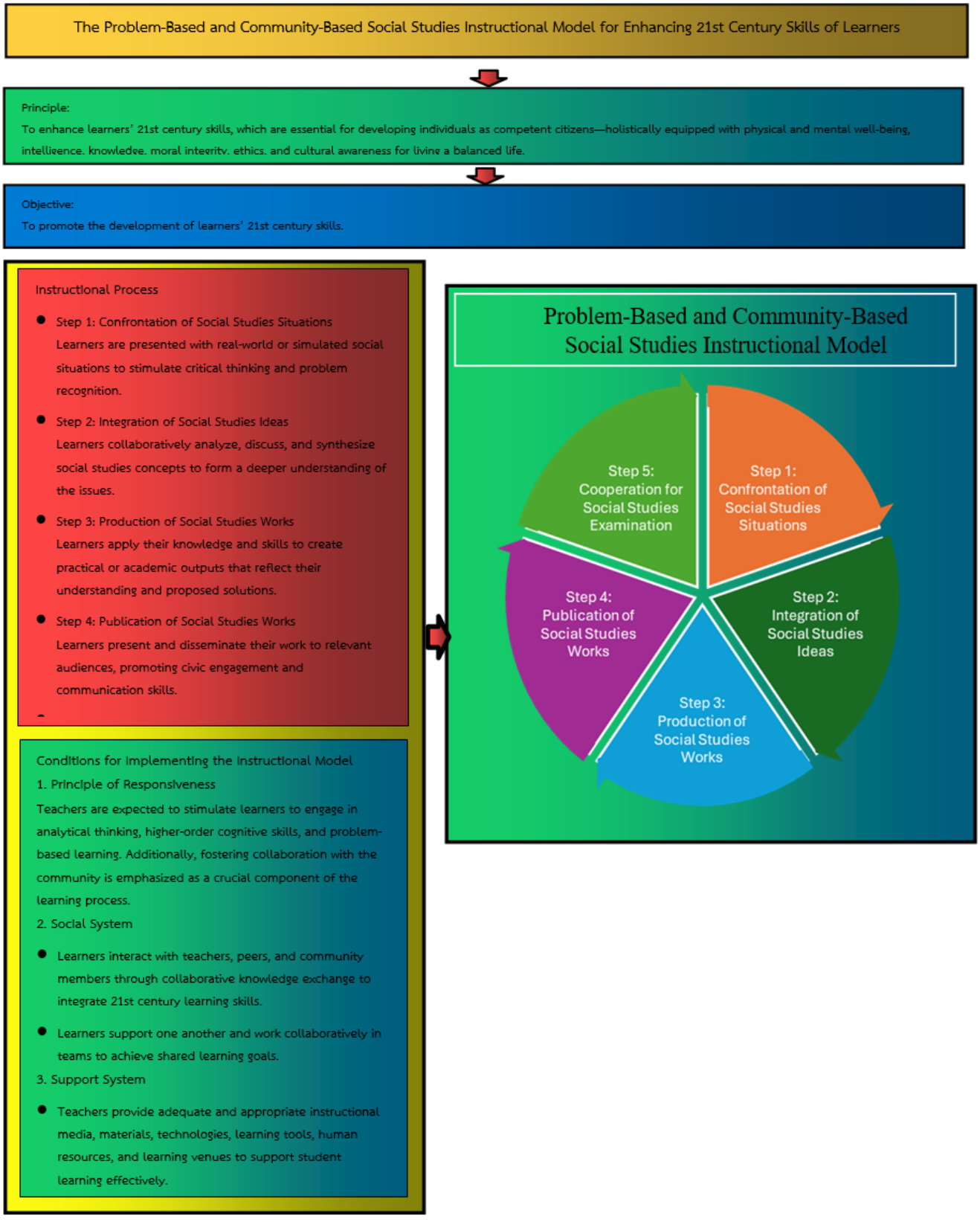

Figure 1.
Development of a Problem-Based and Community-Based Social Studies Instructional Model.

6.2. Results of using the Social Studies Instructional Model that combines Problem-Based and Community-Based Learning to improve 21st-Century Skills in students from small schools.

