

UMGCINMATIC 2025

Development of a Spatial Education Management Program to Enhance Employability Skills of Junior High School Students at Ban Wang Taen School, Loei Province

Prakit Singthong ^{a 1}

^a Ban Wang Taen School, Phanoi Distric, Wangsaphung 42130, Loei Province, Thailand

Abstract

This research aimed to design and evaluate the effectiveness of a spatial education management program to enhance employability skills for junior high school students at Ban Wang Taen School, Loei Province, focusing on the local context of agriculture, tourism, and small-scale trade. The study employed a quasi-experimental research design with a one-group posttest-only approach. The sample consisted of 54 junior high school students in the 2025 academic year. The developed program, named "Hug Loei Craft," integrated 7 sub-activities that incorporated knowledge and skills in 7 areas: leadership and teamwork, problem-solving and adaptability, technological skills, tourism interest, empathy and social awareness, health and well-being interest, and language proficiency. It utilized the Design Thinking process and was validated by experts. The results showed that the program aligned with most components, except for the learning time structure, which was adjusted to supplementary activities. Post-implementation, students' employability skills exceeded the good level benchmark (70% or higher), with third-year junior high students achieving the highest average scores. Overall satisfaction with the program was high (mean = 4.20), particularly in teacher instructional management. This research demonstrates that the program bridges the gap between education and employment, and it can be adapted for other schools to prepare youth for real-world careers in local contexts.

Keyword: Employability, Program, Spatial Education, Handicrafts, Thai Herb

1. Introduction

Loei Province is characterized by diverse social, cultural, and economic contexts, with the majority of its population engaged in agriculture, tourism, and small-scale trade, all of which require skills appropriate to the environment and changes in 21st-century society. Education management at the junior high school level plays a crucial role in laying the foundation for students to acquire the knowledge, abilities, and skills necessary for future employment.

Developing students at the junior high school level must not only enhance academic knowledge but also emphasize the cultivation of life skills, occupational skills, and essential competencies, such as analytical thinking, problem-solving, information technology usage, communication, and collaboration with others. These are key factors that enable students to adapt and confidently enter the professional world. Developing these abilities and skills is vital for creating opportunities, reducing inequality, and improving the quality of life for students in Loei Province, allowing them to grow into important forces for their communities and the nation in the future.

The development of junior high school students in Loei Province still faces several challenges, particularly in terms of abilities and skills necessary for employment, which are critical issues affecting the future of youth and local progress. Some students still have limitations in basic academic skills, including reading, writing, and calculation, making it difficult for them to apply these confidently in real-life work. Additionally, English and third-language skills are not sufficiently strong, despite Loei Province's potential in tourism and border trade, where communication is an essential tool. Furthermore, children and youth lack the cultivation of essential life skills for work, such as responsibility, discipline, communication, and teamwork. These skills are highly valued in the local labor market, especially in community-based tourism, processed agriculture, and service jobs, which require collaboration and joint problem-solving. Meanwhile, schools have not been able to concretely link learning to local occupations, leaving many students without training in modern agriculture, product processing, technology support for careers, or online marketing aligned with the local economic context.

Another issue is students' use of digital technology. Although most children have access to smartphones, their use for creative work, information seeking, media design, or online sales remains limited. At the same time, inequalities in access to devices and the internet persist in some areas of Loei Province, preventing widespread development of digital skills.

Most importantly, the career guidance system is not strong enough. Most students do not have a clear vision of their future paths. Experiential learning, such as short-term internships or learning from local entrepreneurs, is not organized continuously or systematically, resulting in students lacking inspiration and confidence in preparing for the working world.

Therefore, the problems regarding abilities and skills necessary for employment among junior high school students in Loei Province are not limited to knowledge but also include the lack of life skills, occupational skills, and digital skills aligned with the local context. Solving these issues requires collaboration between schools, communities, and relevant agencies to create meaningful learning that can be applied in real careers in the future.

