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From Classrooms to Clouds: The Evolution of Knowledge Sharing in Digital Learning Platforms

Muhammad Nadeem[1], Kashif Mughal[2], Ayesha Urooj[3], Dr. Shireen Azhar[4], Tooba Shaikh[5]

[1] Department of Computer Science and Information Technology, Sir Syed University of Engineering and Technology, Karachi, Pakistan. munadeem@ssuet.edu.pk

[2] Department of Computer Science and Information Technology, Sir Syed University of Engineering and Technology, Karachi, Pakistan. kashif.mughal@ssuet.edu.pk

[3] Department of Computer Science and Information Technology, Sir Syed University of Engineering and Technology, Karachi, Pakistan. aurooj@ssuet.edu.pk

[4] Department of Educational Administration and Supervision Girne American University. shireenuae1@gmail.com

[5] Computer and Information Systems Engineering NED University of Engineering & Technology, Karachi, Pakistan. toobashaikh@neduet.edu.pk

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Abstract

Digital learning platforms have shifted knowledge sharing from classroom-bound explanation to persistent, searchable, networked, and increasingly intelligent cloud-mediated exchange. This paper examines the evolution of knowledge sharing in digital learning platforms through a conceptual-analytical study titled "From Classrooms to Clouds." The study develops an original CLOUD-SECI framework that integrates community presence, learning design, open access, user trust, data-informed feedback, and Nonaka's socialization-externalization-combination-internalization knowledge conversion logic. The methodology uses a transparent author-developed analytical rubric rather than fabricated participant data. Five platform generations are compared: classroom-centered learning, early learning management systems, Web 2.0/social learning, cloud-collaborative platforms, and AI-enabled adaptive cloud learning. Results are presented through original figures, tables, matrices, and diagrams that map the movement from one-way knowledge transmission toward co-created, persistent, multimodal, and analytics-informed knowledge ecosystems. The findings suggest that digital platforms improve access, artifact persistence, collaboration, and personalization, but these gains depend on governance, pedagogical quality, digital literacy, privacy protection, inclusion, and teacher facilitation. The paper argues that cloud-based knowledge sharing is not automatically better than classroom learning; it becomes educationally valuable only when technology strengthens human interaction, feedback, critical inquiry, and equitable participation. The proposed framework offers practical guidance for educators, universities, instructional designers, and platform developers seeking to improve digital learning environments without reducing education to mere content delivery.

Keywords: Knowledge Sharing; Digital Learning Platforms; Cloud Learning; Online Learning; Learning Management Systems; Collaborative Learning; Educational Technology; Artificial Intelligence In Education

1. Introduction

Digital learning platforms have turned the act of sharing knowledge into a classroom-constrained explanation and to persistent, searchable, networked, and increasingly intelligent exchange mediated

by the cloud. The paper explores how knowledge exchange in digital learning platforms has evolved in a conceptual-analytical treatise that was published by the title: From Classrooms to Clouds. The paper elaborates a novel CLOUD-SECI model that incorporates the presence of communities, learning design, open-access resource, user trust, data-informed feedback, and the socialization-externalization/combination-internalization logic of knowledge conversion proposed by Nonaka. The methodology involves viewing transparent and author-constructed analytical rubric, instead of falsified participant data. They compare five platform generations: classroom-based learning, early learning management systems, Web 2.0/social learning, cloud-based collaborative platforms, and AI adaptive cloud learning. Findings are described using novel figures, tables, matrices and diagrams that trace the process of one-way dissemination of knowledge into co-created, persistent, multimodal and analytics-informed knowledge ecosystems. The results indicate that access, artifact persistence, collaboration and personalization are enhanced, but these benefits are contingent on governance, pedagogical quality, digital literacy, privacy protection, inclusion, and teacher facilitation. The paper presents the argument that cloud-based sharing of knowledge is not necessarily superior to classroom learning; however, technology makes educationally worthy of knowledge sharing when it enhances humanity engagement, feedback, critical interrogation, and equal participation. The suggested framework provides a sensible solution to teachers, colleges, course-creators, and platform innovators who want to enrich digital educational settings without making education display providers.

Transfer of knowledge has always been in education, but the specifics of knowledge transfer have radically changed. Traditional classroom KS is often synchronous, local, and well mediated by the teacher. Knowledge sharing can be made searchable, persistent, asynchronous, multimodal, and distributed among learners, teachers, content storefronts, discussion rooms, analytics dashboards, and intelligent systems in cloud-based digital learning platforms. It is not merely the digitization of the classroom, but a reorganization of channels, roles, evidence, risks, and responsibilities of educational communication (Garrison, Anderson, and Archer, 2000; Hrastinski, 2008; UNESCO, 2023).

The COVID-19 pandemic brought the world to more rapidly switch to online and hybrid learning, yet the radical change had originated earlier with learning management systems, open educational resources, social media, collaborative documents, video conferencing, mobile learning and cloud storage. According to OECD (2023), it is within the broader digital education ecosystem, which includes online platforms, student information systems, data systems, procurement, policy, online platforms, and digital devices. The presence of a platform however does not necessarily mean sharing of knowledge. A platform may facilitate learning communities or may degenerate into a library of uploaded content with minimal dialogue, trust and conditions of questioning.

