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Learning Management to Promote Future Skills for Student Teachers: A Case Study of Social Studies Student Teachers at Songkhla Rajabhat University, Thailand

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Abstract

This mixed-methods case study examined instructional management and future-skill needs in higher-education social studies teacher preparation, developed community-based learning activities for the Social Studies Pedagogy course, and examined changes in six future-skill domains among student teachers. The participants were 30 third-year Social Studies student teachers enrolled at Songkhla Rajabhat University in the first semester of the 2025 academic year. Qualitative data were obtained from curriculum and document analysis, expert interviews, observations, and reflections; quantitative data were obtained from achievement measures, activity and lesson-plan evaluations, and pre- and post-intervention assessments of future skills. The six domains identified and used consistently throughout the study were digital skills, lifelong learning skills, social skills, creativity and innovation skills, flexibility and adaptability skills, and critical thinking skills. The community-based lesson plans achieved an efficiency index of 88.25/88.75. Learning-achievement scores increased from M = 14.23 (SD = 1.41) to M = 18.07 (SD = 1.28), $t(29) = 17.84$, $p < .001$, Cohen's $dz = 3.26$. Descriptively, the overall future-skill mean increased from 4.701 (SD = 0.702) before the intervention to 5.225 (SD = 0.549) after the intervention. Because the study used one intact cohort without a control group, the findings should be interpreted as evidence of change within this course context rather than as proof of causal effectiveness. The study contributes a contextually grounded model for connecting community-based social studies learning with future-skill development in teacher education.

Keywords: community-based learning, future skills, social studies teacher education, pre-service teachers, higher education

1. Introduction

Teacher education is increasingly expected to prepare graduates not only with disciplinary and pedagogical knowledge but also with transferable capabilities for working in rapidly changing social, technological, and professional environments. Recent scholarship on future skills in higher education highlights digital competence, critical and creative thinking, communication and social-emotional capacities, adaptability, and lifelong learning as recurring domains that should be intentionally embedded in university curricula (Kotsiou et al., 2022; Zainor et al., 2025). Research with pre-service teachers likewise indicates that teacher-education programs can play an important role in cultivating future-oriented competencies, while also showing that some capabilities require more explicit opportunities for authentic problem solving and application (Eid & Al-Senaidi, 2025).

In Thailand, this agenda is aligned with the Ministerial Regulation on Higher Education Qualifications Standards B.E. 2565 (2022), the 13th National Economic and Social Development Plan (2023-2027), and institutional expectations that teacher graduates should be able to respond to changing educational and community contexts. For Social Studies student teachers, future-oriented competence is especially important because the field requires the integration of disciplinary knowledge with civic, cultural, economic, historical, geographical, digital, and community-based learning.

Community-based learning offers one means of linking these competencies to authentic contexts. Simsawat (2022) describes community-based learning as a learning strategy suited to 21st-century conditions, while Jarupongputtana et al. (2022) show that interdisciplinary community-based learning can connect digital citizenship, experiential learning, lifelong learning, and community knowledge in the preparation of Thai social

studies pre-service teachers. More recent social studies research in southern Thailand has also demonstrated the potential of problem-based and community-based approaches to support 21st-century learning skills through locally situated activities (Phinla et al., 2025).

At Songkhla Rajabhat University, the Social Studies Pedagogy course provides a suitable context for integrating academic content with community inquiry because the course addresses instructional design across religion and ethics, civics and culture, economics, history, and geography. The university's local-development mission also encourages teacher candidates to connect professional learning with community knowledge and real-world situations. In this study, community-based tasks required students to investigate local topics, collaborate in teams, produce written reports and presentations, and design learning activities grounded in community contexts.

1.1 Conceptualization of Future Skills

To avoid treating future skills as an arbitrary list, this study conceptualized them through triangulation of recent future-skills literature, Thai higher-education policy documents, curriculum analysis, and expert review. Six domains were retained because they were consistently relevant to teacher preparation and to the learning tasks in the Social Studies Pedagogy course: (1) digital skills, or the ability to use digital tools and information purposefully and responsibly; (2) lifelong learning skills, or the capacity for self-directed, continuous learning and knowledge updating; (3) social skills, or communication, collaboration, and constructive participation with others; (4) creativity and innovation skills, or the ability to generate, adapt, and communicate useful ideas and products; (5) flexibility and adaptability skills, or the capacity to adjust strategies and behavior when contexts, constraints, or roles change; and (6) critical thinking skills, or the ability to analyze information, evaluate evidence, reason systematically, and make justified judgments. These domains overlap with recent syntheses of future skills for teachers, particularly digital technology, communication, lifelong learning, and socioemotional competence (Zainor et al., 2025), and with broader future-skills frameworks that emphasize higher-order and transferable capabilities (Kotsiou et al., 2022).

