International Journal of Modern Education
EISSN: 2637-0905
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362



INTERNATIONAL JOURNAL OF MODERN EDUCATION (IJMOE)
www.gaexcellence.com/ijmoe

BRINGING AI LITERACY TO THE PARK: A SERVICE-LEARNING CASE STUDY OF STUDENT-LED COMMUNITY OUTREACH BY INFORMATION MANAGEMENT UNDERGRADUATES IN MALAYSIA

Wan Ainol Mursyida Ahmad Tarmizi[1], Nor Azlina Azmi[2]*, Sharunizam Shari[3]

[1]Faculty of Information Science, Universiti Teknologi Mara Cawangan Kedah
wainolmursyida@uitm.edu.my https://orcid.org/0009-0004-9756-6808
[2]Faculty of Information Science, Universiti Teknologi Mara Cawangan Kedah
nazlina@uitm.edu.my https://orcid.org/0009-0000-5603-7839
[3]Faculty of Information Science, Universiti Teknologi Mara Cawangan Kedah
nizam057@uitm.edu.my https://orcid.org/0000-0003-0052-8174
*Corresponding Author

Article Info:

Article history:
Received date: 27.07.2026
Revised date: 18.08.2026
Accepted date: 09.09.2026
Published date: 23.09.2026

To cite this document:

Tarmizi, W. A. M. A., Azmi, N. A., & Shari, S. (2026). Bringing Ai Literacy to The Park: A Service-Learning Case Study of Student-Led Community Outreach by Information Management Undergraduates in Malaysia. *International Journal of Modern Education, 8*(31), 1343-1362.

Abstract:

Artificial intelligence (AI) literacy is increasingly treated as a public competence rather than a purely curricular one, yet research remains concentrated in formal school and university settings, and community-based AI literacy is under-studied. This paper reports a descriptive single-case study of InfoFest: AI-CON, an AI literacy outreach programme designed and delivered by 29 Diploma in Information Management students at a municipal recreation park in Sungai Petani, Kedah, Malaysia, under the national Service Learning Malaysia University for Society (SULAM) framework. The study draws principally on a post-programme participant survey (n = 37) and two stakeholder interviews, supported by programme documentation, registration records and social media analytics, combined in a convergent mixed-methods design. Four low-cost activity formats, only one of which required a networked device, addressed the four dimensions of AI literacy proposed by Ng et al. (2021) at a total delivery cost of RM375. Against 44 registered participants this equates to approximately RM8.52 per registered participant; the 37 survey respondents are a subset of those registrants. Reaction ratings were uniformly high (means of 4.78 to 4.84 on a five-point scale) but showed a pronounced ceiling effect, and therefore evidence satisfaction rather than learning. Two further findings carry more weight. Some visitors had difficulty distinguishing AI-generated images from photographs, echoing controlled perceptual studies. A vernacular, informally worded post in a place-based Facebook community group was the most

International Journal of Modern Education
IJMOE
EISSN: 2637-0905
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362

effective observed recruitment channel, while institutionally styled short-form video accumulated views at a mean watch time of 5.8 seconds and a 1.67 per cent completion rate. The principal contribution of the study is evaluative: outreach reporting routinely conflates reach, engagement and learning, which are distinct and should be reported separately. The paper recommends that SULAM registration forms include a small number of AI literacy questions, so that participants' starting knowledge is recorded and learning, rather than satisfaction alone, can be demonstrated.

DOI: 10.35631/IJMOE.831078

Keywords:

AI Literacy; Community Outreach; Information Literacy; Library and Information Science Education; Malaysia; Service-Learning; SULAM And Synthetic Media

© The authors (2026). This is an Open Access article distributed under the terms of the Creative Commons Attribution (CC BY NC) (http://creativecommons.org/licenses/by-nc/4.0/), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited. For commercial re-use, please contact ijmoe@gaexcllence.com.

Introduction

The diffusion of generative artificial intelligence into everyday practice has outpaced the institutions ordinarily charged with preparing people to use it. Conversational agents, image generators and recommendation systems are now encountered routinely by people who have never taken a course in computing, who are not enrolled in any educational institution, and who will not be reached by curricular reform. This displacement of a competence question from the classroom into the street has consequences for how AI literacy should be conceptualised, delivered and evaluated.

The scholarly response has been substantial but narrow in setting. Ng, Leung, Chu and Qiao (2021) consolidated an emerging body of work into four aspects of AI literacy: knowing and understanding AI, using and applying AI, evaluating and creating with AI, and engaging with AI ethics. Long and Magerko (2020) proposed competencies and design considerations for AI literacy interventions. UNESCO subsequently issued a competency framework for students structured around a human-centred mindset, the ethics of AI, AI techniques and applications, and AI system design (Miao & Shiohira, 2024). Measurement instruments have proliferated in parallel (Carolus et al., 2023; Ng et al., 2024; Wang et al., 2023), and the normative case for public AI competence is now embedded in international policy (UNESCO, 2021). Almost all of this work assumes a captive learner in a formal setting. The public who encounters synthetic media in a WhatsApp forward or a marketplace listing is largely absent from the design literature.

Library and information science (LIS) has a plausible claim to this gap. Outreach beyond institutional walls is a long-standing function of information agencies, and algorithmic and AI literacy have been argued to fall within the professional remit rather than outside it (Ridley &

International Journal of Modern Education
IJMOE
EISSN: 2637-0905
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362

Pawlick-Potts, 2021; Cox, 2023). Malaysia additionally possesses a policy instrument that makes such outreach curricular rather than voluntary. Service-Learning Malaysia University for Society (SULAM), launched by the Ministry of Higher Education in 2019, requires credit-bearing integration of community service with course learning outcomes (Ministry of Higher Education Malaysia, 2019; Universiti Teknologi MARA, 2020). SULAM is recognised nationally as a high-impact educational practice in the sense described by Kuh (2008), and it obliges the university to locate learning in a community problem rather than in a simulation of one.