The issue that the given paper aims at resolving is the fact that the discourse of digital learning platforms tends to revolve around the issue of access, efficiency, or adoption of technology, whereas the intricate process of knowledge sharing is theoretically under-contemplated. Sharing of knowledge does not include passing of information. It entails tacit and explicit knowledge, social being, learner agency, community of practice, feedback loops and transforming experience into reusable artifact (Nonaka, 1994; Wenger, 1998; Alavi and Leidner, 2001). These processes can be enabled digitally, but only when their structure and management are based on the learning theory.

The paper provides a new theoretical framework and a clear analytical scoring sheet to elaborate the dynamics of knowledge sharing between a classroom interaction and a cloud-based interaction. It does not purport to report the results of surveys, interviews, and experimental results. It presents a theoretically based framework, developed by authors, which can be applied by researchers and institutions to analyze or enhance digital knowledge-sharing settings.

1.1 Research Aim

The aim of this paper is to examine how knowledge sharing has evolved across digital learning platform generations and to propose an original framework for designing equitable, collaborative, and

pedagogically meaningful cloud-based knowledge-sharing environments.

1.2 Research Questions

1. How has knowledge sharing evolved from classroom-centered learning to cloud-based digital learning platforms?
2. Which platform affordances most strongly influence access, interaction, persistence, collaboration, personalization, and governance?
3. What barriers and enablers shape effective knowledge sharing in digital learning platforms?
4. What framework can guide educators and institutions in designing stronger digital knowledge-sharing ecosystems?

1.3 Original Contribution

- An original five-stage evolutionary model of knowledge sharing in digital learning platforms.
- An author-developed platform affordance scoring matrix with transparent criteria.
- A CLOUD-SECI framework integrating knowledge management, community inquiry, and digital platform governance.
- Practical tables and figures that institutions can adapt for platform evaluation, curriculum design, and digital learning strategy.

2. Literature Review

2.1 Knowledge Sharing and Knowledge Creation

Knowledge sharing is often defined as sharing of knowledge, perception and practice amongst individuals or other groups. Research on knowledge management identifies explicit knowledge, which is documentable, storable, and capable of being transmitted, but identifies tacit knowledge as being embedded in experience, practice, judgment and social context (Nonaka, 1994; Alavi and Leidner, 2001). Both forms are important in the educational field. Recorded lecture, slide deck, or reading list might be either an explicit knowledge source, whereas problem-solving strategies, feedback within a peer group, reflective judgment and professional identity processes tend to necessitate dialogue, modeling and community involvement.

The SECI model of learning by Nonaka (1994) is handy in understanding the platform shift in learning, as it describes the conversion of knowledge upon socialization, externalization, combination, and internalization. Linking Socialization to the classroom may be provided to facilitate externalization through posts, annotations, shared documents, recorded demonstrations and multimedia artifacts. The difficulty is to structure spaces within which those stages support each other, instead of being ripped into single content uploads.

The theory of communities of practice developed by Wenger (1998) supplements that learning is not only the individual acquisition but also the process of being involved in a common practice. This is significant to the digital platform since knowledge sharing becomes more robust in a scenario where the learners are not just consumers of knowledge, but are rightful parties who pose questions, answer their peers, collaborate in producing resources, and come up with common norms.

2.2 Online Learning, Community, and Interaction

According to the Community of Inquiry framework, effective online learning is a factor of the interplay of cognitive presence, social presence, and teaching presence (Garrison et al., 2000). Cognitive presence deals with inquiry and meaning making, social presence deals with the potential of learners to represent themselves as actual players, and teaching presence deals with design, facilitation and direction. This model demonstrates connection is not enough to promote digital knowledge sharing. It relies on premeditated instructions design and presentation.

Hrastinski (2008) differentiates asynchronous, and synchronous e-learning. The asynchronous (e.g., forums, learning management systems, shared documents) and synchronous (e.g., live video and chat) tools aid reflection and immediacy, motivation, and community building, respectively. Contemporary cloud learning systems integrate the two modes forming a more enriched yet complicated knowledge sharing system.

Research on technology adoption is also important due to the fact that a well built platform cannot work in case the users feel it to be cumbersome, irrelevant or unsafe. Technology Acceptance Model by Davis (1989) focuses on perceived ease of use and usefulness whereas the Social influence, facilitating conditions and performance expectancy are combined in a wider acceptance framework by Venkatesh et al. (2003). All these are directly related to the actual sharing of knowledge between the learners and teachers on a platform.

2.3 From LMS to Cloud and AI-Enabled Platforms

The early learning management systems grouped courses, announcements, assignments, grades and files. They gave better access to administration and they tended to recreate hierarchy in the classroom. The integration of 2.0 web and social learning tools increased participation via blogs and wikis, comments, social feeds, and peer-created resources. Clouding also enhanced the aspect of persistence and collaboration through the provision of real-time joint papers, versions, and video collections, unified messaging services, and cross-gadget support.

The recent controversies around digital education highlight that technology within thinking should be conducive to learning results, and not form a goal in itself. The 2023 Global Education Monitoring Report by UNESCO contends that technology in education should be assessed in terms of relevance, equity, scalability and sustainability. OECD (2023) also conceptualizes digital education as an ecosystem that needs to be governed, infrastructured, evidence-based, and stakeholders involved instead of adopting individual tools.