1.2 Research Gap and Contribution

Although future skills are increasingly discussed in higher education, three gaps remain relevant to this study. First, much of the literature identifies desired competencies at the framework or perception level rather than examining how they are embedded in a specific teacher-education course. Second, research in teacher education has often focused on general or digital competence, while empirical work connecting multiple future-skill domains with social studies pedagogy remains limited. Third, Thai research has established the value of community-based learning for social studies and digital citizenship, but fewer studies have examined a bounded higher-education course in which student teachers investigate local communities, create social studies learning products, and are assessed before and after the learning process. This study addresses these gaps by documenting a course-based community-learning design, specifying the six skill domains used, and reporting learning-process and pre/post descriptive evidence from a cohort of Social Studies student teachers. The study is intentionally framed as a context-specific case rather than a causal effectiveness trial.

1.3 Objectives of the Research

1) To examine instructional management and essential future-skill needs in higher-education social studies instruction.

2) To develop community-based learning activities and lesson plans intended to enhance learning achievement and future skills among Social Studies student teachers.

3) To examine changes in six future-skill domains among Social Studies student teachers after participation in community-based learning.

2. Research Methodology

This study used a mixed-methods, single-group case-study design. Qualitative evidence was used to identify future-skill needs, refine the learning activities, and interpret the implementation process. Quantitative evidence was used to summarize lesson-plan efficiency, achievement-related outcomes, and pre/post future-skill scores. The quantitative component should be understood as a one-group pretest-posttest evaluation of an intact course cohort rather than as a controlled experiment. This design was appropriate for examining an instructional innovation within a naturally occurring class, but it does not rule out alternative explanations for observed changes.

2.1 Participants and Informants

The quantitative sample consisted of 30 third-year undergraduate students majoring in Social Studies in the

Faculty of Education, Songkhla Rajabhat University, who were enrolled in the Social Studies Pedagogy course during the first semester of the 2025 academic year. The class was selected purposively as the bounded case, and participation in the research component was voluntary after the study objectives had been explained. Because the intervention was implemented in one intact class within one department, the sample is appropriate for a course-level case study but is not intended to represent all pre-service teachers in Thailand.

Three internal and external experts in social studies education and teacher education were purposively selected to review curriculum documents, course descriptions, lesson plans, and the proposed future-skill domains. Curriculum instructors and relevant experts also contributed qualitative data through interviews, observation, reflection, and discussion.

2.2 Learning Intervention

The intervention was embedded in the Social Studies Pedagogy course and emphasized community-based learning linked with the geographic inquiry process. Students worked through five recurring phases: Motivation, Practice, Sharing, Summarizing, and Application of Knowledge. Within these phases, they asked questions, acquired and organized information, analyzed community-based evidence, collaborated with peers, produced reports and presentations, and designed instructional products based on local issues and resources. The activities were designed to provide repeated opportunities to exercise the same six future-skill domains identified in the conceptual framework.

2.3 Research Instruments

The qualitative instruments comprised document-analysis forms, structured or semi-structured interview records, observation forms, and focus-group/reflection records. Quantitative instruments comprised end-of-unit review questions, an academic achievement test, evaluation forms for learning activities and lesson plans, a post-learning process assessment, and a future-skills assessment used before and after the intervention. Three experts examined the congruence and appropriateness of the lesson plans and instruments. Item-objective congruence (IOC) was used as evidence of content alignment; items with IOC values from 0.50 to 1.00 were retained.

2.4 Data Analysis

Qualitative data from documents, interviews, observations, and reflections were analyzed inductively to identify recurring needs, instructional considerations, and evidence of how the community-based learning process operated. Quantitative data were summarized using frequency, percentage, mean, and standard deviation. Lesson-plan efficiency was expressed as E1/E2, representing formative/process efficiency and summative/product efficiency.

For the pre/post learning-achievement scores, a paired-samples t-test was used because the same 30 students were assessed before and after the intervention. Future-skill domain scores were summarized descriptively using means and standard deviations because the available retained dataset for this manuscript contained aggregate domain scores rather than matched item-level records for inferential reanalysis. Effect size for the paired achievement comparison was reported as Cohen's dz, calculated as the mean of the paired differences divided by the standard deviation of those differences.