6.2.1. Assessment of Students' 21st-Century Skills

This study examined the 21st-century skills of students instructed through an integrated instructional model versus those educated via traditional methods. We conducted an independent samples t-test to evaluate the hypothesis, and Table 1 displays the results.

Table 1.
Assessment of 21st-Century Skills among Students in Small-Sized Schools Using PBL-CBL Instructional Model versus Traditional Instruction.

21st-Century Skill Dimension	Test Time	Group	Max Score	Mean	S.D.	Level	t	p
Learning and Innovation Skills	Pre-test	Experimental	5	2.55	0.39	Moderate	1.20	0.24
		Control	5	2.37	0.41	Fair		
	Post-test	Experimental	5	4.24	0.55	High	2.37	0.02*
		Control	5	3.75	0.56	High		
Information, Media, and Technology Skills	Pre-test	Experimental	5	2.39	0.28	Fair	2.87	0.00*
		Control	5	2.15	0.17	Fair		
	Post-test	Experimental	5	3.50	0.76	High	1.76	0.09
		Control	5	3.11	0.42	Moderate		
Life and Career Skills	Pre-test	Experimental	5	2.73	0.25	Moderate	2.17	0.03*
		Control	5	2.46	0.39	Fair		
	Post-test	Experimental	5	4.26	0.35	High	2.73	0.01*
		Control	5	3.90	0.37	High		
Overall (3 Dimensions)	Pre-test	Experimental	5	2.56	0.33	Moderate	3.09	0.00*
		Control	5	2.33	0.36	Fair		
	Post-test	Experimental	5	4.00	0.67	High	3.18	0.00*
		Control	5	3.58	0.57	High		

Note: * Statistically significant at the .05 level.

Table 1 shows the average scores for 21st-century skills in three areas: learning and innovation skills, information, media, and technology skills, and life and career skills, for both the experimental and control groups before and after the teaching program. The results may be analyzed in the following manner:

Before instruction, the experimental group exhibited a mean score of 2.56 and a standard deviation of 0.33. This result suggests a moderate level of 21st-century skills based on the evaluation criteria. The control group exhibited a mean score of 2.33 and a standard deviation of 0.36, indicating a fair level of competency.

Post-intervention, the experimental group recorded a mean score of 4.00 (SD = 0.67), whereas the control group achieved a mean score of 3.58 (SD = 0.57). Post-instruction scores for both groups are categorized within the high level of 21st-century skills development.

The results show that although both teaching methods improved student skills, the combined problem-based and community-based approach used in the experimental group had a greater impact on developing students' 21st-century skills.

The comparison of average scores for 21st-century skills—covering learning and innovation skills, information, media, and technology skills, along with life and career skills—between the experimental and control groups, done using an independent samples t-test, showed a significant difference at the .05 level ($t = 3.09$, $p = .00$). This means that the students' 21st-century skills in all three areas were different between the two groups before the teaching began. The finding suggests that the students' 21st-century skills across all three areas varied between the two groups prior to the instructional intervention.

A comparison of post-instruction mean scores between the two groups revealed a statistically significant difference at the .05 level ($t = 3.17$, $p = .00$). The results indicate a significant difference in the students' 21st-century skills across the three domains between the experimental and control groups following the intervention.

6.2.2. Analysis of Academic Performance in Social Studies

The success of the teaching method was evaluated by looking at how well students in the experimental group, who learned through the integrated problem-based and community-based learning (PBL-CBL) model, did in social studies compared to students in the control group, who had regular teaching. An independent samples t-test was done, and the results are shown in Table 2. We performed an independent samples t-test, and Table 2 details the results.

Table 2.
Presents a comparison of academic achievement scores in social studies between the experimental and control groups.

Test Time	Group	N	Mean Score	S.D.	t	p
Pre-test	Experimental	30	17.40	5.69	2.68	0.02*
	Control	30	13.13	2.32		
Post-test	Experimental	30	23.60	4.83	3.65	*0.00
	Control	30	18.73	1.79		

Note: * Statistically significant at the .05 level

Based on Table 2, the comparison of academic achievement in social studies between the experimental and control groups—both before and after the intervention—revealed notable findings. For the experimental group, the mean post-test score ($M = 23.60$, $SD = 4.83$) was higher than the pre-test score ($M = 17.40$, $SD = 5.69$). Similarly, the control group

demonstrated improvement, with a post-test mean score (M = 18.73, SD = 1.79) exceeding the pre-test score (M = 13.13, SD = 2.32).