AI-enabled learning decks usher in a new level where knowledge sharing could be customized, summarized, translated, suggested, and evaluated. This opens the opportunities of adaptive feedback and inclusion, however this brings about concerns regarding data privacy, bias, academic integrity, superficial learning, and over-reliance on automated output. Thus, the pedagogical purpose, the transparency, and the human conduit have to regulate AI-cloud learning.

2.4 Research Gap

Light literature reviews discuss the domain of knowledge management, digital learning community, platform adoption, and digital education governance, but lack a combined evolutionary approach to display the change of affordances of importance of knowledge sharing with platforms and between platform generations. To fill in that gap, this paper comes up with a unique framework and visual / tabular findings that relate theory, design of platforms and practice in institutions.

Table 1. Selected literature themes informing the study

Theme	Key sources	Contribution to this paper
Knowledge creation and sharing	Nonaka (1994); Alavi & Leidner (2001)	Explains tacit/explicit knowledge and conversion processes.
Communities of practice	Wenger (1998)	Frames learning as participation in shared practice.
Online learning community	Garrison et al. (2000); Anderson (2008)	Connects digital learning with cognitive, social, and teaching presence.

Synchronous/asynchronous interaction	Hrastinski (2008)	Explains why timing and communication mode affect knowledge exchange.
Technology acceptance	Davis (1989); Venkatesh et al. (2003)	Explains why perceived usefulness, ease, social influence, and support matter.
Technology-enhanced learning critique	Kirkwood & Price (2014); Selwyn (2016)	Warns against assuming that technology automatically improves learning.
Digital education governance	UNESCO (2023); OECD (2023)	Highlights equity, sustainability, governance, and ecosystem design.

3. Methodology

3.1 Research Design

The conceptual-analytical research design is applied in this paper. This is not to test a statistical hypothesis having participants, but to come up with a structured explanation of how knowledge sharing will change across generations of digital learning platforms. Conceptual research is also suitable when the objective is to elucidate relationships, generalize theory and suggest models that are later to be determined through empirical investigation.

The analysis incorporates literature-based thinking with a micro platform affording rubric developed by the author. The theoretical basis has been established based on scholarly and institutional tools, whereas analytical outputs (matrices, diagrams, capability scores, and framework components) were produced specifically for this paper.

3.2 Analytical Units

Table 2. Platform generations used as analytical units

Analytical unit	Approximate maturity period	Core knowledge-sharing pattern
Classroom-centered learning	Pre-platform / continuing	Teacher-led, place-bound, mostly synchronous oral and written exchange.
Early LMS learning	Late 1990s-2000s	Course files, announcements, assignments, forums, and grade communication.
Web 2.0 / social learning	Mid-2000s-2010s	Peer-generated content, blogs, wikis, social discussion, informal networks.
Cloud-collaborative learning	2010s-2020s	Shared documents, video libraries, live collaboration, cross-device access, version history.
AI-cloud adaptive learning	2020s onward	Personalized recommendations, analytics, generative support, automated feedback, adaptive pathways.

3.3 Original Analytical Scoring Procedure

An author-generated scoring matrix has been used in a transparent way in the paper. The 6 dimensions

affordance dimensions were rated on a 1-5 scale by each generation of the platforms, such as access, interaction, persistence, collaboration, personalization and governance. These are interpretive analytical ratings with regard to certain set criteria and not survey results and/or claims concerning a particular institution.

This method of scoring is helpful in that conceptual comparison is transformed into an apparent grid that can be argued about, improved, or modified by subsequent researchers. It is aimed more of a heuristic, explanatory level without a statistical orientation.

Table 3. Rubric used to generate original analytical scores

Dimension	Score 1 means	Score 3 means	Score 5 means
Access	Restricted by place/time/device.	Available through scheduled or limited online access.	Broad cross-device, anytime access with inclusive design.
Interaction	Mostly one-way delivery.	Structured teacher-student and limited peer interaction.	Rich synchronous and asynchronous interaction.
Persistence	Knowledge disappears unless manually recorded.	Some materials are stored in coarse shells.	Searchable, reusable, versioned, and multimedia artifacts.
Collaboration	Mostly individual or classroom group activity.	Shared forums or group submissions.	Real-time co-creation, peer annotation, and community knowledge bases.
Personalization	Uniform instruction for most learners.	Some choice of pace/resources.	Adaptive pathways, analytics-informed feedback, and flexible support.
Governance	High local teacher control; limited platform risk.	Institutional policies partly developed.	Transparent privacy, equity, AI, data, and quality governance.

3.4 Ethics and Data Transparency

There was no human involvement, no student records, no surveys, no interviews and no institutional set of data. Hence, human-subject research did not need any ethical approval. The results of all the analytical data developed by the author are presented directly in the tables and figures of result. The empirical findings with participants are not stated in the paper.

4. Results

The findings provide initial analytical deliverables of the research: an evolution cycle, platform capability table, capability curves, sharing knowledge loop, CLOUD-SECI model, barrier/enabler analysis and practical assessment checklist. One should read these results as a theoretical framework and original synthesis of analysis rather than as empirical data based on participants.

4.1 Evolutionary Pattern of Knowledge Sharing

The initial finding is that the transformation of knowledge sharing has five stages. All stages vary in terms of where there is knowledge, the task of the teacher, the task of the learner, and the permanence of learning materials.