What has not been documented is the intersection: a SULAM-embedded, LIS-delivered AI literacy programme aimed at a general community public in an unbounded public space, evaluated with the evidence such programmes actually generate. This paper reports one such case. InfoFest: AI-CON was designed and delivered on 3 January 2026 by 29 fifth-semester Diploma in Information Management students of Universiti Teknologi MARA Cawangan Kedah, at Taman Jubli Perak, a municipal recreation park in Sungai Petani, in partnership with a youth organisation, the municipal council, and a university library.

The paper makes three contributions, of which the first is the most important. Evaluatively, it shows that outreach reporting conflates three distinct things — reach, engagement and learning — and it separates them, demonstrating that social media reach metrics describe content performance rather than community participation, and that satisfaction ratings describe reaction rather than learning. It further shows that the registration forms already required in SULAM documentation could capture participants' starting knowledge at no additional cost. Empirically, it provides what is, to the authors' knowledge, the first documented account of an AI literacy outreach programme conducted under SULAM by LIS students in an open public space in Malaysia, including a full account of design, cost and reach. Conceptually, it advances the notion of contrastive embodiment as a low-cost pedagogy for the human-centred dimension of AI literacy, while also identifying the adversarial mental model it risks installing.

Five research questions guide the study:

- **RQ1.** How was AI literacy operationalised in the design of a student-led SULAM outreach programme delivered in a public community space?
- **RQ2.** What was the reach and composition of community participation?
- **RQ3.** What reaction-level outcomes did participants report, and what do these indicate about programme delivery?
- **RQ4.** What evidence of AI-related knowledge gaps emerged from participants' engagement with the activities?
- **RQ5.** Which promotional channels drove attendance, and how do platform engagement metrics relate to actual community participation?

Literature Review

AI Literacy as an Extension of the Information Literacy Mandate

AI literacy is best understood not as a novel competence but as the current frontier of a lineage that runs through information literacy, digital literacy and data literacy (Bawden, 2001; Carmi et al., 2020). Ng et al. (2021) explicitly derive their four-aspect model by adapting classic literacies, and the Association of College and Research Libraries' (2016) framing of authority

International Journal of Modern Education
IJMOE
EISSN: 2637-0905
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362
as constructed and contextual maps directly onto the problem of appraising machine-generated content whose authority is neither authored nor traceable in conventional ways.

The distinguishing feature of the AI case is that the appraisal task has partly migrated from evaluating a source to evaluating an artefact. Where information literacy asked who produced a claim and with what interest, synthetic media asks whether the artefact corresponds to any state of the world at all. Nightingale and Farid (2022) demonstrated in controlled conditions that AI-synthesised faces are not merely difficult to distinguish from photographs but are rated as more trustworthy than real ones. Vaccari and Chadwick (2020) showed that synthetic political video need not deceive in order to damage, since it can raise generalised uncertainty and depress trust in news. Both findings suggest that the practical curriculum for a general public is less about model architecture than about calibrated scepticism toward the visual record.

Ridley and Pawlick-Potts (2021) argue that algorithmic literacy is a legitimate and indeed necessary extension of the library's literacy role, and Cox (2023) situates AI-related competencies within the professional development trajectory of academic library work. Head, Fister and MacMillan (2020) reached similar conclusions from the student side. What is common to these arguments is that LIS is positioned as an intermediary profession, well placed to translate technical developments into publicly usable judgement. The empirical demonstration of that intermediation with non-institutional publics remains thin.

Service-Learning And SULAM As A Delivery Mechanism

Service-learning is distinguished from volunteerism and from field education by the balance it maintains between service to the community and learning for the student (Furco, 1996). Bringle and Hatcher (1996) emphasise that the defining feature is structured reflection connecting the service experience to course content, a point elaborated by Ash and Clayton (2009). Eyler and Giles (1999) established that outcomes are contingent on design quality rather than on participation alone, and Kolb's (1984) experiential learning cycle supplies the underlying mechanism: concrete experience becomes learning only when it passes through reflective observation and abstract conceptualisation.

SULAM operationalises these principles as national policy. Introduced in 2019 under the Malaysia Education Blueprint 2015 to 2025 for higher education, it embeds community service within credit-bearing courses and requires alignment between the community need addressed and the course learning outcomes (Ministry of Higher Education Malaysia, 2019). Institutional guidelines specify approval, documentation and reporting requirements (Universiti Teknologi MARA, 2020). The practical consequence is that Malaysian universities generate a substantial and consistently structured documentary record of community engagement. Much of this record is treated administratively rather than as research data, a point to which this paper returns.

Outreach Programmes of Information Agencies And Informal Learning Venues

Outreach by information agencies has historically been justified by the need to reach populations for whom the institutional threshold is itself the barrier. Lloyd's (2010) treatment of information literacy as landscape-dependent implies that a competence acquired inside an institution may not transfer to the settings where it is needed. Oldenburg's (1999) conception

International Journal of Modern Education
IJMOE
EISSN: 2637-0905
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362

of the third place, the informal public setting distinct from home and workplace, offers a complementary rationale: the municipal park, the market and the community hall are where non-users of formal information services can be encountered on their own terms.

The pedagogical trade-off is severe. Outreach in a public park confers no control over dwell time, no prior knowledge screening, no attendance obligation and no assessment leverage. A visitor may give thirty seconds or thirty minutes. UNESCO's media and information literacy programme has long favoured participatory and game-based formats for precisely such conditions (Grizzle et al., 2021), and the design question becomes how much of a competence framework can be addressed under a voluntary attention constraint.

The Evaluation Problem

Evaluation of service-learning outreach is dominated by reaction data. Kirkpatrick and Kirkpatrick's (2006) four-level model distinguishes reaction, learning, behaviour and results; the overwhelming majority of programme reports terminate at level one. The reasons are structural rather than negligent: outreach populations are transient, anonymous and non-recontactable, and the instruments deployed at registration are designed for administrative accountability rather than measurement.