The paired achievement analysis was completed using the 30 matched pre-test and post-test scores retained for the course cohort.

2.5 Ethical Approval

This study was reviewed and approved by the Research Ethics Committee for Human Subjects at Songkhla Rajabhat University, Thailand (Approval No. 043/2025). All participants provided informed consent before participation. Participation was voluntary, participants could withdraw without penalty, and confidentiality and anonymity were maintained. Data supporting the findings may be requested from the corresponding author, subject to ethical and privacy restrictions.

3. Results

3.1 Identification of the Six Future-Skill Domains

Document analysis, curriculum analysis, expert input, and literature synthesis resulted in six domains used consistently throughout the study: digital skills; lifelong learning skills; social skills; creativity and innovation skills; flexibility and adaptability skills; and critical thinking skills. These six domains were used in the intervention design, the skill assessment, Table 2, the interpretation of findings, and the synthesized instructional framework.

3.2 Efficiency of the Community-Based Lesson Plans

The community-based lesson plans were evaluated against the established efficiency criterion. The mean formative/process score was 71.58 out of 80 (SD = 2.10), corresponding to E1 = 88.25. The mean summative/product score was 18.52 out of 20 (SD = 1.28), corresponding to E2 = 88.75. The resulting efficiency index was therefore 88.25/88.75.

Table 1. Efficiency of the Social Studies Pedagogy lesson plans

N	Process full score	Process M	Process SD	E1	Product full score	Product M	Product SD	E2	E1/E2
30	80	71.58	2.10	88.25	20	18.52	1.28	88.75	88.25/88.75

3.3 Pre- and Post-Intervention Learning Achievement

Students' learning-achievement scores increased from a pre-test mean of 14.23 (SD = 1.41) to a post-test mean of 18.07 (SD = 1.28). A paired-samples t-test showed that the increase was statistically significant, $t(29) = 17.84$, $p < .001$. The mean paired increase was 3.83 points (95% CI [3.39, 4.27]), with a large within-person effect size (Cohen's dz = 3.26). These results indicate a substantial improvement in achievement within this cohort; however, because the study did not include a control group, the result should not be interpreted as definitive evidence that the intervention alone caused the gain.

Table 2. Paired-samples t-test for learning achievement before and after the intervention

Measure	N	Mean	SD	Mean diff.	t	df	p
Pre-test	30	14.23	1.41				
Post-test	30	18.07	1.28	3.83	17.84	29	< .001

3.4 Pre- and Post-Intervention Future-Skill Scores

Before the intervention, the overall future-skill mean was 4.701 (SD = 0.702). After the intervention, the overall mean was 5.225 (SD = 0.549). Five domains showed clear descriptive increases: lifelong learning, social skills, creativity and innovation, flexibility and adaptability, and critical thinking. Digital skills were already high at baseline and increased slightly from 5.61 to 5.65. Because matched item-level future-skill records were not retained for reanalysis, these domain results are reported descriptively and are not presented as inferential evidence.

Table 3. Future-skill scores before and after the community-based learning intervention

Future-skill domain	Pre M	Pre SD	Post M	Post SD	Mean change	Interpretation
Digital skills	5.61	0.673	5.65	0.556	+0.04	Descriptive increase
Lifelong learning skills	4.65	0.681	5.15	0.611	+0.50	Descriptive increase
Social skills	4.52	0.679	5.07	0.567	+0.55	Descriptive increase
Creativity and innovation skills	4.16	0.765	5.20	0.535	+1.04	Descriptive increase
Flexibility and adaptability skills	4.82	0.684	5.45	0.512	+0.63	Descriptive increase
Critical thinking skills	4.45	0.732	5.43	0.515	+0.98	Descriptive increase
Overall	4.701	0.702	5.225	0.549	+0.524	Descriptive increase

3.5 Student Learning Products

All five student groups completed the required community-based reports and presentations and met the course evaluation criterion. The topics were Kai Nui Temple Tour; the legend of Pu Bhujanga Naga and Ya Thongkham; local wisdom of Koh Yo handwoven fabric; traditional local fishing tools; and three-water Asian sea bass. Presentation scores ranged from 93% to 98%, while report scores ranged from 93% to 98%. These products provide evidence that students were able to complete the assigned inquiry and instructional-design tasks; however, product scores alone should not be interpreted as causal evidence of future-skill development.