Table 4. Evolution of knowledge-sharing modes across platform generations

Generation	Dominant knowledge mode	Typical artifacts	Teacher role	Learner role	Main limitation
Classroom-centered	Oral explanation, board work, print notes	Lecture notes, textbooks, worksheets	Primary knowledge source and facilitator	Listener, note-taker, participant	Limited persistence and access beyond the classroom.
Early LMS	Digital posting and structured course communication	PDFs, assignments, forums, gradebook	Course organizer and content distributor	User of course materials and submitter of tasks	Often administrative rather than deeply collaborative.
Web 2.0/social	Peer-generated sharing and informal network learning	Blogs, wikis, comments, social posts, videos	Moderator and curator	Contributor, commenter, peer explainer	Quality control and distraction risks.
Cloud-collaborative	Real-time co-creation and persistent cloud artifacts	Shared docs, recordings, dashboards, repositories	Designer, facilitator, feedback provider	Co-author, collaborator, reflective participant	Privacy, access inequality, tool overload.
AI-cloud adaptive	Personalized, analytics-informed, AI-assisted sharing	Adaptive tasks, AI summaries, learning analytics, recommendations	Human guide, evaluator, ethical overseer	Self-directed learner with machine support	Bias, dependency, integrity, and transparency risks.

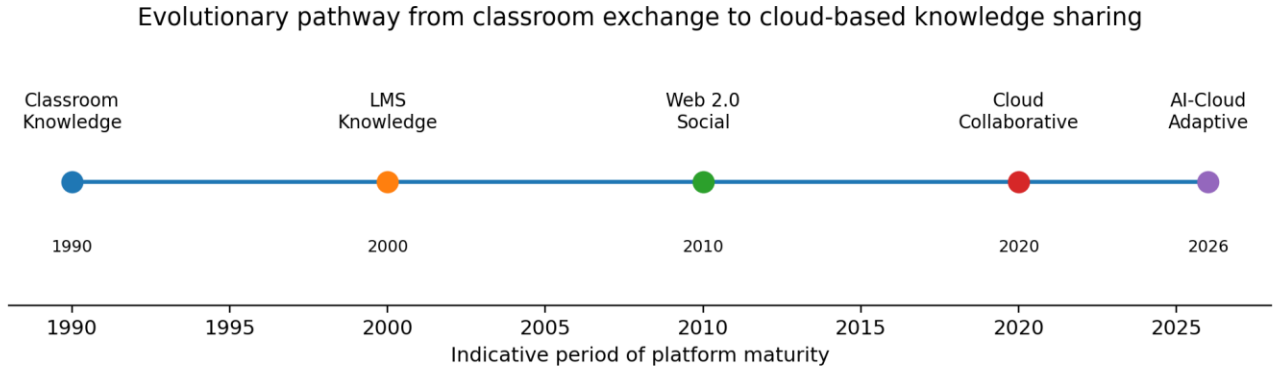

Figure 1. Author-developed evolutionary timeline from classroom exchange to cloud-based knowledge sharing.

4.2 Platform Affordance Scoring Matrix

The second result is an original scoring matrix showing how platform generations differ across six knowledge-sharing affordances. The matrix reveals that cloud-collaborative and AI-cloud environments increase access, persistence, collaboration, and personalization, but governance does not automatically rise at the same pace.

Table 5. Author-developed platform affordance scores

Platform generation	Access	Interaction	Persistence	Collaboration	Personalization	Governance	Total / 30
Classroom Knowledge	2	4	1	3	2	4	16
LMS Knowledge	3	3	3	3	2	3	17
Web 2.0 Social	4	4	4	4	2	2	20
Cloud Collaborative	5	4	5	5	3	3	25
AI-Cloud Adaptive	5	4	5	5	5	3	27