An independent samples t-test looking at the pre-test scores of the two groups showed a significant difference at the .05 level (t = 2.68, p = .02), meaning the two groups had different starting academic performance in social studies. Furthermore, a comparison of post-test scores also revealed a statistically significant difference (t = 3.65, p = .00), indicating that students in the experimental group outperformed those in the control group after the intervention. These results suggest that the integrated problem-based and community-based instructional model had a greater positive impact on students' academic achievement in social studies compared to traditional instruction.

6.2.3. Student Satisfaction Toward the Instructional Model

The level of student satisfaction with the social studies teaching method that combines problem-based learning and community-based learning—created to help students in small schools develop 21st-century skills—was evaluated and is shown in Table 3.

Table 3.
Student Satisfaction Toward the Social Studies Instructional Model Integrating Problem-Based and Community-Based Learning (n = 15 students).

Aspects of Satisfaction	Mean	S.D.	Level of Satisfaction	Rank
Learning Content	4.60	0.32	Highest	3
Learning Activities	4.46	0.39	High	4
Instructional Media and Resources	4.70	0.33	Highest	1
Assessment and Evaluation	4.65	0.30	Highest	2
Overall Satisfaction	4.60	0.33	Highest	—

Table 3 shows that students are very satisfied with the teaching method that mixes problem-based learning and community-based learning to improve 21st-century skills in small schools, with an average score of 4.60 (SD = 0.33). The analysis showed that students rated instructional media and learning resources the highest at 4.70, followed by assessment and evaluation at 4.65, learning content at 4.60, and learning activities at 4.46. The findings indicate that students had a favorable response to the accessibility and effectiveness of the learning resources and assessment strategies utilized in the instructional model.

7. Discussion

This study discusses the research findings in relation to its objectives. The findings can be succinctly summarized and analyzed as follows:

1. Evolution of Social Studies An instructional model that combines problem-based and community-based learning

The CIPPC Model was developed to improve 21st-century skills in students at small-sized schools through the integration of problem-based learning (PBL) and community-based learning (CBL). The model received validation from five specialists, with an overall evaluation demonstrating high appropriateness, reflected in mean scores of 4.80 to 5.00 and standard deviations of 0.00 to 0.45. The findings validate the structural coherence and practical applicability of the model for instructional purposes.

The elevated appropriateness ratings result from the model's systematic development, which is consistent with the principles of effective 21st-century education. The design promotes active learning, real-world problem-solving, and community engagement, which are essential in contemporary educational settings.

The findings align with the research conducted by Koculu, et al. [8] which highlights the necessity for learners in the digital age to cultivate digital, learning, and life skills. Their research indicates that educators ought to develop experiential learning opportunities to enhance comprehension of societal contexts. Kuloğlu [9] identified that effective skill development necessitates a learning environment encompassing in-school, out-of-school, and online enrichment activities.

The study corroborates the findings of Chotika and Pinanta [10] emphasizing the significance of fostering a positive classroom environment, whether physical or virtual, to enhance effective learning outcomes. The studies underscore the significance of the CIPPC model in synthesizing various instructional methods to improve students' competencies in accordance with global educational trends.

I can assist in continuing the discussion section for objectives 2.1–2.3 or in structuring the entire article for journal submission.

7.1. Outcomes of the Instructional Model Implementation

Assessment of 21st-Century Skills in Students from Small-Sized Schools

The test results on 21st-century skills, taken before and after teaching, showed that students in the experimental group, who learned through the combined problem-based and community-based learning (PBL-CBL) model, had much better skill levels after instruction compared to the control group. The observed difference was statistically significant at the .05 level, thereby supporting Research Hypothesis 1. Students instructed through the PBL-CBL social studies model demonstrated markedly superior 21st-century skills compared to their peers taught via traditional instructional methods.

This outcome can be linked to the instructional model's focus on active engagement with real-world community issues. The collaborative engagement of teachers, students, and community members facilitated the development of diverse

competencies among learners, both in and out of the classroom. This approach, centered on the learner, facilitated the application of knowledge in authentic contexts, enhancing both understanding and skills.