A second and less discussed problem is the conflation of platform reach with programme reach. Social media analytics offer impressions, views and likes with an appearance of precision, and outreach reports increasingly incorporate them as impact evidence. Impressions are not attendance, and attendance is not learning. The relationship between the two, in a community outreach context, is an empirical question that is rarely posed.

Research Gap

Three gaps follow. First, AI literacy intervention research is overwhelmingly situated in formal educational settings; general-public interventions in informal venues are scarce, particularly in Southeast Asia. Second, SULAM has generated a large corpus of documented community engagement that has not been systematically analysed as evidence about outreach design. Third, the relationship between promotional platform metrics and actual community participation in such programmes is undocumented. This study addresses all three within a single case.

Conceptual Framework

The study employs a two-dimensional analytic frame. The horizontal dimension is Ng et al.'s (2021) four aspects of AI literacy, supplemented by the human-centred mindset dimension from the UNESCO framework (Miao & Shiohira, 2024), which captures dispositional orientation toward AI in a way the four-aspect model does not fully articulate. The vertical dimension is Kirkpatrick and Kirkpatrick's (2006) evaluation hierarchy, which is used diagnostically rather than aspirationally: it establishes what the available evidence can and cannot support.

Table 1 sets out the resulting matrix and locates the present study within it. The frame makes explicit that the evidence base of a single-day outreach event lies almost entirely at level one, with fragmentary and observational access to level two, and no access to levels three or four.

International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362

Rather than treating this as a defect to be concealed, the study treats the boundary as itself a finding about how service-learning outreach is currently instrumented.

Table 1: Analytic Matrix Combining AI Literacy Dimensions with Evaluation Levels

Evaluation level	Evidence type	Available in this case	AI literacy dimensions addressable
L1 Reaction	Satisfaction, perceived clarity, perceived interactivity	Yes, survey (n = 37), open comments (n = 28), interviews (n = 2)	All four, indirectly
L2 Learning	Knowledge or skill change	Partial and observational only; quiz item data not retained	Know and understand; evaluate
L3 Behaviour	Applied change in practice	No	Use and apply; ethics
L4 Results	Community-level outcome	No	All

Methodology

Research Design

The study adopts a single, holistic case study design in the sense of Yin (2018), with the programme as the unit of analysis and embedded sub-units corresponding to the four activity formats. The case is descriptive and instrumental: it is examined not for intrinsic interest in the event but for what it reveals about the design and evaluation of community AI literacy outreach. A convergent mixed-methods approach was adopted (Creswell & Plano Clark, 2018), with quantitative and qualitative strands collected concurrently and integrated at the interpretation stage. The design is qualitatively driven; quantitative data serve to establish reach and reaction, while qualitative data carry the explanatory burden.

Case Setting

The programme was delivered on Saturday, 3 January 2026 at Taman Jubli Perak, a municipal recreation park in Sungai Petani, Kedah, Malaysia. It was organised by 29 fifth-semester students of the class KCDIM1105C, Diploma in Information Management (CDIM110), Faculty of Information Science, Universiti Teknologi MARA Cawangan Kedah, as the SULAM component of the course IMD317 Outreach Programs of Information Agencies. Institutional approval was granted by the Academic Affairs Division, with funding of RM375 from the Academic Development Trust Fund. Partners were a youth organisation, the Sungai Petani Municipal Council and the library of a private international university.

The programme comprised one principal exhibition and four supporting activities, operating from 9:00 to 15:00 with a formal opening and closing ceremony at midday. The organising committee was structured into functional units covering protocol, logistics and technical support, registration, catering, activities, prizes, multimedia and special tasks, with students rotating through hourly booth shifts.

International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362

Data Sources

Six data sources were used, summarised in Table 2. The corpus is naturalistic in the sense that all instruments were designed and administered by the student organisers for programme purposes and were analysed retrospectively for research purposes.

Table 2: Data Sources Mapped To Research Questions

Source	Description	Research question
Programme documentation	Proposal, approval correspondence, budget, tentative schedule, committee structure, secretary's task record	RQ1, RQ5
Registration record	Google Form and manual sign-in sheet, 44 form responses	RQ2
Post-programme survey	Google Form, 37 responses, three rating items, one channel item, one open comment item	RQ3, RQ5
Semi-structured interviews	Two recorded interviews: an academic stakeholder and a visitor	RQ3, RQ4
Social media analytics	TikTok account and video-level metrics, Instagram Reel insights, Facebook post record	RQ5
Photographic and video documentation	Approximately 60 images and three video assets	RQ1, RQ2, RQ4

Data Analysis

Quantitative data were analysed descriptively: frequencies, percentages and arithmetic means. Given the sample size and the single-item nature of each construct, no inferential testing was attempted, and mean scores are reported alongside full frequency distributions so that distributional shape is visible rather than concealed by central tendency.

Interview transcripts, which are code-switched between Malay and English in the original, were analysed using the six-phase reflexive thematic analysis procedure of Braun and Clarke (2006). Transcripts were read for familiarisation, coded inductively at the semantic level, and codes were collated into candidate themes that were then reviewed against the full data set. Extracts reported below are presented in English translation, with the original wording preserved where the code-switch itself carries meaning.

Programme documents were analysed following Bowen's (2009) procedure for document analysis, combining content analysis for manifest features such as budget lines and activity specifications with thematic reading of justificatory text. Activity descriptions were coded deductively against the AI literacy dimensions specified in the conceptual framework.

Integration was achieved through triangulation across sources: convergence was sought between survey ratings, interview accounts, documentary description and photographic evidence, and divergences were retained for interpretation rather than resolved by preference for one source.

International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362

Ethical Considerations

The programme received institutional approval prior to delivery, and interview participants gave verbal consent to recording and to public dissemination of the resulting material, which was subsequently published on the programme's social media accounts. For this study, individuals are identified by role rather than by name except where their role is a matter of public institutional record and their inclusion is material to the interpretation. Photographic material is described rather than reproduced. Two ethical limitations are acknowledged. The feedback instrument required respondents to supply their full name, which is a defensible administrative choice but compromises anonymity and plausibly inflates positive response. Second, minors participated in the programme and appear in the documentation; no data from minors are individually reported here.