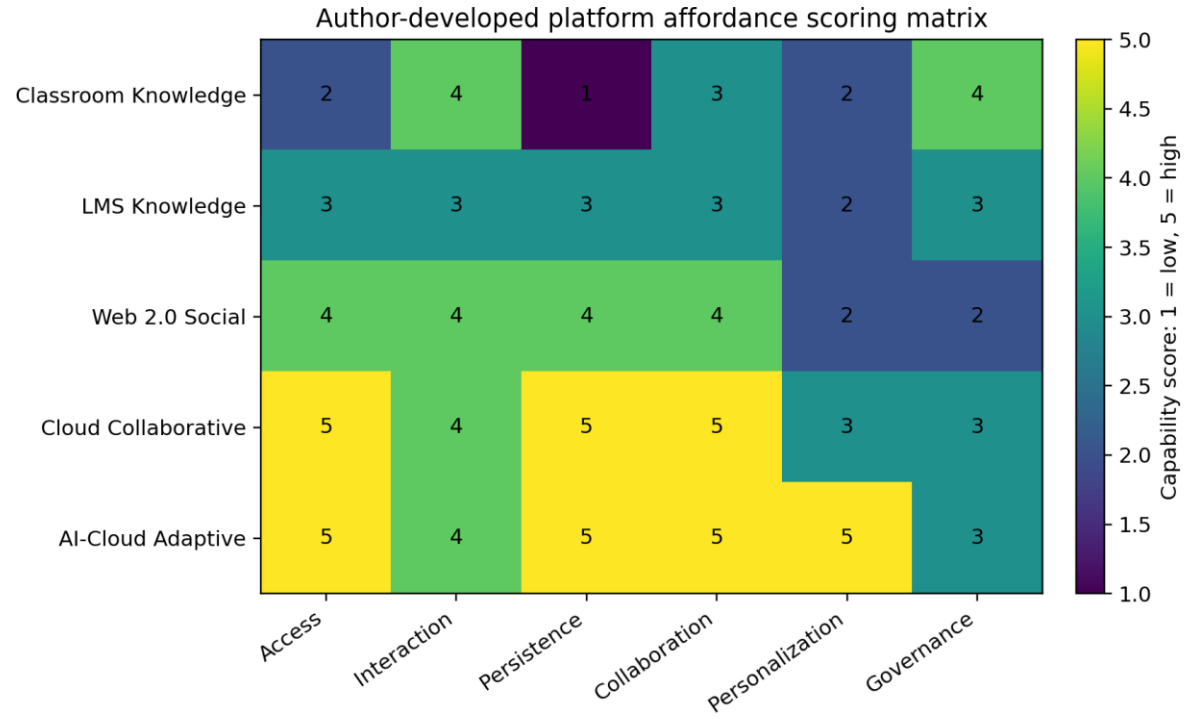

Figure 2. Heatmap of the original platform affordance scoring matrix.

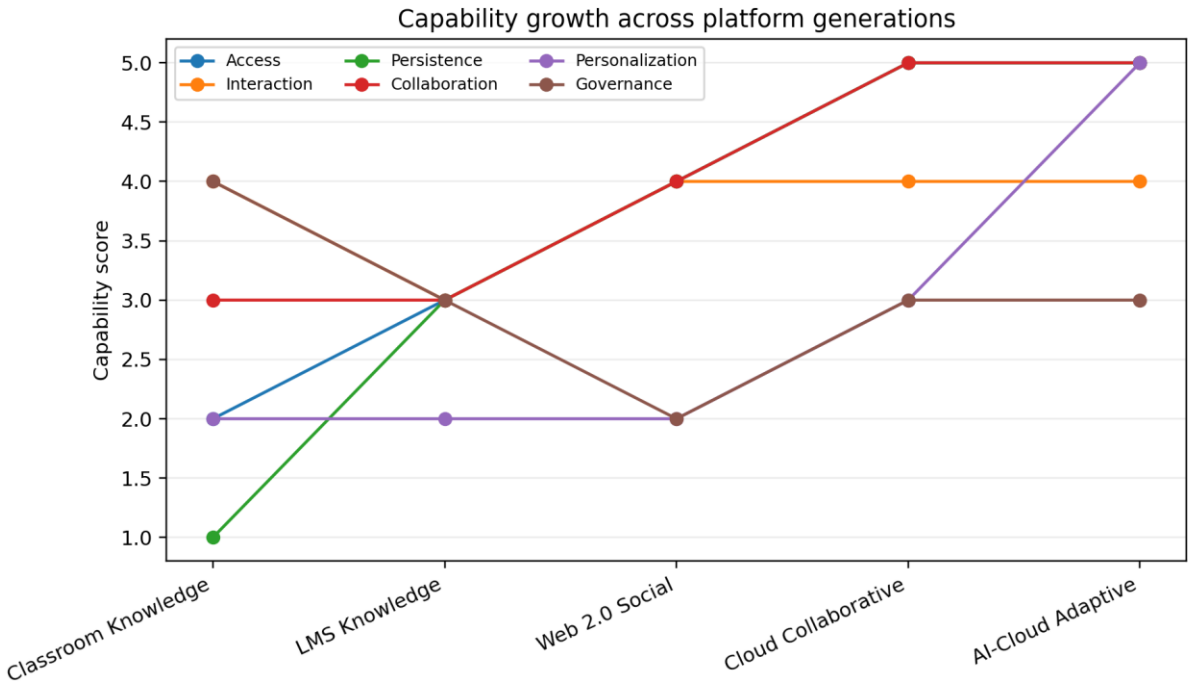

Figure 3. Capability trajectories across platform generations.

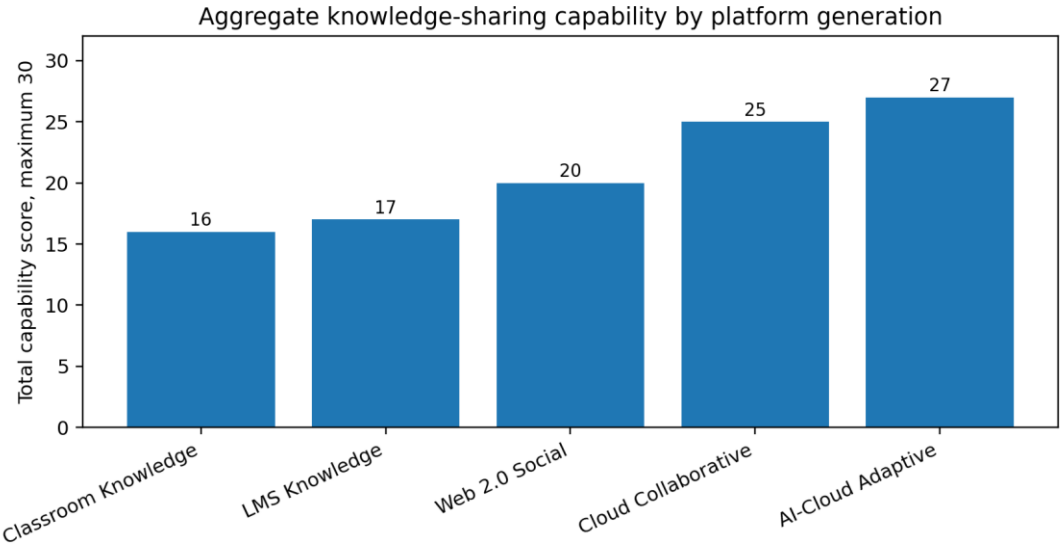

Figure 4. Aggregate knowledge-sharing capability score by platform generation.

