
พิมพ์วิมล สุวรรณรัตน์³ (Pimpawee Suwannarat)³

การประเมินนี้มีวัตถุประสงค์เพื่อวัดผลกระทบทางสังคมและผลตอบแทนทางสังคมจากการลงทุน (SROI) ของโครงการเพิ่มประสิทธิภาพแพลตฟอร์มการศึกษาโลกแบบบูรณาการสู่บรรณานุกรม (WISE Platform) โดยใช้ระเบียบวิธีเก็บข้อมูลแบบผสมผสาน ได้แก่ การวิจัยเอกสาร การสนทนากลุ่ม และการสัมภาษณ์เชิงลึก

Received March 13,2026 Revised: August 8,2026 Accepted: August 11,2026

กับผู้ดำเนินโครงการและผู้มีส่วนได้ส่วนเสีย กรอบการประเมิน SROI ประยุกต์ใช้ ทฤษฎีการเปลี่ยนแปลง การวางแผนผลลัพธ์ การกำหนดตัวชี้วัด การคำนวณ ส่วนที่เกิดขึ้นเองตามปกติ (Deadweight) การย้ายที่ของผลกระทบ (Displacement) การระบุส่วนที่เกิดจากปัจจัยภายนอก (Attribution) การลดลงของผลลัพธ์ ตามกาลเวลา (Drop-off) และการใช้ตัวแทนทางการเงิน (Financial Proxy) ผู้มีส่วนได้ ส่วนเสียหลักประกอบด้วย ครู นักเรียน นักวิจัย นิสิตนักศึกษา มหาวิทยาลัย และ ศิลปินแห่งชาติ ผลการศึกษาเผยให้เห็นถึงผลลัพธ์ด้านเศรษฐกิจ เช่น การลดระยะเวลาในการเตรียมสื่อการสอน การพัฒนาทักษะด้านไอที การใช้เทคโนโลยีในงาน ด้านประวัติศาสตร์เพื่อสร้างงานและรายได้ รวมถึงการเพิ่มขึ้นของรายได้จากการท่องเที่ยวผ่านกิจกรรมส่งเสริมวัฒนธรรม (มโนราห์) โดยศิลปินแห่งชาติ ส่วนผลลัพธ์ด้านสังคมประกอบด้วยความภาคภูมิใจในการอนุรักษ์และเผยแพร่ มรดกทางวัฒนธรรมท้องถิ่นให้แก่คนรุ่นหลัง จากการวิเคราะห์พบว่า โครงการ มีมูลค่าปัจจุบันของผลประโยชน์ 18,745,470.52 บาท มูลค่าปัจจุบันของต้นทุน 11,495,272.63 บาท มูลค่าปัจจุบันสุทธิ (NPV) 7,250,197.89 บาท โดยแบ่งเป็น มูลค่าปัจจุบันของผลประโยชน์ทางเศรษฐกิจ 13,146,822.89 บาท และมูลค่าปัจจุบัน ของผลประโยชน์ทางสังคม 5,598,647.62 บาท คิดเป็นอัตราส่วน SROI เท่ากับ 1:1.63 ซึ่งระบุว่าทุกการลงทุน 1 บาท จะสร้างมูลค่าทางสังคมและเศรษฐกิจรวม 1.63 บาท ข้อค้นพบเชิงนโยบายชี้ให้เห็นว่าการลงทุนในแพลตฟอร์มการศึกษาดิจิทัล ด้านมรดกวัฒนธรรมมีความคุ้มค่าเชิงนโยบาย สามารถใช้เป็นแบบอย่างในการ ตัดสินใจจัดสรรงบประมาณภาครัฐเพื่อขยายผลแพลตฟอร์มการเรียนรู้ดิจิทัล ตลอดจนการบูรณาการทุนทางวัฒนธรรมเข้ากับเทคโนโลยีสมัยใหม่เพื่อขับเคลื่อน เศรษฐกิจสร้างสรรค์และการอนุรักษ์วัฒนธรรมอย่างยั่งยืน

คำสำคัญ : การประเมินผลตอบแทนทางสังคม, ระเบียบวิธีวิจัยแบบผสมผสาน, มรดกทางวัฒนธรรม, แพลตฟอร์มการศึกษาดิจิทัล

Abstract

This evaluation aims to assess the social impact and Social Return on Investment (SROI) of the World Integrated Suvarnabhumi Education Platform (WISE Platform) project. The study employs a mixed-methods data collection approach, including documentary research, focus group discussions, and in-depth interviews with project implementers and key stakeholders. The SROI assessment framework applies the Theory of Change, outcome mapping, indicator identification, deadweight, displacement, attribution, drop-off, and financial proxies. Key stakeholders include teachers, primary/secondary students, researchers, undergraduate students, the university, and national artists. Findings reveal significant economic outcomes, such as reduced lesson preparation time for educators, enhanced IT skills, application of technology in historical studies to generate employment and income, and increased tourism revenue from cultural promotion activities (Manohra) led by national artists. Social outcomes include heightened pride and community engagement in preserving and transmitting local cultural heritage to future generations. The financial analysis demonstrates a Present Value of Benefits of 18,745,470.52 THB and a Present Value of Costs of 11,495,272.63 THB, resulting in a Net Present Value (NPV) of 7,250,197.89 THB (comprising 13,146,822.89 THB in economic benefits and 5,598,647.62 THB in social benefits). The resulting SROI ratio of 1:1.63 indicates that every 1 THB invested generates 1.63 THB in social and economic value. Crucially, the key policy implication of this finding underscores that public investment in digital education platforms for cultural heritage is highly cost-effective and viable. It provides evidence-based justification for funding agencies and policymakers to scale up digital learning infrastructures and integrate local cultural capital with modern digital tools to drive the creative economy and sustainable cultural preservation.