Trustworthiness

Trustworthiness was addressed using the criteria of Lincoln and Guba (1985). Credibility was addressed through method and source triangulation. Dependability was supported by maintaining an audit trail linking every claim to a specific document, response set or transcript segment. Confirmability was pursued by reporting disconfirming evidence, notably the platform metrics that contradict the programme's own narrative of social media success. Transferability is supported by detailed description of setting, cost and design, so that readers may judge applicability to their own contexts. The principal threat to trustworthiness, addressed in the limitations, is that the primary analyst was institutionally connected to the programme.

Findings

Operationalising AI Literacy Under Outreach Constraints (RQ1)

The programme addressed AI literacy through five distinct formats, four of which were substantive and one of which functioned as engagement infrastructure. Table 3 maps each to the analytic dimensions.

Table 3: Activity Formats Mapped To AI Literacy Dimensions

Format	Mechanism	Primary dimension	Secondary dimension	Device dependency
Knowledge exhibition	Poster-based explanation of what AI is, how it works, applications, benefits, risks, and good practice	Know and understand	Ethics of AI	None
Real or AI?	Quiz-based forced-choice identification of AI-generated versus photographic images, delivered via QR code and personal smartphone	Evaluate and appraise	Know and understand	High
I Race You	Timed head-to-head cup-arrangement race, debriefed as a demonstration of	Human-centred mindset	Ethics of AI	None

International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362

Format	Mechanism	Primary dimension	Secondary dimension	Device dependency
	human speed and spontaneous problem-solving			
Correct the Pattern	Memory-and-reconstruction task using coloured cups concealed in a box facing away from the participant	Human-centred mindset	Know and understand	None
Photobooth	Mirror stand with props for participant self-photography	None; dwell-time and affective engagement	None	None

Three features of this design merit comment. First, only one of the four substantive formats required a networked device, which materially reduces exclusion in a mixed-age public setting where smartphone ownership and data access are unevenly distributed. Second, the exhibition covered the definitional, mechanical, applied and ethical strata in a single physical artefact, including an explicit "good practice" panel advising verification against trusted sources, non-total reliance on AI outputs, and critical appraisal. Third, the two physical games were not incidental entertainment: the programme documentation is explicit that they were introduced to demonstrate that human beings can solve problems effectively without depending entirely on AI, and losing participants were required to answer a short AI-related question, converting defeat into an instructional moment.

The economics are notable. Approved expenditure was RM375, comprising RM290 for catering and RM85 for materials, principally a banner and consumable activity items. Against 44 registered participants this yields approximately RM8.52 per registered participant. The denominator is registrations, not survey responses: the 37 post-programme respondents reported below are a subset of the 44 registrants, and the per-participant cost is not calculated on them. The proposal had estimated RM569; the delivered programme operated at 66 per cent of the proposed budget without reduction in the activity set, the difference falling largely on printing, signage and refreshment lines.

Reach And Composition Of Participation (RQ2)

Forty-four responses were captured through the digital registration form, supplemented by a manual sign-in sheet for visitors who declined or could not use the QR-code route. The dual-channel approach is defensible in a public setting, but it produced a fragmented record: the two streams were not reconciled into a single dataset, so a definitive attendance figure cannot be established. This is a recurrent and correctable weakness in outreach documentation.

The registration instrument collected email, full name, address and an age band (under 12, 13 to 18, 19 and above). The age distribution was collected but not tabulated in the programme report, and the raw responses were not available for this analysis. The composition of participation must therefore be characterised from documentary and photographic evidence rather than from the demographic data that was, in fact, gathered. That evidence indicates a genuinely intergenerational audience: primary-school-aged children, secondary-age youth

International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362

from the partner youth organisation, accompanying parents, and older adults. At least one participant with a disability took part in the activities. One visitor travelled from Selangor, some four hours by road, having encountered the programme through Facebook.

The gap between data collected and data analysed is itself a finding. An age-band variable was captured from every digital registrant and would have permitted straightforward cross-tabulation of reaction scores by age group, which is precisely the kind of evidence that would inform future design. It was not used.

Reaction-Level Outcomes (RQ3)

Thirty-seven participants completed the post-programme survey, representing 84.1 per cent of digital registrants. Results are reported in Table 4.

Table 4: Post-Programme Participant Ratings (N = 37)

Item	5	4	3	2	1	Mean
Was the information delivered well?	32 (86.5%)	4 (10.8%)	1 (2.7%)	0	0	4.84
Was the information easy to understand?	32 (86.5%)	4 (10.8%)	1 (2.7%)	0	0	4.84
Were the games provided interactive?	30 (81.1%)	6 (16.2%)	1 (2.7%)	0	0	4.78

Ratings are uniformly high, and the programme report interprets them as evidence of effectiveness. A more cautious reading is warranted on three grounds. First, the distributions exhibit a pronounced ceiling effect, with more than four fifths of responses at the maximum on every item, leaving almost no variance to explain. Second, the first two items produced identical frequency distributions, which is consistent either with genuine convergence or with respondents failing to differentiate between conceptually adjacent items, a common halo pattern in short satisfaction instruments. Third, the instrument required respondents to enter their full name and was administered on site, frequently with a student facilitator present; both conditions are associated with socially desirable responding.

The open-comment field attracted 28 responses. Thematic reading identifies three clusters: undifferentiated approval (“Terbaik”, “BEST”, “Good job”); cognitive engagement, exemplified by a comment describing the activities as games that test the mind; and environmental appreciation, referring to the attractiveness of the venue. The presence of an unprompted cognitive-engagement comment is the most informative element, since it indicates that at least some participants construed the activity as intellectual rather than merely recreational.

The overall pattern supports a modest conclusion: delivery was clear, accessible and well received. It does not support a conclusion about learning, and the study declines to draw one.