2. Method

2.1 Participants

The informants were divided into 3 groups as follows:

Group 1 : Stakeholders, consisting of educational supervisors, school administrators, teachers, and community representatives, totaling 14 people, selected through purposive sampling for workshops to develop the school's education management program.

Group 2 : Experts, consisting of academics, education management specialists, and policy-level administrators, totaling 3 people, selected through purposive sampling to validate the school's education management program.

Group 3: Junior high school students in the 2025 academic year, totaling 54 people, selected through purposive sampling.

2.2 Measures

The data collection tools consisted of:

School education management program design record form: An open-ended questionnaire used in workshops to draft the school's education management program.

School education management program draft validation form: A checklist used to validate the draft program before implementation.

Student employability skills assessment form: A rubric divided into 4 quality levels: 4 = Excellent; 3 = Good; 2 = Fair; 1 = Needs Improvement.

Satisfaction questionnaire: A 5-level rating scale with 20 items to assess students' satisfaction with the school's education management program, where: 5 = Highest satisfaction; 4 = High satisfaction; 3 = Moderate satisfaction; 2 = Low satisfaction; 1 = Lowest satisfaction (Boonchom Srisard, 2017).

Tool Development and Quality Assurance:

The program design record form was developed by studying documents related to Design Thinking to define tool components, then creating open-ended questions. Content validity was checked by 5 experts, with IOC = 1.00 for all items. It was piloted in internal teacher meetings before use in stakeholder workshops.

The program validation form was developed by studying program evaluation research, creating a checklist. Content validity: IOC = 1.00. Piloted with 2 teachers, consistency = 70.83% (above 70%).

The employability skills assessment rubric was developed by studying related research, creating a 4-level rubric. Content validity: IOC = 1.00. Piloted with 2 teachers on the same student, ICC = 0.926 (high reliability).

The satisfaction questionnaire was developed by studying satisfaction measurement research, creating a 5-level scale with 20 items. Content validity: IOC = 1.00. Piloted with 30 students from another school, reliability analyzed.

2.3 Procedure and design

This development of the spatial education management program to enhance employability skills for junior high school students at Ban Wang Taen School was conducted from November 2024 to August 2025, implementing the school's education management program in the first semester of the 2025 academic year. It used a quasi-experimental research design with a one-group posttest-only design. The research procedures were as follows:

Analyze the current state and problems regarding employability skills of junior high school students.

Study local wisdom, community context, local occupations, and labor market needs in Loei Province.

Analyze students' abilities, skills, and aptitudes aligned with 7 employability components.

Synthesize employability skills from international and Thai literature, resulting in 7 components: (1) Leadership & Teamwork; (2) Problem-Solving and Adaptability; (3) Technological Skills; (4) Tourism Interest; (5) Empathy & Social Awareness; (6) Health and Well-being Interest; (7) Language Proficiency.

Analyze teachers' abilities, skills, and aptitudes aligned with the 7 components, and study community context, local wisdom, and learning resources.

Teachers observe students' behaviors in activities related to the 7 employability skills, noting strengths and areas for development in class or extracurricular activities, helping students self-discover interests, strengths, and career preferences.

Teachers and students jointly discuss students' existing skills and those needing development for work preparation.

Administrators, teachers, and students discuss school processes to help students develop skills for employment in Loei Province.

Stakeholder workshop to draft the spatial education management program, with 14 participants using Design Thinking in 5 steps:

Empathize: Analyze target students' employability skills.

Define: Brainstorm to define problems and questions for spatial education management approaches.

Ideate: Draft the program (describing resulting activities).

Prototype: Detail program components and validate with experts. Presented the draft in a meeting. Before testing, held a critique meeting with Loei Provincial Education Office and 13 other schools on May 20, 2025, at Forra Hill Resort, Loei Province. Found activities covered needed skills but needed clear format and timing. Adjusted to supplementary activities, scheduled Fridays 15:00-16:00.