4.3 Knowledge-Sharing Activities by Platform Generation

The third result is an activity map. Knowledge sharing becomes stronger when digital platforms support multiple activities rather than one-way delivery. The most mature environments combine explanation, peer exchange, artifact creation, feedback, reflection, and reuse.

Table 6. Knowledge-sharing activities supported by each platform generation

Activity	Classroom	LMS	Web 2.0 / Social	Cloud-collaborative	AI-cloud adaptive
Teacher explanation	High	High	Medium	High	High with AI support

Peer questioning	Medium	Medium	High	High	High
Artifact persistence	Low	Medium	High	Very high	Very high
Collaborative writing	Low	Medium	High	Very high	Very high
Feedback speed	Medium	Medium	Medium	High	Very high
Personalized pathways	Low	Low-medium	Medium	Medium	High
Knowledge reuse	Low	Medium	High	Very high	Very high
Quality/governance need	Medium	Medium	High	Very high	Very high

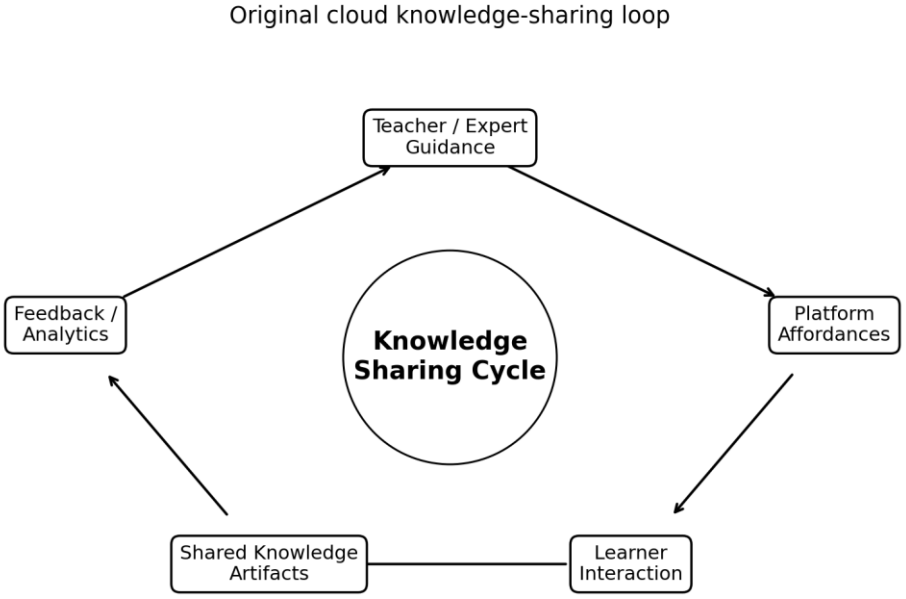

Figure 5. Original knowledge-sharing loop showing how platform affordances, interaction, artifacts, and feedback reinforce learning.

4.4 CLOUD-SECI Framework

The fourth result is the proposed CLOUD-SECI framework. It connects six platform design requirements with the SECI knowledge conversion process. The framework argues that digital learning platforms should not only store content; they should convert learner interaction into shareable, trustworthy, reusable, and reflective knowledge artifacts.

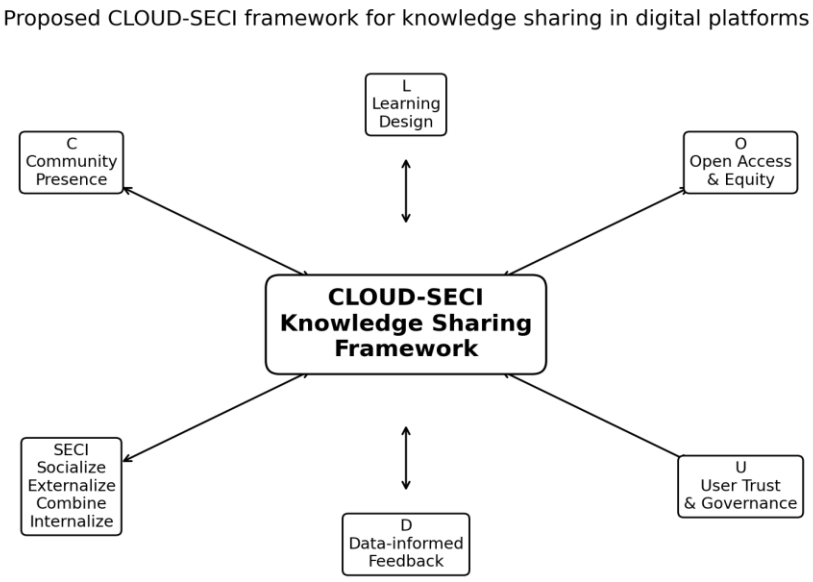

Figure 6. Proposed CLOUD-SECI knowledge-sharing framework.