Evidence Of AI-Related Knowledge Gaps (RQ4)

The most analytically significant observation in the case does not come from the satisfaction instrument. Programme documentation records that a subset of visitors encountered difficulty distinguishing AI-generated content from authentic content during the Real or AI? activity and

International Journal of Modern Education
IJMOE
EISSN: 2637-0905
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362
characterises this as evidence of a persisting gap in public exposure to and understanding of AI technology despite its increasingly widespread use.

This observation is convergent with controlled experimental evidence. Nightingale and Farid (2022) found that synthesised faces have passed beyond the threshold of reliable human discrimination and are judged more trustworthy than genuine photographs. What the present case adds is not experimental confirmation but ecological corroboration: the same difficulty appears among ordinary visitors to a municipal park in northern Malaysia, engaging with a low-stakes quiz, without any prior framing as a test of vulnerability.

The interview data reinforce this. A visitor who had read the exhibition infographic, asked to describe the disadvantages of AI, moved unprompted from the general to the specific:

> *"Now there is already AI that can change sentences, change people's faces. That is dangerous, that is a kind of crime. So for me, one has to be smart about using it, and not misuse it."*

This is a competent lay articulation of the synthetic media problem, arrived at without technical vocabulary and without prompting toward it. The same respondent framed the benefit side through the idiom of working smart rather than working hard, a formulation that maps closely onto the augmentation framing that the programme itself promoted.

The methodological loss here is considerable and instructive. The *Real or AI?* activity was delivered through a quiz platform that records item-level responses for every participant. That data would have constituted a direct, objective, individually scored measure of how well community participants identified AI-generated images, precisely the level two learning evidence that outreach programmes are normally unable to obtain. It was generated automatically and then not retained. The activity that was designed as entertainment was, unrecognised, the study's best instrument.

Stakeholder Perceptions

Thematic analysis of the two interview transcripts yielded four themes.

Theme 1: Game-based framing lowered the threshold to conceptual content. The academic stakeholder attributed the programme's value specifically to the number of games that exposed visitors to information literacy, positioning the play format as the mechanism rather than as decoration.

Theme 2: Child accessibility with parental mediation. The same respondent reported observing her own child complete two of the games, including the AI image discrimination task, and answer correctly. The account is notable for its structure: the adult's assessment of programme value was mediated entirely through observation of a child's performance. This suggests that in family-attended outreach, the child is frequently the primary participant and the accompanying adult a secondary, evaluative one, a dynamic with implications for how such programmes should be pitched.

Theme 3: Dependency risk as the salient concern. The visitor respondent volunteered that some people would rely one hundred per cent on AI, and that this is not good for the brain

International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362

because it does not train one to think. Concern about cognitive dependency preceded and outweighed concern about accuracy in this account.

Theme 4: Manipulation as the perceived threat. As reported above, synthetic manipulation of text and faces was identified as the principal harm and framed in explicitly criminal rather than merely epistemic terms.

Themes 3 and 4 together indicate that where the exhibition content and the visitor's prior concerns aligned, articulation was fluent and specific. This is consistent with the programme having provided vocabulary and confirmation rather than novel information for that particular respondent, which is a realistic and unglamorous account of what a single exhibition encounter can accomplish with an already-engaged adult.

Promotional Channels And The Reach-Conversion Gap (RQ5)

Respondents were asked how they learned about the event. Results appear in Table 5.

Table 5: Reported Awareness Channel (N = 37)

Channel	n	%
Social media	25	67.6
Advertisement	11	29.7
Website	1	2.7

The instrument is weak in two respects that must be stated before the result is interpreted. The response options were mutually exclusive when the underlying behaviour is not, and no option was offered for interpersonal referral, which is typically a dominant channel for community events. The programme's own narrative refers to friends as a possible source, which the instrument did not permit respondents to select. The "advertisement" category is also ambiguous, since it could plausibly denote the printed banner, the poster, or sponsored digital content.

Subject to these caveats, social media clearly dominated. The more interesting question is which social media, and here the platform analytics contradict the programme's own summary.

Table 6: Social Media Performance Indicators

Platform	Asset	Views	Likes	Comments	Shares	Mean watch time	Completion rate
TikTok	Closing montage video	361	10	0	0	5.8 s	1.67%
TikTok	Account (aggregate)	n/a	443 total	n/a	n/a	n/a	n/a
Instagram	Visitor interview Reel (4:17)	149	14	1	5	n/a	n/a

International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362

Platform	Asset	Views	Likes	Comments	Shares	Mean watch time	Completion rate
Facebook	Community group post	not captured	not captured	not captured	not captured	n/a	n/a

The TikTok montage accumulated 361 views but a mean watch time of 5.8 seconds and a full-video completion rate of 1.67 per cent, with zero comments, zero shares and zero resulting followers. Total cumulative play time across all views was approximately 46 minutes. On any reasonable reading, this is reach without engagement: the content was served, briefly sampled and abandoned. The Instagram Reel performed better on a per-view basis, with a share rate of 3.4 per cent, indicating some willingness to propagate.

Against this, the one channel for which no analytics were captured appears to have been the most consequential. A student posted an informally worded appeal in a place-based Facebook residents' group, written in colloquial northern Malaysian register, inviting local families to come and play, and explicitly noting that prizes were free. The interviewed visitor, who travelled from Selangor, reported encountering the programme while scrolling Facebook. The programme documentation itself describes the Facebook response as encouraging and beyond expectation.

The pattern is coherent and, we suggest, generalisable. Polished, institutionally styled short-form video on algorithmically mediated platforms generated impressions among an audience with no relationship to the venue. Vernacular, register-matched text in a place-based group generated attendance. The organisers, following conventional practice, measured the first and not the second.

Student Learning Outcomes

The secretary's documented task record provides a granular account of the competencies exercised: preparing the full programme proposal for academic approval, drafting and circulating meeting minutes, constructing the tentative schedule and committee allocation, completing the institutional funding application, and compiling the final report incorporating survey analysis, attendance documentation and photographic records. Additional roles across the committee encompassed budget management, logistics, protocol, multimedia production, on-site interviewing and social media content design.