Test: Implement the prototype program with target junior high students.

Received supervision on July 2, 2025.

Assessed employability skills and student satisfaction on September 15-18, 2025.

Presented and disseminated results.

2.4 Data analysis

Basic student data from employability skills assessment and satisfaction: Analyzed using frequency and percentage.

Employability skills scores: Analyzed using percentage, compared to good level benchmark (70% or higher) with one-sample t-test if sampled. Interpretation: 80-100% = Excellent; 70-79% = Good; 60-69% = Fair; Below 60% = Needs Improvement.

Student satisfaction scores: Analyzed using mean and standard deviation. Interpretation (Boonchom Srisard, 2017): 4.51-5.00 = Highest; 3.51-4.50 = High; 2.51-3.50 = Moderate; 1.51-2.50 = Low; 1.00-1.50 = Lowest.

3. Results

The presentation of research results is divided according to the research objectives as follows:

1. To design a spatial education management program to enhance employability skills for junior high school students at Ban Wang Taen School.

2. To study the results of using the spatial education management program to enhance employability skills for junior high school students at Ban Wang Taen School.

Results of Designing the Spatial Education Management Program to Enhance Employability Skills for Junior High School Students at Ban Wang Taen School

The spatial education management program to enhance employability skills for junior high school students at Ban Wang Taen School integrates 3 main activities: Making herbal compress balls, making artificial flowers from ribbons, and printing fabric patterns from natural materials, integrated with sub-activities: Surveying local wisdom on herbs or handicrafts, creating promotional media, searching vocabulary and composing English conversational sentences from activities, and organizing exhibitions to present activities. Total learning time: 15 hours.

Results of Validating the School's Education Management Program

The validation of the spatial education management program to enhance employability skills for junior high school students at Ban Wang Taen School aligned with all components except Component 6: Learning Time Structure, regarding the scheduling of learning time. Originally integrated into the career work subject group, it was adjusted per expert recommendations to supplementary activities, scheduled in the timetable from 15:00-16:00 on Fridays.

Results of Using the Spatial Education Management Program to Enhance Employability Skills for Junior High School Students at Ban Wang Taen School

Basic Student Information

Ban Wang Taen School provides education from kindergarten (Anuban 1) to junior high school. In the 2025 academic year, there were 200 students in total (Ban Wang Taen School, 2025). The target group for the program was junior high school students, The basic information of students participating in the project: Male: 32 (57.14%); Female: 24 (42.86%). By grade level: Grade 7: 25 (44.64%); Grade 8: 23 (41.07%); Grade 9: 8 (14.29%).

Employability Skills of Junior High School Students at Ban Wang Taen School

Percentage of Employability Skills Scores for Junior High School Students at Ban Wang Taen School Compared to the Good Level Benchmark (70% or Higher), showed that average scores for all grade levels exceeded the benchmark. The highest average was for Grade 9, followed by Grade 8 and Grade 7, respectively.

Satisfaction with Using the Spatial Education Management Program to Enhance Employability Skills for Junior High School Students at Ban Wang Taen School

The assessment of satisfaction with using the spatial education management program to enhance employability skills for junior high school students at Ban Wang Taen School used a questionnaire from 56 participating students was overall at a high level. By aspect, the highest satisfaction was in teacher instructional management (Mean=4.20, SD=1.03). By item, the highest was Item 18: Teacher guidance and assistance during learning (Mean=4.29, SD=1.07).

4. Discussion and conclusion

Summary of Research Results

Results of Designing the Spatial Education Management Program to Enhance Employability Skills for Junior High School Students at Ban Wang Taen School

The spatial education management program to enhance employability skills for junior high school students at Ban Wang Taen School integrates 3 main activities: Making herbal compress balls, making artificial flowers from ribbons, and printing fabric patterns from natural materials (Eco Print), integrated with sub-activities: Surveying local wisdom on herbs or handicrafts, creating promotional media, searching vocabulary and composing English conversational sentences from activities, and organizing exhibitions to present activities. Total learning time: 15 hours.