Keywords : SROI, Mixed Methods, Cultural Heritage, Digital Education Platform

Introduction

The Office of Digital Innovation and Intelligent Systems at Prince of Songkla University (PSU), funded by the Ministry of Higher Education, Science, Research and Innovation (MHESI) and the National Research Council of Thailand (NRCT), led the initiative “Enhancing the Suvarnabhumi Integrated Education”. This initiative focuses on developing core infrastructure and expanding the Suvarnabhumi ecosystem through the World Integrated Suvarnabhumi Education Platform (WISE Platform: wise.psu.ac.th). Designed as a two-way communication and learning hub, the WISE Platform serves as a central repository for Suvarnabhumi Studies, connecting instructors, learners, researchers, and content creators to facilitate flexible digital education and open-data access. Prior to this evaluation, the platform had achieved significant operational milestones. It developed specialized modules including WISE Platform (a digital repository of archaeological and historical datasets accessible via API), WISE Trip (a tool empowering users to create cultural tourism itineraries), and WISE Classroom (an online social science learning portal) which collectively engaged diverse user groups across academic and community domains (Choksuchat, C., Saewong, S., 2023).

Despite these practical and academic accomplishments, the initiative lacks a formal evaluation of its broader economic and social impacts. Traditional financial matrices (such as internal rate of return or net profit) fail to capture non-monetary societal value, such as cultural preservation, digital literacy enhancement, and educational time savings. While research gaps persist regarding the holistic valuation of digital educational platforms in cultural contexts, applying the Social Return on Investment (SROI) framework allows for the quantification of these multifaceted impacts into standardized monetary metrics, providing empirical evidence to justify public funding, optimize platform performance, and support scalability.

Research Objectives

To conduct a rigorous evaluation of the WISE Platform, this study establishes the following specific objectives

To evaluate the social impact and calculate the Social Return on Investment (SROI) of the WISE Platform project.

To measure the extent of economic, social, and environmental changes generated by the project.

To analyze the distinct impacts experienced by key stakeholder groups, including teachers, primary/secondary students, undergraduate students, researchers, educational institutions, and national artists.

To assess the cost-effectiveness and efficiency of the financial capital invested in enhancing the platform.

Literature Review

Theoretical Foundations of SROI Evaluation

Social Return on Investment (SROI) is a holistic analytical framework designed to measure and account for a broader concept of value, incorporating social, environmental, and economic outcomes generated by an intervention (Achavanuntakul and Yamlaor, 2017; SROI Network, 2012). Unlike conventional financial cost-benefit analyses, SROI assigns monetary proxies to non-market and intangible outcomes, enabling decision-makers to evaluate whether invested resources yield meaningful social transformation (Olsen & Nicholls, 2005).

The implementation of SROI is guided by seven fundamental principles

- 1) Involving stakeholders,
- 2) Understanding what changes,
- 3) Valuing things that matter using financial proxies,
- 4) Including only material outcomes,
- 5) Avoiding over-claiming,

6) Maintaining transparency, and 7) Verifying results through rigorous standardizations (SROI Network, 2012). Central to this analysis is the Theory of Change (ToC), which constructs a logical continuum mapping inputs and activities to outputs, short-term outcomes, and long-term societal impacts (New Economy Foundation, 2009). To ensure that reported impacts are not overstated, the evaluation incorporates critical adjustment factors, namely Deadweight (outcomes that would have happened anyway), Displacement (outcomes that displaced other positive activities), Attribution (contributions from external factors), and Drop-off (the attenuation of impact over time).

SROI in Higher Education and Digital Platform Contexts

The application of SROI in educational initiatives has gained traction as funding agencies demand greater accountability and proof of social utility. Educational platforms generate multifaceted returns that extend beyond formal academic achievements to include enhanced digital literacy, improved pedagogical efficiency, and expanded intellectual access.

In higher education, evaluation models frequently highlight how educational investments generate positive externalities. For instance, Sitthisopasakul et al. (2021) evaluated the SROI of a doctoral program in educational measurement and evaluation in Thailand, demonstrating that advanced academic training creates systemic social benefits such as enhanced research capacity, educational policy innovation, and institutional efficiency that significantly surpass direct financial investments. When applied to digital platform ecosystems, SROI frameworks must account for the dual nature of outcomes: direct technical efficiency (e.g., time saved in lesson preparation and research data retrieval) and indirect capacity building (e.g., elevated digital skills and collaborative networks).

Cultural Heritage Preservation and Social Impact Assessment

Quantifying the value of cultural heritage initiatives poses unique methodological challenges due to the intangible nature of historical capital, collective memory, and artistic expression. Modern social impact literature advocates for viewing cultural heritage not as a static historical artifact, but as a dynamic asset capable of driving the creative economy, community empowerment, and local tourism.

Evaluating cultural development projects requires capturing both economic returns (e.g., job creation, tourism revenue, performance fees) and intangible social value (e.g., cultural pride, intergenerational transmission of traditional arts). In the Thai context, community-level interventions have successfully integrated SROI methodologies to evaluate localized social transformations. For example, Atsalikorn et al. (2023) assessed the social impact and SROI of a local capacity-building project in Lampang Province, demonstrating how structured social interventions enhance quality of life, strengthen local networks, and generate measurable socio-economic returns for community stakeholders. Extending this methodology to digital cultural platforms like the WISE Platform allows researchers to evaluate how digital repositories and tools (such as WISE Trip and WISE Classroom) safeguard intangible cultural heritage such as traditional Manohra performances while empowering local artists and fostering cultural appreciation among younger generations.