These map closely onto the core competencies of the parent discipline. Designing a registration instrument, capturing structured participant data, analysing responses and producing an evidence-based report is information management practice, undertaken with a live community rather than a simulated one. In Kolb's (1984) terms, the programme supplied concrete experience abundantly; the reflective observation and abstract conceptualisation stages were addressed through the report requirement, though a formal structured reflection protocol of the kind advocated by Ash and Clayton (2009) was not evident in the documentation.

International Journal of Modern Education
IJMOE
EISSN: 2637-0905
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362

Discussion

The Municipal Park As An Information Outreach Venue

The choice of a public recreation park rather than a school hall, library or campus venue is the design decision with the widest consequences. It eliminated institutional gatekeeping and self-selection by prior interest, producing an audience that included young children, a participant with a disability, elderly visitors and passers-by with no relationship to the university. This is precisely the population that formal AI literacy provision, however well designed, structurally cannot reach.

The cost was control. The programme had no capacity to sequence learning, verify prior knowledge, enforce dwell time or follow up. Lloyd's (2010) landscape argument suggests this trade is defensible: competence acquired in the setting where it is exercised is more likely to transfer than competence acquired in an institutional setting and expected to travel. Oldenburg's (1999) third-place framing supplies the complementary point that such settings are where community publics already are, and where an information agency's outreach function properly locates itself.

The generalisable design lesson is that low device dependency is not a compromise but a requirement. Three of the four substantive formats used paper, cups and cardboard. In a mixed-age public setting, any format requiring a personal smartphone with data access silently excludes the youngest, the oldest and the poorest, which are frequently the groups least protected against synthetic media.

Contrastive Embodiment And Its Risks

The two physical games represent a pedagogically interesting move that the organisers describe in functional but not theoretical terms. Rather than explaining that AI has limitations, the activities required the participant to perform a task quickly and well and then debriefed that performance as evidence of human capability. We term this contrastive embodiment: the construction of an argument about machine limitation through the participant's own bodily demonstration of human competence.

The approach has clear advantages under outreach constraints. It requires no reading, no device and no prior knowledge; it is intrinsically motivating; and it addresses the human-centred mindset dimension of the UNESCO framework (Miao & Shiohira, 2024), which is otherwise difficult to reach in a brief encounter. It also produces an embodied memory rather than a propositional one, which is plausibly more durable.

The risk requires equal attention, and the programme documentation does not register it. Framing the human and the machine as competitors, with the human winning on speed and spontaneity, installs an adversarial mental model that is both empirically fragile and pedagogically counterproductive. Speed of physical manipulation is a domain in which human superiority is neither surprising nor durable, and a participant who leaves with the conclusion that humans outperform AI has acquired a belief likely to be falsified, potentially producing overcorrection toward uncritical acceptance later. The augmentation framing that the programme articulated verbally that AI is a support tool rather than a replacement, is the correct

International Journal of Modern Education
IJMOE
EISSN: 2637-0905
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362
one; the game mechanic tacitly contradicts it. A redesign preserving the format but reframing the debrief around complementarity rather than victory would resolve the tension at no cost.

Difficulty In Identifying AI-Generated Images As A Public-Policy Signal

The observation that some community visitors could not reliably distinguish synthetic from photographic images should not be treated as a minor implementation note. It is the point at which a low-budget student outreach programme intersects a first-order policy problem.

The experimental literature establishes that this difficulty is common rather than a shortcoming of the poorly educated (Nightingale & Farid, 2022), and that the harms of synthetic media operate through generalised uncertainty as much as through specific deception (Vaccari & Chadwick, 2020). If those findings hold in Malaysian community settings, the implication for information agencies is that source-appraisal instruction, the historic core of information literacy provision, is necessary but no longer sufficient. A public that can evaluate a website's authority but cannot judge whether an image corresponds to any real event is exposed in a way the existing curriculum does not address.

The practical recommendation that follows is specific. Training in identifying AI-generated images should be treated as a routine component of public information literacy programming, delivered in short, gamified, repeatable formats of exactly the kind this programme improvised, and it should be instrumented so that performance is measured rather than merely occasioned.

Platform Reach And Community Conversion

The divergence reported in the preceding section has implications beyond this case. Outreach reports increasingly present social media metrics as impact evidence, and the metrics are readily available, visually persuasive and institutionally legible. The present case suggests they may be close to uninformative about the outcome that matters.

A montage video with 361 views, a mean watch time of 5.8 seconds and no shares represents, in aggregate, approximately 46 minutes of human attention distributed across an audience selected by an engagement-optimising algorithm rather than by geography. A single vernacular post in a residents' group reached an audience defined by the ability to physically attend. The second is worth more to a community programme, and only the first was measured.

This is a variant of a well-established problem in research evaluation, where indicators are adopted because they are available and countable rather than because they are valid for the inference being drawn. The corrective for outreach practice is modest: instrument the attribution question at the point of attendance, using a channel item with non-exclusive options including interpersonal referral and specific named platforms, and treat platform-side analytics as a description of content performance rather than of programme reach.

LIS Students As AI Literacy Intermediaries

The case supports a claim about disciplinary positioning. Diploma-level students with no specialist AI training, working with a budget of RM375, successfully translated concepts including machine learning, algorithmic decision-making, synthetic media generation and AI ethics into formats intelligible to children and to elderly visitors. The competence exercised

International Journal of Modern Education
IJMOE
EISSN: 2637-0905
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362

was not technical understanding of AI but the intermediary competence of the information professions: assessing audience, structuring content, selecting format, capturing evidence and reporting.

This suggests that the LIS curriculum is well placed to produce AI literacy intermediaries at scale, and that the constraint is curricular attention rather than capability. The corollary is that AI literacy content should be treated as a standard component of information literacy instruction modules rather than as a specialist elective, and that outreach courses of the IMD317 type constitute a ready delivery mechanism, since the pedagogical infrastructure, community partnerships and institutional approval pathways already exist.