Table 4. Results of student community-based learning products

Topic	Presentation (%)	Report (%)	Evaluation
Kai Nui Temple Tour	93.00	93.00	Pass
The Legend of Pu Bhujanga Naga and Ya Thongkham	95.00	95.00	Pass
Local Wisdom of Koh Yo Handwoven Fabric	94.00	95.00	Pass
Traditional Local Fishing Tools	96.00	95.00	Pass
Three-Water Asian Sea Bass	98.00	98.00	Pass

4. Discussion

The findings support the use of community-based learning as a context for integrating future skills into social studies teacher education. The intervention required students to move beyond classroom-only knowledge by investigating community topics, collaborating with peers, organizing evidence, presenting interpretations, and designing instructional products. This is consistent with Jarupongputtana et al. (2022), who positioned community-based and interdisciplinary learning as a pathway for developing digital citizenship and lifelong-learning-related competencies among Thai social studies pre-service teachers.

The six-domain framework used in this study is also supported by more recent future-skills research. Zainor et al. (2025) identified digital technology, communication, lifelong learning, and socioemotional skills as recurring priorities for future teachers, while Eid and Al-Senaidi (2025) found that teacher-education courses can support future-skill development but should provide stronger opportunities for non-routine problem solving and diverse perspectives. In the present study, the largest descriptive increases occurred in creativity and innovation and critical thinking, both of which were explicitly exercised through community inquiry, group problem solving, and product development.

Digital skills showed only a small descriptive increase. One plausible interpretation is a ceiling effect because the baseline mean was already high. This interpretation should be treated cautiously because the manuscript does not report item-level distributions or paired inferential statistics. The result nevertheless suggests that future iterations of the course may need more demanding digital tasks—such as digital mapping, multimedia evidence synthesis, data visualization, or community-facing digital products—if the objective is to generate measurable growth in digital competence.

The study's local emphasis is a strength because it situates skill development in authentic social studies content. Recent work on community-based and problem-based social studies likewise emphasizes that local contexts can provide meaningful settings for 21st-century learning (Phinla et al., 2025). At the same time, the present results should not be generalized beyond the cohort without further evidence. A single-group design cannot separate the effects of the intervention from maturation, concurrent coursework, testing effects, or other contextual influences.

5. Conclusion

This study developed and implemented a community-based learning approach in the Social Studies Pedagogy course to connect local inquiry with six clearly defined future-skill domains: digital skills, lifelong learning skills, social skills, creativity and innovation skills, flexibility and adaptability skills, and critical thinking skills. The lesson plans achieved an efficiency index of 88.25/88.75, and learning-achievement scores increased significantly from $M = 14.23$ ($SD = 1.41$) to $M = 18.07$ ($SD = 1.28$), $t(29) = 17.84$, $p < .001$, Cohen's $dz = 3.26$. All student groups completed the required community-based products, while the future-skill domain scores also showed descriptive improvement overall.

The main contribution is not a claim of causal effectiveness but a documented course-level model showing how future-skill development can be embedded in social studies teacher preparation through community inquiry, collaboration, geographic processes, reflection, and application. The model can inform subsequent studies that use larger multi-site samples, validated skill measures, comparison or control groups where feasible, and complete reporting of paired inferential statistics and effect sizes.

5.1 Synthesized Instructional Framework

Motivation → Practice → Sharing → Summarizing → Application of Knowledge

Integrated across: Digital Skills | Lifelong Learning Skills | Social Skills | Creativity and Innovation Skills | Flexibility and Adaptability Skills | Critical Thinking Skills

6. Limitations and Future Research

The study has several limitations that should be considered when interpreting the findings. First, the sample comprised only 30 students from one Social Studies program and one course, limiting transferability to other institutions or teacher-education contexts. Second, the study did not include a control or comparison group; therefore, the statistically significant pre/post achievement difference cannot be attributed exclusively to the community-based intervention. Third, future-skill domain results are reported descriptively because matched item-level future-skill records were not available for reanalysis. Future research should use larger and more diverse samples, report instrument reliability and construct validity in greater detail, include comparison conditions where feasible, retain matched domain-level data, and report confidence intervals and effect sizes for all major outcomes.

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Author contributions

Khwandaw Pinthongpunth was responsible for conceptualization, study design, data collection, analysis, interpretation, and preparation and revision of the manuscript.

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Competing interests

The author declares that there are no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Informed consent

Obtained.

Ethics approval

Approved by the Research Ethics Committee for Human Subjects at Songkhla Rajabhat University, Thailand (Approval No. 043/2025).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available from the corresponding author upon reasonable request, subject to ethical and privacy restrictions.

Data sharing statement

No additional data are publicly available.

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