Beyond the SROI framework itself, the broader literature on economic analysis of cultural heritage investments points to a persistent gap in quantified, education-linked applications: Tišma et al. (2022) find that most cultural-heritage social-value evaluations to date rely on qualitative social impact assessment rather than monetized SROI-type methods, while related work on cultural-heritage institutions such as public libraries has likewise emphasized combining objective and subjective indicators to capture social returns that purely finan-

cial evaluation would miss. Situating the WISE Platform evaluation within this literature clarifies its contribution: it is among a small number of studies applying a fully monetized SROI methodology to a digital, education-oriented cultural-heritage intervention, rather than a qualitative heritage impact assessment.

Academic Contextualization of the WISE Platform

From a digital humanities and educational technology perspective, the WISE Platform represents a specialized ecosystem designed to bridge academic research, cultural preservation, and public pedagogy. In academic literature, open-access digital repositories are evaluated based on their ability to democratize knowledge, reduce transaction costs for researchers, and foster cross-disciplinary engagement.

The WISE Platform operates through three core functional pillars

1. WISE Platform (Data Infrastructure): Provides an open API and a standardized digital repository for archaeological, historical, and Suanabhum study datasets. Academically, this reduces redundant research efforts, minimizes data retrieval times for scholars, and promotes data transparency.

2. WISE Trip (Cultural Tourism Application): Connects historical data with geographic and community contexts. It serves as an economic bridge between academic preservation and community-based cultural tourism, enabling content creators to market heritage sites and artistic performances.

3. WISE Classroom (Pedagogical Hub): Facilitates digital humanities education through structured online courses. It enhances the digital capabilities of educators and students while integrating local cultural narratives into primary, secondary, and higher education curricula.

By positioning the WISE Platform within the broader scholarship of digital learning platforms, educational SROI, and cultural valuation, this study establishes a robust theoretical framework for measuring the total social value generated by public investments in Thailand's digital educational infrastructure.

Key Tools and Frameworks

1) Theory of Change: This is the foundation of the evaluation, outlining how the initiative creates societal impact. It defines goals and desired outcomes, and explains the difference the initiative makes compared to a scenario in which it does not exist. This tool clarifies the initiative's significance in driving tangible social change (New Economy Foundation, 2009).

2) Stakeholder Analysis: This involves identifying and analyzing all individuals or groups affected by the initiative, both positively and negatively. Including stakeholder perspectives ensures a holistic and fair evaluation of the initiative's impact.

3) Mapping outcomes: This tool breaks down the initiative's activities and outputs, mapping the path from inputs to outcomes. It includes input, activities, outputs, and outcomes, demonstrating how each stage contributes to achieving the Theory of Change (New Economy Foundation, 2009).

4) Social Indicators: These are measurable tools used to track social outcomes, reflecting changes in areas such as behavior, consumption, health, and the environment. Indicators should be "SMART" (Specific, Measurable, Achievable, Relevant, and Time-bound) to ensure effective tracking and measurement.

5) Base Case Scenario: This establishes a realistic baseline for comparison by assessing what would have happened without the initiative. It uses principles such as attribution, deadweight, displacement, and drop-off to accurately assess long-term outcomes. A well-defined base case enhances the evaluation's credibility and accuracy.

Research Methodologies

Key Informants

These criteria are designed to identify individuals who can provide in-depth and comprehensive information about the project. Selection is based on the number of stakeholders they represent, their understanding of the project, and their ability to facilitate access to other relevant stakeholders. The specific criteria are as follows: At least 10–15 percent of the total number of stakeholders will be selected as key informants. The specific criteria for selecting key informants are as follows: (1) Stakeholder status: They must be active stakeholders in the project. (2) Project knowledge: They should have a thorough understanding of the project. Individuals involved since the project's inception are preferred, as they are likely to possess detailed knowledge of its progress and changes. (3) Community leadership: They should be community or group leaders. This facilitates easier access to other stakeholders, as they can serve as intermediaries for contacting community members. (4) Willingness to participate: They must be willing to cooperate with evaluators, including participating in periodic follow-ups or retrospective data collection.

Stakeholder analysis is a crucial process in the planning and execution of successful projects. Understanding stakeholders enables project teams to identify their needs, expectations, and the potential impacts of the project. Insights gained from this analysis are instrumental in developing effective communication strategies, managing risks, and fostering collaboration. Stakeholder analysis involves examining individuals, groups, or organizations that are directly or indirectly involved in a project or activity -particularly those likely to experience changes as a result of the project. In this study, six key stakeholder groups have been identified: teachers, pupil students, researchers, undergraduate students, lecturers, and national artists.

Data Collection

Focus Group: A focus group is a qualitative research method used to collect data by bringing together members of a target group to discuss and exchange opinions on pre-determined topics. A moderator facilitates the discussion, guiding participants through the conversation and encouraging in-depth exchanges. This method is valuable for gaining insights into the perspectives, attitudes, and behaviors of the target group.

In-Depth Interview: An in-depth interview is a qualitative research technique that involves one-on-one conversations to gather detailed information about the interviewee's opinions, attitudes, motivations, and experiences. This method uses open-ended questions to encourage respondents to express their thoughts freely. It is typically conducted as a semi-structured interview, allowing for flexibility while maintaining focus on key topics (Atsalikorn, W., 2023).

Data Analysis

Primary Data: Collected through semi-structured, in-depth interviews with key informants. **Secondary Data:** Sourced from academic articles, reports, books, and other relevant documents used in calculating the project's social return on investment.

The data analysis in this evaluation consists of five stages, as outlined below:

Stage 1 : Defining the scope of the evaluation. The project, implemented in 2022 as a three-year initiative, is being evaluated in 2024 using an ex-post evaluation method. The total project budget amounts to 10,730,960 THB. This stage involves establishing the boundaries of the evaluation, including the timeframe, objectives, and financial scope, to ensure a focused and accurate assessment of the project's outcomes.