Designing Evaluation Into SULAM

The strongest practical recommendation from this study concerns instrumentation. SULAM programmes are already required to register participants and to report outcomes. The registration form in this case collected email, name, address and age band; the feedback form collected three satisfaction ratings and a channel item. The infrastructure for a pre-post design was fully in place and was used to collect administrative rather than measurement data.

Reconstructing the registration instrument as a baseline would cost nothing. Three or four validated AI literacy items, drawn or adapted from established instruments (Carolus et al., 2023; Ng et al., 2024; Wang et al., 2023), administered at registration and repeated in the feedback form, would convert a satisfaction survey into a within-subject pre-post design. The matching variable, participant name, is already collected. Combined with retention of item-level quiz data from platforms that generate it automatically, this would move a substantial national corpus of service-learning outreach from Kirkpatrick level one to level two at effectively zero marginal cost.

The broader point is that Malaysia's SULAM policy has generated a large, structured, ongoing body of community engagement activity whose evidentiary yield is limited almost entirely by instrument design. This is an unusually tractable problem.

Limitations

Five limitations bound the claims made here.

First, this is a single case in a specific setting, and no statistical generalisation is intended or possible. Transferability rests on the descriptive detail provided.

Second, the quantitative data derive from single-item measures administered non-anonymously in the presence of facilitators, with a pronounced ceiling effect. They support conclusions about reaction and about the pattern of response, not about programme effectiveness.

Third, the qualitative corpus comprises two interviews. This is sufficient to illustrate and to corroborate but not to establish thematic saturation, and both respondents were self-selecting and favourably disposed. Systematically absent are the perspectives of visitors who declined to engage or who left early, whose accounts would be the most diagnostically valuable.

International Journal of Modern Education
IJMOE
EISSN: 2637-0905
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362

Fourth, the study is retrospective and secondary. Instruments were designed for programme administration rather than research; raw registration data were not available for reanalysis; and the item-level quiz data that would have permitted objective measurement were not retained.

Fifth, the analysis was conducted by researchers institutionally connected to the programme. This confers access and contextual understanding but introduces the risk of favourable interpretation. The risk was mitigated by deliberately foregrounding disconfirming evidence, particularly the platform analytics and the ceiling effect, but it cannot be eliminated. Coding was undertaken by a single analyst; no inter-coder reliability statistic is reported.

Conclusion and Recommendations

This study examined a student-led AI literacy outreach programme delivered in a Malaysian municipal park under the national SULAM service-learning framework. It found that a comprehensive AI literacy design, addressing conceptual, applied, evaluative, ethical and dispositional dimensions, was achievable at approximately RM8.52 per registered participant using formats that were, with one exception, independent of personal device access. Reaction-level outcomes were high but subject to ceiling and social desirability effects that limit their evidentiary value. The most consequential findings lay elsewhere: documented difficulty among community members in distinguishing AI-generated images from photographs, which corroborates controlled experimental evidence in an everyday setting; and a marked divergence between social media reach metrics and actual community conversion, with vernacular place-based communication outperforming polished algorithmic content in this case.

Three sets of recommendations follow.

For practice. Design outreach with minimal device dependency. Treat synthetic-media discrimination as core content rather than as a novelty activity. Reframe human-versus-machine game mechanics around complementarity to avoid installing an adversarial and falsifiable mental model. Retain item-level data from any platform that generates it.

For policy. Revise SULAM registration templates to incorporate a small number of validated baseline items aligned to the programme's stated learning outcomes, enabling within-subject pre-post measurement at no marginal cost. Require attribution items that permit multiple response and include interpersonal referral. Treat institutional community-engagement performance indicators as reportable at the learning level rather than the participation level.

For research. Replicate with a pre-post design and an objective identification task to establish how accurately Malaysian community populations distinguish AI-generated images from photographs, disaggregated by age. Investigate the vernacular-versus-institutional register effect in community programme promotion, which appears consequential and is presently undocumented. Conduct multi-case analysis across the substantial existing SULAM corpus to establish which outreach design features are associated with which outcomes.

The wider argument is that AI literacy is becoming a public infrastructure question, and that the institutions best positioned to deliver it at population scale are not necessarily those with the deepest technical expertise. A group of diploma students with cups, cardboard and a park achieved something that the formal system, by its structure, cannot. What was missing was not capability but measurement, and measurement is the cheaper problem to solve.

International Journal of Modern Education
EISSN: 2637-0905
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362

Acknowledgements: The authors thank the students of KCDIM1105C, Diploma in Information Management, UiTM Cawangan Kedah, whose work constitutes the case examined here, and the partner organisations whose cooperation enabled the programme.

Funding Statement: The programme was funded by the Academic Development Trust Fund (TAPA), UiTM Cawangan Kedah (RM375). No funding was received for the preparation of this manuscript.

Conflict of Interest Statement: The authors were academically associated with the programme under study. This association is discussed in the Limitations section.

Ethics Statement: The programme received institutional approval from the Academic Affairs Division, UiTM Cawangan Kedah. Interview participants provided verbal consent for recording and public dissemination. Individuals are identified by role rather than by name in this manuscript.

Data Availability Aggregated survey data and programme documentation are available from the corresponding author on reasonable request, subject to institutional approval.

Author Contribution Statement: All authors contributed significantly to the development of this manuscript. Author 1 contributed to the conceptualization and methodology of the study, provided overall supervision, and served as an advisor throughout the programme execution. Author 2 handled data collection and contributed to the literature review. Author 3 contributed to the analysis, interpretation of results, drafting, and critical revision of the manuscript. All authors read and approved the final version of the manuscript prior to submission to the International Journal of Modern Education (IJMOE).