The findings align with James [11] which indicates that the integration of problem-based and community-based learning fosters interdisciplinary engagement. Students collaborated to discuss issues, analyze problems, and utilize prior knowledge and experiences to gather and evaluate necessary information for proposing viable solutions, resulting in improved learning outcomes.

Kök and Duman [12] found that learning facilitated by questioning, dialogue, and the application of knowledge in community contexts promotes reflective and adaptable thinking, thereby enhancing learning development.

Shah, et al. [13] highlighted that PBL-CBL enhances hands-on engagement and cultivates skills including inquiry, critical discussion, and independent problem-solving. This process fosters higher-order thinking skills such as analysis, evaluation, synthesis, and creativity, resulting in enhanced and meaningful learning outcomes.

The study by Sever, et al. [14] supports these results, showing that the PBL-CBL approach helps students build knowledge by planning, analyzing, researching, asking questions, and discussing. This process improves students' capacity to summarize information and facilitates ongoing learning development.

7.2. A Comparative Analysis of Academic Achievement in Social Studies Pre- and Post-Instruction Utilizing the PBL-CBL Model Versus Traditional Teaching Methods

The results showed that students who learned using the social studies model that mixes problem-based learning and community-based learning (PBL-CBL) scored much higher on tests after instruction compared to those in the control group. The difference was statistically significant at the .05 level, thus supporting Research Hypothesis 2.

This outcome can be attributed to the model's focus on active participation and experiential learning in the domains of civic duty, culture, and social life. The instructional process promoted student engagement, practical application, and interaction among learners, educators, and the broader community. Such conditions facilitate a more profound understanding and enhance meaningful learning outcomes.

The findings align with those of Thongchaloem [15] who established that community-based learning processes significantly improved problem-solving skills among elementary students. The learning model demonstrated high instructional efficiency, achieving the 75/75 standard, with post-test scores significantly exceeding pre-test scores at the .05 level.

Thiamyot [16] similarly found that the integration of community-based learning with digital media enhances lifelong learning skills via practical engagement. The study indicated a statistically significant rise in post-test scores, with students exhibiting collaborative interaction both within and beyond the classroom.

Thongchaloem [15] found that post-instruction scores significantly surpassed pre-instruction scores at the .01 level in the context of community-based learning. This method facilitated the construction of new knowledge from prior experiences and encouraged self-regulated and social learning via direct community engagement.

Onkon [17] found that pre-service teachers demonstrated significant improvement in their knowledge following participation in integrated, practice-based learning activities. Engagement in genuine community scenarios, facilitated by educators, learners, and local stakeholders, improved instructional quality and fostered a diverse array of competencies and skills.

The repeated results from different studies show that the PBL-CBL instructional model helps improve academic success by creating valuable learning experiences that go beyond just the classroom.

7.3. Student Satisfaction Regarding the Instructional Model

The results about how happy students are with the social studies teaching method that uses problem-based learning and community-based learning (PBL-CBL) showed they are very satisfied, with an average score of 4.60 (SD = 0.33). This provides support for Research Hypothesis 3. A potential explanation for the elevated satisfaction levels is the teacher's focus on fostering higher-order thinking skills, such as analytical, critical, and creative thinking and problem-solving. Students were encouraged to develop collaboration, adaptability, leadership, and communication skills. The experiential aspect of the learning process, along with prompt feedback, improved student competencies like information literacy and media awareness, thereby fostering the development of essential 21st-century skills.

The findings are consistent with the research of [18] which underscores the necessity of effective social studies instruction in fostering higher-order thinking skills in both classroom and external contexts. Skills such as critical thinking, systems thinking, analysis, synthesis, and creativity facilitate student development by enhancing action, decision-making, and problem-solving abilities.

Ozalp and Akpinar [19] identified that teachers' instruction in creative and critical thinking had a significant impact on the development of students' cognitive abilities. It is recommended that educators pose thought-provoking questions, facilitate connections between concepts, and assist students in developing meaningful responses.

Burnett and Cuevas [20] asserted that effective history instruction must emphasize critical thinking through experiential learning, both in and out of the classroom. This approach promotes the analysis, synthesis, and formulation of reasoned and ethical judgments among students, thereby improving academic performance and cultivating favorable attitudes toward the study of social studies and history.