Stage 2 : Stakeholder analysis. This stage focuses on identifying and analyzing the individuals, groups, and organizations affected by the project either directly or indirectly. The analysis aims to understand the distinct changes each stakeholder group is expected to experience because of the project. This understanding helps ensure that the social value created is accurately captured and reflects the perspectives of those most impacted.

Stage 3 : Outcome Mapping Analysis. Outcome mapping is used to systematically and comprehensively understand and track the project's impacts particularly in terms of social development and change. This method illustrates the logical linkages between inputs, activities, outputs, and outcomes across different stakeholder groups. By visualizing these relationships, project managers can better assess how each component contributes to meaningful change and measure progress toward the intended social outcomes.

Stage 4 : Considering Deadweight, Attribution, Displacement, and Drop-off. When evaluating Social Return on Investment (SROI), it is important to recognize that some social outcomes are intangible or abstract and require the use of financial proxies. Moreover, different stakeholder groups may have varying perceptions of how much an outcome can be attributed to the project or activity. Since not all observed changes can be solely credited to the intervention, it is essential to account for other influencing factors to avoid overstating the project's impact. To ensure a realistic and credible analysis, the following four adjustment factors are considered: (1) Deadweight: The portion of the outcome that would have occurred even if the project or activity had not taken place. (2) Attribution: The share of the outcome that can be directly linked to the project, excluding contributions from other interventions or factors. (3) Displacement: The extent to which the positive outcome may have replaced or negatively impacted other activities or groups. (4) Drop-off: The reduction in the value or significance of the outcome over time. By incorporating these

factors, the analysis provides a more accurate reflection of the project's true social impact.

Stage 5 : SROI analysis. After accounting for all relevant factors such as deadweight, attribution, displacement, and drop-off the resulting value reflects the project's social benefits. The calculation of the Social Return on Investment (SROI) involves aggregating the Net Present Value (NPV) of all stakeholder benefit values across the entire project period. This total is then divided by the NPV of the total investment. The result is the SROI ratio, which indicates how much social value (in baht) is generated for every baht invested in the project.

The present value of all social benefit indicators reflects the total value of the project's positive impact on the target group over the entire duration of its influence. This duration begins from the year the project concludes and continues until the expected end of the impact period. The present value can be calculated using the following formula:

$$Present\ value\ (PV) = \sum_{i=0}^n \frac{Net\ benefit\ value}{(1+r)^t}$$

Where: r = discount rate of 3.5 percent

t = duration of net benefit persistence (years)

The discount rate of 3.5 percent was adopted with reference to internationally used social discount rates for social- and health-value evaluations, notably the standard rate applied by the United Kingdom National Institute for Health and Care Excellence (NICE) in social cost-benefit appraisal. This rate also falls within the 0-6 percent sensitivity range recommended by the Health Intervention and Technology Assessment Program (HITAP) under the Thai Guidelines for Health Technology Assessment, whose 3 percent base-case rate is the closest published Thai benchmark for a study of this kind, since

Thailand has no single mandated social discount rate for SROI evaluations. The 3.5 percent rate was therefore treated as a reasonable, internationally consistent middle value for the three-year benefit-persistence horizon used in this evaluation; the Sensitivity Analysis subsection below reports how the SROI ratio would change under alternative rates.

The SROI ratio represents the relationship between the present value of the net social benefits generated by the project and the present value of the total investment. It provides a quantitative measure of how much social value is created for every baht invested. The SROI ratio can be calculated using the following formula:

$$SROI = \frac{\text{PV of Net Benefits}}{\text{PV of Costs}}$$

Where :

Net Benefits = Total Benefits – Adjustments (Deadweight, Attribution, Displacement, Drop-off)

Present Value (PV) = Adjusted future values discounted to the present year

Assuming the calculated SROI value is 'a', the Social Return on Investment (SROI) can be interpreted as follows: for every 1 unit invested in the project, 'a' units of social benefits are generated. Therefore, it is generally recommended to invest in projects with an SROI value greater than or equal to 1, as this indicates that the benefits at least match the costs of investment. The higher the SROI value is above 1, the more it demonstrates that the project has delivered social benefits that exceed its costs, thereby reflecting the project's greater value and effectiveness in generating positive impact (Sektrakul, K., 2023).

Results and Discussion

After data collection and analysis of the relevant factors following the SROI analysis steps outlined earlier the study produced the following key results: The outcome mapping for this analysis is illustrated in Figure 1.