Validation results of the school's education management program by experts showed alignment with all components except Component 6: Learning Time Structure, regarding the scheduling of learning time. Originally integrated into the career work subject group, it was adjusted to supplementary activities, scheduled from 15:00-16:00 on Fridays.

Results of Using the Spatial Education Management Program to Enhance Employability Skills for Junior High School Students at Ban Wang Taen School

Average scores for all grade levels exceeded the benchmark (70% or higher), with Grade 9 having the highest average, followed by Grade 8 and Grade 7.

Satisfaction with using the spatial education management program to enhance employability skills for students was overall at a high level. By aspect, the highest was teacher instructional management (Mean=4.20, SD=1.03). By item, the highest was Item 18: Teacher guidance and assistance during learning (Mean=4.29, SD=1.07).

Discussion of Research Results

Results of Designing the Spatial Education Management Program to Enhance Employability Skills for Junior High School Students at Ban Wang Taen School

The spatial education management program to enhance employability skills for junior high school students at Ban Wang Taen School was designed using Design Thinking, arising from teachers studying and understanding students in all aspects, identifying real problems regarding employability skills or competencies. This enabled designing a program aligned with students' issues, including studying the school context to utilize local wisdom or available resources for maximum benefit in learning activities. The employability skills for students in Loei Province consist of 7 components: 1) Leadership & Teamwork; 2) Problem-Solving and Adaptability Skills; 3) Technological Skill; 4) Tourism Interest; 5) Empathy & Social Awareness; 6) Health and Well-being Interest; 7) Language Proficiency. This aligns with the study by Jongklanee Suwanna et al. (2025) on promoting learning characteristics for occupational skill development of students in Rajaprachanukroh schools in Mae Hong Son Province, which found 5 components: 1) Flexibility and Adaptability; 2) Initiative and Self-Direction; 3) Social and Cross-Cultural Skills; 4) Productivity and Accountability; 5) Leadership and Responsibility. Overlapping components include: 1) Leadership & Teamwork aligns with Leadership and Responsibility; 2) Problem-Solving and Adaptability aligns with Flexibility and Adaptability; 3) Empathy & Social Awareness aligns with Social and Cross-Cultural Skills. Other components align according to each area's context.

Results of Using the Spatial Education Management Program to Enhance Employability Skills for Junior High School Students at Ban Wang Taen School

From the satisfaction assessment of using the spatial education management program to enhance employability skills for junior high school students at Ban Wang Taen School, students had overall high satisfaction, and by aspect, high satisfaction in all areas. Teacher instructional management was clear, with appropriate use of media and equipment, teacher guidance and assistance during learning, promoting inclusive participation, and inspiring continuous learning interest. This indicates the program aligns appropriately with enhancing employability skills for students in Loei Province, usable as guidelines for other schools in Loei. This aligns with the study by Phairat Klinthap et al. (2023) on guidelines for developing occupational skills for junior high school students, finding that developing students' occupational skills requires training in various occupations, opportunities to practice in local or nearby community establishments, helping students gain knowledge, skills, and positive attitudes leading to future career choices.

Recommendations

Recommendations for Applying Research Results

Apply the program to other schools in the area, as it has been validated by experts and shown positive results in student abilities and satisfaction. Consider adapting it to other local schools to expand employability skill development for students broadly.

This program can serve as a model; other schools can modify or add main and sub-activities to align with their local wisdom and occupations, such as basket weaving or agricultural product processing, to match local labor market needs.

From student satisfaction in teacher instructional management (especially guidance and assistance), develop clear manuals or teaching materials for teachers, enabling others to implement the program effectively and provide good student guidance.

Recommendations for Future Research

This research measured abilities and satisfaction post-program; future research should follow up long-term to see if abilities persist and are applied in real life, such as in side jobs, income generation, or choosing related vocational studies.