The elevated student satisfaction indicates the model's effectiveness in fostering an engaging and empowering learning environment that supports cognitive and affective development.

7.4. A New Body of Knowledge from the Study

This study yielded significant insights into the teaching of social studies at the primary education level, particularly in the context of small schools. The primary contributions can be synthesized as follows:

CIPPC Model: A Social Studies Learning Framework Emphasizing Problem-Solving and Community Engagement

The CIPPC model was developed to enhance 21st-century skills through five core instructional processes:
(1) Confrontation of Social Studies Situations – Engaging students with authentic community-based issues.
(2) Integration of Social Studies Ideas – Facilitating the synthesis and analysis of relevant knowledge.
(3) Production of Social Studies Works – Encouraging students to generate original outputs informed by their learning.
(4) Publication of Social Studies Works – Promoting the dissemination and public sharing of student-created work.
(5) Cooperation for Social Studies Examination – Encouraging collaboration among peers and the wider community for reflection and refinement.

Effective Integration of Project-Based and Community-Based Learning Approaches

The model integrates elements of Problem-Based Learning (PBL) and Community-Based Learning (CBL), creating opportunities for students to link academic content with real-life contexts. This integration supports the construction of knowledge through experiential learning, thereby promoting deeper understanding.

Promotion and Assessment of 21st-Century Learning Competencies

The instructional framework successfully fosters three key domains of 21st-century competencies:
(1) Learning and innovation skills,
(2) Information, media, and technology skills, and
(3) Life and career skills.

A comprehensive evaluation system was implemented, encompassing cognitive, affective, and behavioral learning outcomes.

Establishment of a Learning Community Linking Schools and Local Contexts

The CIPPC model strengthens partnerships between educational institutions and local communities. It enables students to learn from community members, indigenous knowledge, and authentic local experiences—thus enhancing their lifelong learning capabilities and civic engagement.

A Novel Pedagogical Framework for Skill Development Across Disciplines

This study led to the development of an innovative instructional framework that is applicable across subject areas. The framework underscores the importance of creative, context-based learning and emphasizes the active participation of students in the learning process.

8. Conclusion

The CIPPC model not only improves academic achievement but also provides a sustainable instructional approach for developing essential 21st-century competencies in primary education. Its implementation is particularly beneficial for small schools with limited resources, serving as a catalyst for learner empowerment and community-school integration.

9. Recommendations

9.1. This Study Presents the Following Recommendations

9.1.1. Recommendations for Implementing the Research Outcomes

The findings demonstrated that the instructional model, which combines problem-based learning with community-based learning, successfully enhanced varied learning experiences for students in small-sized schools. During a 20-week implementation period, students in the experimental group exhibited superior post-test scores in civic duty, culture, and social life. Students involved in active, self-directed learning engaged in practical tasks, collaborated through brainstorming, and utilized their knowledge in genuine community settings.

The instructional process focused on experiential learning, utilizing real-world community issues as the basis for instructional activities. The collaboration among educators, learners, and community stakeholders facilitated the development of higher-order thinking skills, including analysis, critical thinking, creativity, and problem-solving. Furthermore, students cultivated collaboration, adaptability, and intercultural understanding.

The results indicated that students in small-sized schools believed that problem- and community-based learning improved their analytical and problem-solving skills in real-world situations. Students utilized their knowledge by planning and reflecting on their learning processes, thereby creating significant links between classroom education and community involvement.

9.1.2. Recommendations for Future Research

Future studies should investigate the impact of implementing problem- and community-based learning across various subject areas to enhance essential skills and knowledge, thereby improving the effectiveness of both in-school and out-of-school learning.

It is advisable to broaden learning models to incorporate additional project-based and field-based elements. Such inclusion would enable learners to acquire genuine experiences. Future research could examine the impact of varying academic achievement levels on the development of 21st-century skills.

Learning activities must be tailored to align with the distinct attributes of local communities. These initiatives should be tested and modified to enhance 21st-century skills across diverse community settings. Future research should

incorporate evaluations of learners' attitudes, satisfaction, and skill development across various instructional models for comparative analysis.

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