Table 7. CLOUD-SECI framework components and design implications

Component	Meaning	Design implication
Community presence	Learners and teachers experience one another as real participants.	Use introductions, peer forums, group norms, live sessions, and respectful response culture.
Learning design	Knowledge sharing is structured around meaningful tasks.	Use problem-based prompts, collaborative assignments, rubrics, and reflection checkpoints.
Open access and equity	Participation is possible across time, device, language, and ability differences.	Provide mobile access, captions, offline options, low-bandwidth resources, and accessibility checks.
User trust and governance	Users understand how data, AI, privacy, and academic integrity are managed.	Publish policies, protect data, use transparent AI rules, and maintain teacher oversight.
Data-informed feedback	Analytics and feedback help learners improve rather than merely monitor them.	Use dashboards for formative guidance, early support, and reflective progress tracking.
SECI conversion	Tacit and explicit knowledge move through socialization, externalization, combination, and internalization.	Encourage discussion, annotation, shared resources, synthesis tasks, and application-based assignments.

4.5 Barrier and Enabler Analysis

The fifth result is a barrier/enabler map. The main finding is that digital platforms improve sharing only when access, trust, digital literacy, pedagogy, privacy, and motivation are deliberately managed.

Table 8. Barriers, effects, and practical mitigation strategies

Barrier	Effect on knowledge sharing	Practical mitigation
Access inequality	Students without reliable devices or connectivity contribute less and receive less feedback.	Low-bandwidth design, device lending, offline downloads, flexible deadlines.
Weak digital literacy	Learners may consume content but avoid deeper participation or collaboration.	Orientation modules, peer mentoring, tool walkthroughs, digital study skills.
Low social presence	Students feel isolated and reduce peer interaction.	Structured introductions, instructor presence, group roles, live check-ins.
Privacy and surveillance concerns	Users may avoid honest participation if data use is unclear.	Transparent data policies, consent, minimal data collection, privacy-by-design.
Platform overload	Too many tools fragment attention and knowledge artifacts.	Tool rationalization, clear communication channels, course navigation standards.
AI dependency	Learners may outsource thinking and reduce authentic knowledge creation.	Process-based assessment, oral defense, reflective logs, AI-use disclosure rules.

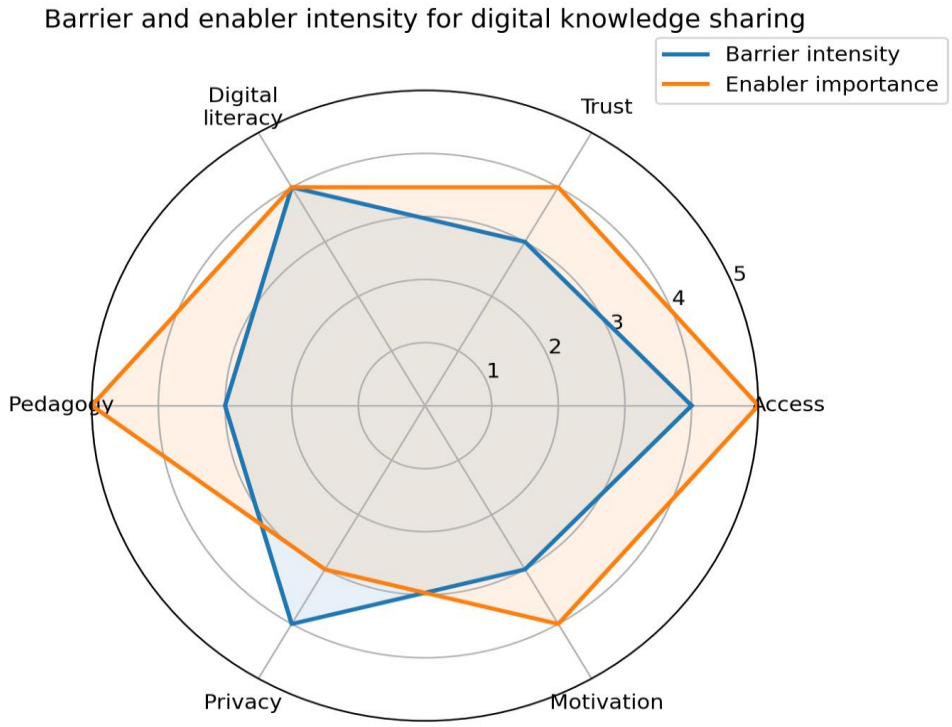

Figure 7. Barrier and enabler intensity in digital knowledge-sharing environments.

4.6 Institutional Evaluation Checklist

The sixth result is a practical checklist that institutions can use before adopting or redesigning a learning platform. It converts the conceptual findings into operational questions.

Table 9. Practical institutional checklist for digital knowledge-sharing platforms

Evaluation area	Key question	Evidence to inspect
Pedagogical fit	Does the platform support the learning outcomes, not just content delivery?	Course designs, activity types, feedback tasks, assessment alignment.
Interaction quality	Are there spaces for meaningful teacher-student and peer-peer exchange?	Forum quality, live session records, peer review workflows, response patterns.
Artifact persistence	Can learners find, reuse, and revise knowledge artifacts?	Search, tagging, version history, repository structure, archive policies.
Equity and accessibility	Can diverse learners participate under realistic conditions?	Accessibility audit, mobile performance, captioning, bandwidth options.
Governance and privacy	Are data use, AI use, privacy, and integrity rules transparent?	Policies, consent forms, AI guidelines, platform contracts.
Teacher workload	Does the platform reduce or increase unnecessary teacher burden?	Workflow mapping, automation quality, support services, training materials.
Learning analytics	Are analytics used for formative support rather than punishment?	Dashboard design, intervention protocols, student explanations, fairness checks.