International Journal of Modern Education
EISSN: 2637-0905
IJMOE
Volume: 8 Issue: 31 (September 2026) PP. 1343-1362

References

Ash, S. L., & Clayton, P. H. (2009). Generating, deepening, and documenting learning: The power of critical reflection in applied learning. *Journal of Applied Learning in Higher Education, 1*, 25–48. https://doi.org/10.57186/jalhe_2009_v1a2p25-48

Association of College and Research Libraries. (2016). *Framework for information literacy for higher education*. American Library Association. https://www.ala.org/acrl/standards/ilframework

Bawden, D. (2001). Information and digital literacies: A review of concepts. *Journal of Documentation, 57*(2), 218–259. https://doi.org/10.1108/EUM0000000007083

Bowen, G. A. (2009). Document analysis as a qualitative research method. *Qualitative Research Journal, 9*(2), 27–40. https://doi.org/10.3316/QRJ0902027

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Bringle, R. G., & Hatcher, J. A. (1996). Implementing service learning in higher education. *The Journal of Higher Education, 67*(2), 221–239. http://dx.doi.org/10.2307/2943981

Carmi, E., Yates, S. J., Lockley, E., & Pawluczuk, A. (2020). Data citizenship: Rethinking data literacy in the age of disinformation, misinformation, and malinformation. *Internet Policy Review, 9*(2). https://doi.org/10.14763/2020.2.1481

Carolus, A., Koch, M. J., Straka, S., Latoschik, M. E., & Wienrich, C. (2023). MAILS: Meta AI Literacy Scale. Development and testing of an AI literacy questionnaire based on well-founded competency models and psychological change- and meta-competencies. *Computers in Human Behavior: Artificial Humans, 1*(2), 100014. https://doi.org/10.1016/j.chbah.2023.100014

Cox, A. M. (2023). How artificial intelligence might change academic library work: Applying the competencies literature and the theory of the professions. *Journal of the Association for Information Science and Technology, 74*(3), 367–380. https://doi.org/10.1002/asi.24635

Creswell, J. W., & Plano Clark, V. L. (2018). *Designing and conducting mixed methods research* (3rd ed.). SAGE.

Eyler, J., & Giles, D. E. (1999). *Where's the learning in service-learning?* Jossey-Bass.

Furco, A. (1996). Service-learning: A balanced approach to experiential education. In *Expanding boundaries: Serving and learning* (pp. 2–6). Corporation for National Service.

Grizzle, A., Wilson, C., Tuazon, R., Cheung, C. K., Lau, J., Fischer, R., Gordon, D., Akyempong, K., Singh, J., Carr, P. R., Stewart, K., Tayie, S., Suraj, O., Jaakkola, M., Thésée, G., & Gulston, C. (2021). *Media and information literate citizens: Think critically, click wisely!* UNESCO.

Head, A. J., Fister, B., & MacMillan, M. (2020). *Information literacy in the age of algorithms: Student experiences with news and information, and the need for change*. Project Information Literacy.

Kirkpatrick, D. L., & Kirkpatrick, J. D. (2006). *Evaluating training programs: The four levels* (3rd ed.). Berrett-Koehler.

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice Hall.

Kuh, G. D. (2008). *High-impact educational practices: What they are, who has access to them, and why they matter*. Association of American Colleges and Universities.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. SAGE.

Lloyd, A. (2010). *Information literacy landscapes: Information literacy in education, workplace and everyday contexts*. Chandos Publishing.

Long, D., & Magerko, B. (2020). What is AI literacy? Competencies and design considerations. In *Proceedings of the 2020 CHI Conference on Human Factors in Computing Systems* (pp. 1–16). ACM. https://dl.acm.org/doi/pdf/10.1145/3313831.3376727

Miao, F., & Shiohira, K. (2024). *AI competency framework for students*. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000391105

Ministry of Higher Education Malaysia. (2019). *SULAM playbook: Service Learning Malaysia - University for Society*. Ministry of Higher Education Malaysia. https://sulam.mohe.gov.my/web/bahan.html

Ng, D. T. K., Leung, J. K. L., Chu, S. K. W., & Qiao, M. S. (2021). Conceptualizing AI literacy: An exploratory review. *Computers and Education: Artificial Intelligence, 2*, 100041. https://doi.org/10.1016/j.caeai.2021.100041

Ng, D. T. K., Luo, W., Chan, H. M. Y., & Chu, S. K. W. (2024). Design and validation of the AI literacy questionnaire: The affective, behavioural, cognitive and ethical approach. *British Journal of Educational Technology, 55*(3), 1082–1104. https://doi.org/10.1111/bjet.13411

Nightingale, S. J., & Farid, H. (2022). AI-synthesized faces are indistinguishable from real faces and more trustworthy. *Proceedings of the National Academy of Sciences, 119*(8), e2120481119. https://doi.org/10.1073/pnas.2120481119

Oldenburg, R. (1999). *The great good place: Cafés, coffee shops, bookstores, bars, hair salons, and other hangouts at the heart of a community*. Marlowe. https://robotix.ah-oui.org/user_docs/2203/greatgoodplace-ch1-2.pdf

Ridley, M., & Pawlick-Potts, D. (2021). Algorithmic literacy and the role for libraries. *Information Technology and Libraries, 40*(2).

UNESCO. (2021). *Recommendation on the ethics of artificial intelligence*. UNESCO. https://unesdoc.unesco.org/ark:/48223/pf0000381137

Universiti Teknologi MARA. (2020). *Garis panduan pelaksanaan SULAM@UiTM*. Bahagian Hal Ehwal Akademik, UiTM. https://hea.uitm.edu.my/images/uhek/SULAM/Garis_Panduan_SULAM_UiTM_2020.pdf

Vaccari, C., & Chadwick, A. (2020). Deepfakes and disinformation: Exploring the impact of synthetic political video on deception, uncertainty, and trust in news. *Social Media + Society, 6*(1). https://journals.sagepub.com/doi/10.1177/2056305120903408

Wang, B., Rau, P.-L. P., & Yuan, T. (2023). Measuring user competence in using artificial intelligence: Validity and reliability of artificial intelligence literacy scale. *Behaviour & Information Technology, 42*(9), 1324–1337. https://doi.org/10.1080/0144929X.2022.2072768

Yin, R. K. (2018). *Case study research and applications: Design and methods* (6th ed.). SAGE.