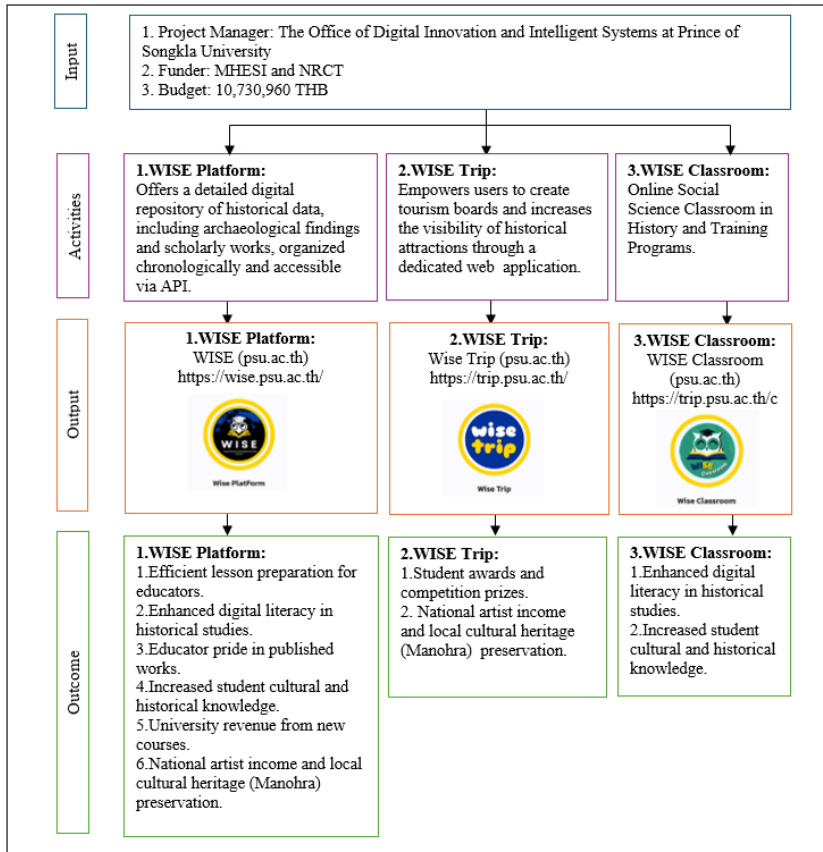


Figure 1 Outcome Mapping framework
Source: Wittawat Hemtanon et al. (2023)

Financial Valuation of Outcomes

To assess the project’s outcomes, evaluators conducted interviews with stakeholders, identifying six primary stakeholder groups, each experiencing different types of outcomes. Financial proxies were then developed to assign monetary value to these outcomes. The resulting analysis, which draws on both stakeholder interview data and relevant secondary sources, is presented in Table 1.

Table 1 Financial value

Stakeholders	Population size	Outcomes	Financial proxy	Monetary Valuation Source	Value (THB/year)
1. Teachers	150	Save time on teaching preparation	Reduced costs are calculated by multiplying the number of hours by the minimum wage.	- Minimum wage of 50 baht per hour (Ministry of Labour, 2024)	5,600
	150	Develop technology skills and be able to apply them more to historical work.	Average cost of technology skills training courses.	Video Media Creation Training Course of 10,000 baht per course	10,000

Stakeholders	Population size	Outcomes	Financial proxy	Monetary Valuation Source	Value (THB/year)
	150	Experiencing pride in the publication of one's own writing.	Time dedicated to passion work is calculated by multiplying the number of hours by minimum wage.	- Minimum wage of 50 baht per hour (Ministry of Labour, 2024)	4,160
2. Pupil Students	200	Developed significantly improved skills in creating historical video content.	Average cost of video production training courses.	- Video Media Creation Training Course of 10,000 baht per course (NSTDA, 2024)	10,000
	200	Expanded knowledge of culture/ history	Average cost of history learning courses.	- Average cost of history learning of 2,000 baht per course (MAC education, 2024).	2,000
	10	Received an award	Average award winnings from contest participation.	- Quantitative data from stakeholder interviews	500

Stakeholders	Population size	Outcomes	Financial proxy	Monetary Valuation Source	Value (THB/year)
3. Researchers	100	Improve technological proficiency and its applicability to historical research.	Average cost of technology skills training courses.	Video Media Creation Training Course: 10,000 baht per course	10,000
	100	Save time on research data retrieval	Reduced costs are calculated by multiplying the number of hours by the minimum wage.	- Minimum wage of 50 baht per hour (Ministry of Labour, 2024)	6,400
	100	Experiencing pride in the publication of one's own writing.	Time dedicated to passion work is calculated by multiplying the number of hours by minimum wage.	- Minimum wage of 50 baht per hour (Ministry of Labour, 2024)	4,160

Stakeholders	Population size	Outcomes	Financial proxy	Monetary Valuation Source	Value (THB/year)
4. University Students	120	Expanded knowledge of culture/ history	Average cost of history learning courses.	- Average cost of history learning of 2,000 baht per course (MAC education, 2024).	2,000
	120	Experiencing pride in the publication of one's own writing.	Time dedicated to passion work is calculated by multiplying the number of hours by minimum wage.	- Minimum wage of 50 baht per hour (Ministry of Labour, 2024)	2,080
	1	Increased income from leveraging technology skills.	Net revenue from work.	- Quantitative data from stakeholder interviews	12,000
5. University	1	Increased income from developing new courses.	Net revenue from education fees by attracting more students	- Quantitative data from stakeholder interviews	570,000

Stakeholders	Population size	Outcomes	Financial proxy	Monetary Valuation Source	Value (THB/year)
6. National Artists	1	Income derived from tourists and students engaging in visits and workshops.	Net revenue from tourism and workshop activities.	- Quantitative data from stakeholder interviews	348,000
		Experiencing deep satisfaction in promoting Manora culture to ensure its longevity.	Time dedicated to passion work is calculated by multiplying the number of hours by minimum wage.	- Minimum wage of 50 baht per hour (Ministry of Labour, 2024)	665,600

Source: Wittawat Hemtanon et al. (2023)

Overview of the Deadweight, Attribution, Displacement, and Drop off Adjustments

Some social outcomes are intangible or abstract and thus require the use of financial proxies to estimate their value. Additionally, stakeholder groups may hold differing perspectives on the extent to which the outcomes observed can be attributed directly to the project or its activities. It is also important to recognize that not all changes result solely from the project being evaluated. To ensure an accurate and credible assessment and to avoid overestimating the project’s social impact four key adjustment factors must be considered: Deadweight, Attribution, Displacement, and Drop-off. These considerations are summarized in Table 2.