Table 10. Results aligned with research questions

Research question	Main result	Output in paper
RQ1: Evolution	Knowledge sharing moves from local, synchronous, teacher-mediated exchange toward persistent, networked, collaborative, and adaptive exchange.	Table 4; Figure 1
RQ2: Affordances	Access, persistence, collaboration, and personalization rise across platform generations, while governance requires deliberate institutional design.	Table 5; Figures 2-4
RQ3: Barriers/enablers	Access, literacy, social presence, privacy, platform overload, and AI dependency are key risks; mitigation requires policy and pedagogy.	Table 8; Figure 7
RQ4: Framework	The CLOUD-SECI model provides a structured way to design and evaluate digital knowledge-sharing ecosystems.	Figure 6; Table 7

5. Discussion

5.1 Interpretation of Findings

The results indicate that transforming the classrooms into clouds does not mean revealing offline to online learning. It is a metamorphosis in knowledge sharing architecture. Knowledge in classroom-based learning is highly incarcerated in the way the teacher explains, face-to-face conversation and instant social environment. Knowledge in cloud learning is more and more widely shared among individuals, artifacts, platforms, algorithms and repositories. This sharing generates both reach and reuse, along with novel design, governance, and digital literacy responsibilities.

According to the scoring matrix, cloud and AI-cloud platforms possess high access, persistence, collaboration, and personalization potentials. Nevertheless, a key weakness is the governance aspect. This aligns with the assumption in UNESCO (2023) that educational technology has to be assessed based on relevance, equity, scalability, and sustainability. An environment that increases access and diminishes privacy, inclusion or teacher agency cannot be said to be a complete success in the knowledge-sharing environment.

The Community of Inquiry point of view is also supported by the result. Online course environments require cognitive presence by way of inquiry activities, social presence using human interactions, as well as teaching presence using planned design and facilitation (Garrison et al., 2000). These factors are essential because without them, cloud platforms will turn into a storage facility instead of a learning community.

5.2 Implications for Educators

- Do not simply routines at content-upload, but design knowledge-sharing. The course should be designed to incorporate discussion prompts, peer review, shared documents, reflective journals, and group syncretic tasks.
- Make participation tangible and relevant. Students ought to be aware of the purpose of posting, commenting, annotating or collaborating and how it helps them to achieve the learning outcomes.
- Johnstrope Interaction synchronous and asynchronous. Presence can be developed by the use of live sessions, whereas asynchronous spaces can be utilized to facilitate reflections and construction of knowledge.
- Use AI outputs as aids to the learning, not as a substitute to student reasoning. The process, reflection, explanation, and application should be evaluated by teachers, not just a polished final text.

5.3 Implications for Institutions and Platform Designers

- Embrace platforms with pedagogical appropriateness, ease of use, data security, integrativeness, and their support capabilities as opposed to branding and trendiness.
- Offer educator development on digital pedagogy and design of knowledge sharing, rather than on button-clicking skills.
- Apply learning analytics judiciously and openly. Analytics should be used to assist in finding what it needs to support, rather than to establish learning environments which are surveillance-intensive.
- Establish effective AI governance that addresses the acceptable use, privacy, bias, a test of integrity, and student disclosure.

5.4 Theoretical Contribution

The CLOUD-SECI framework is a contribution to theory by bridging knowledge-management logic and online learning community theory with platform governance. It demonstrates that knowledge exchange within online learning environments relies on the ability to transform personal experience into common devices, the ability to transform shared devices into group understanding and the ability to transform group understanding into personal learning and further action.

5.5 Limitations

The main limitation is that the paper is conceptual and analytical. The scoring matrix is proprietary and open, yet not founded on survey, interview, learning analytics, or experiment data. The framework needs to be tested by the future research in particular schools, universities, or training organizations, via mixed methods, platform logs, survey of learners, teacher interviews and course level outcomes measures.

6. Conclusion

In this paper, the transformation of knowledge sharing in classrooms into digital learning tools on clouds was explored. The researchers discovered that digital platforms alter the pace, extent, shape, and permanence of the exchange of educational knowledge. These enable the transfer of knowledge out of the physical classroom into searchable, collaborative, multimodal, and adaptive environments. But the advantages are not self-evident. The digital learning space has the potential to enhance community inquiry, however it may cause inequity, distraction, monitoring and surveillance, shallow experiences, and reliance on automation.

In this paper, the initial CLOUD-SECI model asserts that successful digital sharing of knowledge assumes that there is community, designed learning, open access, trust of the users, feedback based on data and a willed conversion of knowledge. The greatest conclusion is that technology cannot be used to substitute the human pillars of education. Effective digital platforms are useful in instances where they prolong teacher mentoring, enhance peer instruction, archive valuable facts, and promote speculative inquiry. It is not the cloud that will make learning an even more important part of life, it is the production of human determinacy, collective practice, and accountable digital design.

7. Data Availability Statement

All author-generated analytical data used in this conceptual paper are included in Tables 3-10 and Figures 1-7. No human participant data, private institutional records, or secondary statistical datasets were used.

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