Collect satisfaction data from other stakeholders, such as parents, communities, or local entrepreneurs, for a more comprehensive view of the program's benefits to youth and community development overall.

For deeper insights, conduct qualitative research, such as in-depth interviews with students by grade, to understand why Grade 9 had the highest average scores and other factors affecting learning and satisfaction.

Acknowledgements

This research was supported by Ban Wang Taen School and relevant stakeholders in Loei Province. Special thanks to the experts, teachers, and students who participated.

References

- Awasthy, R., Flint-Taylor, J., Gibbs, T. (2020). Driving success through genuine partnerships: Lessons from industry-academia collaboration. *Journal of Business Research*, 115, 25-35.
- Boonchom Srisard. (2017). Preliminary research statistics. Suwiriyanan.
- Bytyqi, D. (2021). Project-based learning: Influence on students' skills and abilities. *International Journal of Instruction*, 14(4), 289-306.
- Carpenter, J., Witherby, A., Naff, D., Johnson, R., & Dempsey, K. A. (2024). Preparing pre-service and in-service teachers to teach employability skills to special populations: A systematic review of the literature. *Career Development and Transition for Exceptional Individuals*, 47(1), 3-17.
- Dennison, S. (2023). Mentoring: A guide to effective mentoring. In *Mentoring in Nursing through Narrative Stories Across the World* (pp. 61-69). Cham: Springer International Publishing.
- Guàrdia, L., Mancini, F., Jacobetty, P., & Maina, M. (2021). Graduates' employability skills in East Africa. *Journal of Teaching and Learning for Graduate Employability*, 12(2), 169-196.
- Hummel, K. (2023). Career and Technical Education: Current Policy and Suggested Directions. ETS Research Report Series, 2023(1), 1-20.
- Husain, M. Y., Mokhtar, S. B., Ahmad, A. A., & Mustapha, R. (2014). Importance of employability skills from employers' perspective: The views of Malaysian employers. *Procedia-Social and Behavioral Sciences*, 37, 430-438.
- Indeed Editorial Team. (2023). Internships: A guide for employers and interns. Indeed Career Guide.

- Jackman, W. M. (2021). The online computer-assisted translation classroom. *Frontiers in Education*, 6, Article 710123.
- Jongklanee Suwanna et al. (2025). Promoting learning characteristics for occupational skill development of students in Rajaprachanukroh schools, Mae Hong Son Province.
- Kong, Y. (2021). Experiential learning in hospitality management education. *Journal of Hospitality & Tourism Education*, 33(2), 99-114.
- Long, N. T. L., & Nga, N. T. H. (2022). An enquiry into the ideo-motor theory of employability skills development of tourism students in Vietnam. *Journal of Teaching in Travel & Tourism*, 22(4), 285-306.
- Oroszi, T. (2020). Competency-based education. In *Industry Practices, Processes and Techniques Adopted in Education: Supporting Innovative Teaching and Learning Practice* (pp. 267-288). Singapore: Springer.
- Phairat Klinthap et al. (2023). Guidelines for developing occupational skills for junior high school students.
- Prabowo, W. A., Suyanto, M., & Sanusi, A. (2023). The effect of soft skills on employability through critical thinking skills of graduates in the post-pandemic. *International Journal of Innovation, Creativity and Change*, 17(1), 1-16.
- Sandaran, S. C. (2012). Service learning: Transforming students, communities and universities. *Procedia-Social and Behavioral Sciences*, 66, 380-390.
- Wardana, L. W., Narmaditya, B. S., Wibowo, A., Mahendra, A. M., Wibawa, N. A., Harwida, G., & Rohman, A. N. (2020). The impact of entrepreneurship education and students' entrepreneurial mindset: The mediating role of attitude and self-efficacy. *Heliyon*, 6(9), e04922.
- Williams, S., Dodd, L. J., Steele, C., & Randall, R. (2015). A systematic review of current understandings of employability. *Journal of Education and Work*, 29(8), 877-901.