Table 2 Overview of the Deadweight

Stakeholders	Outcomes	Deadweight	Explanation
1. Teachers	Save time on teaching preparation	0%	If the project did not exist, teachers would invariably have to dedicate significant time to locating historical information for teaching preparation.
	Develop technology skills and be able to apply them more to historical work.	30%	If the project did not exist, teachers would have already acquired some technological skills such as institutional support (10%) - training, workshops; previous experience (10%) and self-learning, or technological advancements (10%), a total of 30%.
	Experiencing pride in the publication of one's own writing.	0%	If the project had not existed, teachers would not have been able to disseminate their self-authored content.
2. Pupil Students	Developed significantly improved skills in creating historical video content.	60%	If the project did not exist, students would still develop skills through several activities such as existing school curriculum (10%), extracurricular activities (10%), technological familiarity among younger generations (20%), or peer learning (10%) and self-directed practice (10%), a total of 60%.

Stakeholders	Outcomes	Deadweight	Explanation
	Expanded knowledge of culture/history	30%	If the project did not exist, students would still acquire some cultural/historical knowledge from other sources such as access to public resources (20%), self-driven learning (10%), a total of 30%.
	Received an award	0%	If the project had not existed, students would be unable to obtain awards and certificates from the Wise project.
3. Researchers	Improve technological proficiency and its applicability to historical research.	30%	If the project did not exist, researchers continue to make strides in enhancing their technological skills for historical research. Advancements in digital humanities to access easily open-source tools (20%), self-directed learning, peer collaboration (10%), a total of 30%.
	Save time on research data retrieval	0%	If the project had not existed, researchers would have spent a long time searching for historical information.
	Experiencing pride in the publication of one's own writing.	0%	If the project had not existed, researchers would not have been able to disseminate their self-authored content.

Stakeholders	Outcomes	Deadweight	Explanation
4. Undergraduate Students	Expanded knowledge of culture/history	30%	If the project had not existed, students would still acquire some cultural/historical knowledge from other sources such as university curriculum and coursework (15%), public academic and digital resources (15%), a total of 30%.
	Experiencing pride in the publication of one's own writing.	0%	If the project had not existed, students would not have been able to disseminate their self-authored content.
	Increased income from leveraging technology skills.	0%	If the project did not exist, students will find it impossible to make money in history-related jobs.
5. University	Increased income from developing new courses.	50%	If the project did not exist, universities will continue to receive revenue from registration fees. This provides a boost to revenue from an increase in student applications of approximately 50%, thus reflecting a 50% deadweight.

Stakeholders	Outcomes	Deadweight	Explanation
6. National Artists	Increased income from tourists and students engaging in visits and workshops.	60%	If the project had not existed, national artists would still earn income from the same sources (tourist visits and student workshops), but the increase in income would be only 40% of the potential increase, thus reflecting a 60% deadweight.
	Experiencing deep satisfaction in promoting Manora culture to ensure its longevity.	60%	If the project had not existed, national artists would still promote culture via alternative platforms. The national artist conducts activities regularly to foster a deep appreciation for Manora. The platform serves as an additional channel to further enhance this appreciation. It is determined to be a deadweight.

*Note: ** Deadweight is the percentage of changes that would have happened anyway*

Source: Wittawat Hemtanon et al. (2023)

Attribution Analysis: The outcomes resulting from the implementation of this project are not influenced by any other initiatives related to the “Enhancing the Potential of the Suvarnabhumi Integrated Education Platform Connecting the World” project. As a result, the Attribution value is determined to be zero, indicating that the observed outcomes can be fully attributed to the project under evaluation.

Displacement Analysis: The outcomes generated by the implementation of the “Enhancing the Potential of the Suvarnabhumi Integrated Education Platform Connecting the World” project do not negatively impact other stakeholder groups or displace the benefits of other initiatives. Therefore, the

Displacement value is assessed as zero, indicating that the project's positive outcomes were achieved without shifting resources or benefits away from other areas.

Drop-off Analysis: Based on interviews with all stakeholder groups, and considering the continuous relevance and rapid evolution of IT technologies, it was determined that the project's impact particularly in areas such as IT skill development, the use of technology in historical and cultural work, and stakeholder pride in publishing self-authored content will persist for approximately 2 to 3 years following project completion.

As such, for these specific outcomes, a Drop-off value of 30% has been applied to account for the gradual decline in impact over time. For other outcome areas, the effects are expected to remain stable throughout the 3-year project evaluation period, and no drop-off is applied.

Sensitivity Analysis

To test how sensitive the SROI ratio is to the key adjustment assumptions, the base-case result ($SROI = 1.63$) was recalculated under alternative deadweight, drop-off, attribution, and discount-rate assumptions. Because deadweight in the base case ranges from 0 to 60 percent across outcomes (weighted average of approximately 30-35 percent across all outcome lines in Table 2), a uniform ± 10 percentage-point shift in deadweight and drop-off was applied to approximate a low, medium (base case), and high scenario, holding Displacement at 0 percent and varying Attribution between 0 and 20 percent as discussed above. Under these combined adjustments, the SROI ratio moves within an approximate range of 1.3 to 1.9, remaining above the minimum viable threshold of 1.0 in all scenarios; this indicates that the project's positive social return is robust to reasonable variation in the adjustment factors, even though the precise point estimate is sensitive to the Attribution assumption in particular.

SROI Evaluation Results

Based on the analysis of outcomes and Social Return on Investment (SROI), the project demonstrates significant social and economic value. The resulting SROI ratio is 1.63, indicating that for every 1THB invested in the project, 1.63 THB in social value is generated for all stakeholders. These results are summarized in Table 3.

Table 3 SROI Evaluation Results

Year	Year	Present Value of Costs	Present Value of Benefits	Net Present Value (NPV)
-2	2022	11,495,272.63	6,930,868.60	-4,564,404.03
-1	2023		6,083,895.60	6,083,895.60
0	2024		5,455,344.00	5,455,344.00
1	2025		275,362.32	275,362.32
			Total PV Costs	11,495,272.63
			Total PV Benefits	18,745,470.52
			NPV	7,250,197.89
			SROI	1.63

Source: Wittawat Hemtanon et al. (2023)

Note on Table 3 cost structure: the full Present Value of Costs (11,495,272.63 THB) is recorded entirely in Year -2 (2022) because the project’s total budget of 10,730,960 THB was disbursed to the implementing office as a single upfront capital grant at project inception, covering infrastructure development, platform build-out, and setup activities for the full three-year period; the PV figure differs from the nominal budget because it reflects the future value of that upfront disbursement compounded to the evaluation’s base year, consistent with the discounting formula presented under Data Analysis.

No further direct costs were incurred in Years -1, 0, and 1 because operating and maintenance activities during those years were absorbed within Prince of Songkla University's existing recurrent budget rather than charged to the project.

Conclusion and Suggestions

Discussion

The resulting SROI ratio of 1:1.63 sits within the range typically reported for education- and culture-related social investments in Thailand and internationally, though direct comparison is limited by differing methodologies and adjustment assumptions across studies. It is broadly consistent with the order of magnitude reported by Atsalikorn et al. (2023) for a community-level capacity-building project in Lampang province, and is more conservative than ratios reported for some digital-platform social interventions in other sectors, reflecting the WISE Platform's relatively high initial infrastructure investment relative to its three-year benefit-persistence horizon. In the cultural-heritage evaluation literature specifically, Tišma et al. (2022) note that quantitative social-value methods such as SROI remain comparatively rare for heritage and cultural-education interventions, most existing applications relying on qualitative social impact assessment; the present study therefore contributes one of the few quantified SROI applications to a digital cultural-heritage education platform, a research gap the Introduction and Literature Review identify. The comparison also underscores a methodological caution raised by the reviewers: SROI ratios are highly sensitive to Attribution and Deadweight assumptions, and studies that set Attribution to zero, as in the present base case, should be read as reporting an upper-bound rather than a definitive point estimate, which is why the Sensitivity Analysis subsection above is presented alongside the base-case result.

Proportions of Economic and Social Benefit

The project evaluation revealed that the total present value of benefits, amounting to 18,745,470.52 THB, is distributed across two primary sectors: Economic Sector: This sector accounts for the majority of the benefits, with a total of 13,146,822.89 THB, representing 70% of the overall benefits. Key contributing factors include increased revenue for universities, higher income for students and national artists, time savings for educators, researchers, and students, expansion of historical knowledge, improved technological skills in historical research, and student recognition through academic competitions. Social Sector: This sector received 5,598,647.62 THB in benefits, accounting for the remaining 30%. These benefits stem from the sense of accomplishment experienced by educators, researchers, and students in publishing their own content, as well as the pride felt by National Artists involved in Manora performances for preserving and promoting cultural heritage. These proportions are visually represented in Figure 2.

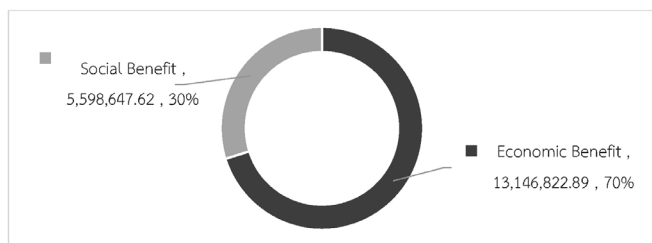


Figure 2 Economic and Social Benefit Proportions

Source: Wittawat Hemtanon et al. (2023)

- The implementation of this project has led to meaningful changes across several areas: Cultural and Historical Awareness: Students demonstrated increased knowledge and appreciation of local culture and history.
- Information Technology Skill Development: The project significantly enhanced IT skills among students, teachers, researchers, and professors, promoting digital literacy and competence in academic and cultural contexts.

- Student Confidence and Engagement: Activities within the project fostered self-confidence and motivated students to participate in academic competitions by presenting their work.
- Sense of Pride and Ownership: Participants, including students and educators, expressed pride in publishing their work on the project's website, contributing to a shared knowledge base.
- Improved Teaching Efficiency: The compilation of historical and cultural data reduced the time teachers and professors needed to prepare educational materials, streamlining lesson planning and content delivery.

Key Findings from the SROI Evaluation

1. Budget Efficiency: The project has produced significant positive changes for stakeholders, demonstrating strong value for investment. Key outcomes include:

- Innovative Cultural and Historical Learning: The use of website-based data and promotion of video content creation has enabled students to engage with historical research in a dynamic and modern format.
- Enhanced IT Skills: Students, teachers, and professors improved their digital competencies, supporting long-term educational development.
- Student Empowerment: The project fostered a sense of pride and boosted student confidence through opportunities for content creation and participation in competitions.
- Academic Resource Development: By compiling historical and cultural information, the project has served as a valuable academic resource, significantly reducing the time educators spend searching for teaching materials.
- Support for National Artists: National artists benefited through increased income and the recognition of their contributions shown on the platform, particularly in traditional art forms like Manora.

Although the project involved a substantial investment mainly in infrastructure development and the creation of the Suvarnabhumi ecosystem, the resulting benefits clearly outweigh the initial costs. This indicates high operational efficiency and cost-effectiveness. However, researchers identified potential areas for further improvement: Stakeholder Engagement: The platform could generate greater impact by attracting broader stakeholder participation, which would amplify its positive outcomes. Tourism Integration (WISE Trip Feature): While the project includes tourism-related content, researchers found no evidence that stakeholders are currently utilizing this data for tourism purposes. Unlocking this potential would require targeted promotion to tourism-related agencies and the collection of usage data to assess its impact. To maximize the platform's effectiveness, it is recommended that project organizers actively encourage the use of tourism data and deepen engagement with a broader range of stakeholders.

2. Role of the Digital Innovation and Intelligent Systems Office, Prince of Songkla University. The Digital Innovation and Intelligent Systems Office at Prince of Songkla University plays a pivotal role in the successful implementation of the project through the development of an integrated education platform. This platform has had a substantial positive impact on a range of stakeholders by transforming traditional learning approaches to align with the digital era and promoting integrated, multidisciplinary knowledge acquisition. Project activities have not only strengthened information technology skills among students, teachers, and researchers, but also provided a space for students to publish and showcase their work. This opportunity has enhanced student self-confidence, digital literacy, and creative expression, all of which will contribute to their long-term academic and professional development. Additionally, the platform's inclusion of national artists, particularly through the showcasing of cultural works such as Manora performances, has broadened public awareness of

Thai arts and heritage. This has had a direct positive impact on the artists themselves, increasing their visibility, pride, and potential income. As previously discussed, the project has already yielded notable outcomes. However, its full potential has yet to be realized. The platform serves as a critical information hub. To further enhance its effectiveness, project implementers are encouraged to :

- Raise awareness of the platform's content and features. Expand outreach to additional stakeholder groups such as tour operators, tourists, and tourism-related agencies. Actively promotes the use of the WISE Trip feature as a tool for cultural tourism. By deepening stakeholder engagement and broadening usage, the project can generate even more substantial social and economic benefits in the future.

3. Outcomes Achieved: The project has successfully delivered its planned outputs and generated widespread, meaningful outcomes across all stakeholder groups. Notably, it has introduced innovative learning modalities within the context of Suvarnabhumi-related studies, offering a fresh and engaging approach to education in this cultural domain. A key achievement of the project is the clear establishment of a Suvarnabhumi learning ecosystem, an integrated environment that fosters interdisciplinary learning, cultural appreciation, and community participation. This ecosystem supports not only academic growth but also the broader goals of cultural preservation and awareness. By continuing to strengthen this Suvarnabhumi learning ecosystem, the project will play a vital role in promoting the dissemination, learning, and intergenerational transmission of Suvarnabhumi's arts, culture, and historical narratives. This will ensure the sustained progression of cultural identity and heritage for future generations.

Theoretical and Policy Contribution

Theoretically, this study extends the SROI literature by applying the framework to a digital cultural-heritage education platform, a context in which

quantified social-value studies remain scarce both in Thailand and internationally (Tišma et al., 2022). Practically, the findings support several concrete policy recommendations for the Ministry of Higher Education, Science, Research and Innovation (MHESI) and the National Research Council of Thailand (NRCT): (1) prioritize continued funding for digital platforms that combine educational infrastructure with cultural-heritage preservation, given the demonstrated positive net social return; (2) require SROI or comparable social-value evaluation as a standard component of ex-post reporting for similarly funded platform projects, to build a comparable evidence base across MHESI/NRCT-funded initiatives; and (3) support targeted expansion of tourism-facing features such as WISE Trip through partnership with tourism-sector agencies, an outcome pathway identified in this evaluation as currently under-realized.

Acknowledgments

Grateful Acknowledgements to The Office of Digital Innovation and Intelligent Systems at Prince of Songkla University

References

- Achavanuntakul, S., and Yamlaor, P. (2017). **Handbook for Social Impact Assessment and Social Return on Investment (SIA & SROI Handbook)**. Retrieved September 5, 2025, from <http://www.salforest.com/knowledge/sia-handbook-2017>.
- Atsalikorn, W., Laothamatas, J. and Prasoptham, J. (2023). Social impact and social return on investment of the potential development project for elderly care service in Mae Mok subdistrict, Thoen district, Lampang province, **Kasetsart Journal of Social Sciences**. 44(3), 665–674.

- Choksuchat, C. and Saewong, S. (2023). **Optimization of the World Integrated Suvarnabhumi Education Platform (WISE Platform)**. Retrieved September 4, 2025, from <https://wise.psu.ac.th/>.
- Hemtanon, W., Romyen, A., and Suwannarat, P. (2023). **SROI evaluation results. Social Return on Investment (SROI) Assessment of the Project on Enhancing the Capacity of the Suvarnabhumi Education Integration Platform for Global Connectivity**. (Research Results Report). Songkla : Prince of Songkla University.
- MAC education. (2024). **History book**. Retrieved September 5, 2025, from <https://www.maceducation.com/>.
- Ministry of Labour. (2024). **Minimum wage**. Retrieved September 5, 2025, from <https://www.mol.go.th/>.
- New Economy Foundation. (2009). **A guide to social return on investment**. Retrieved September 6, 2025, from <https://neweconomics.org/2009/05/guide-social-return-investment>.
- NSTDA. (2024). **Video Media Creation Training Course**. Retrieved September 7, 2025, from <https://www.nstda.or.th/home/>.
- Olsen, S., and Nicholls, J. (2005). **A framework for approaches to SROI analysis**. London : The Social Return on Investment Network.
- Sektrakul, K. (2023). **Social Return on Investment (SROI)**. Retrieved September 7, 2025, from <https://setsustainability.com/libraries/1233/item/social-return-on-investment-sroi-6>.
- SROI Network. (2012). **A guide to social return on investment**. Retrieved September 7, 2025, from <http://www.socialvaluelab.org.uk/wp-content/uploads/2016/09/SROI-a-guide-to-social-return-on-investment.pdf>.

- Sitthisopasakul, T., Kanjanawasee, S. and Bhongmakapat, T. (2021). Social Returns on Investment for Doctor of Philosophy program in educational measurement and evaluation, **Kasetsart Journal of Social Sciences**. 42(4), 878–885.
- Tišma, S., Uzelac, A., Jelinčić, D. A., Franić, S., and Mileusnić Škrtić, M. (2022). Overview of social assessment methods for the economic analysis of cultural heritage investments, **Journal of Risk and Financial Management**. 15(8), 1-19.