

Redefining Generic Skills in the AI Era: A Conceptual Review Based on Historical Evolution and International Frameworks

Fumiyo Seimiya, Hosei University, Japan
Rihyei Kang, Hosei University, Japan

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Abstract

This paper aims to theoretically organize and clarify how the concept of generic skills is being redefined in the age of artificial intelligence (AI) through an integrative analysis of historical discussions and international competency frameworks. Much of the existing discourse on AI-era skills has remained limited to an “*additive*” approach that incorporates new capabilities such as AI literacy into existing frameworks, without critically examining the underlying assumptions on which generic skills have been based. Traditionally, generic skills have been defined primarily as transferable abilities that enhance employability (Andrews & Higson, 2008; Bennett et al., 1999) and conceptualized as individual characteristics. However, these discussions rest on pre-AI premises and appear insufficient to explain what generic skills should be in the new environment where humans and AI collaborate. This study adopts a conceptual review methodology and examines a literature corpus composed of three groups: foundational academic research, international competency frameworks, and AI-era policy and analytical documents. These are analyzed along three dimensions: purpose, locus of competence, and orientation toward change. The analysis identifies three conceptual shifts in the redefinition of generic skills: (1) from skills for employability to skills that support human flourishing; (2) from individual characteristics to relational capabilities that support human-AI collaboration; and (3) from adaptive response to transformative agency that leads change. Additionally, this paper points out that generic skills development in universities has formed a “*third educational domain*” distinct from traditional disciplinary education and professional training, and discusses the need to re-examine this domain in the AI era.

Keywords: generic skills, artificial intelligence, conceptual shifts, human-AI collaboration, competency frameworks, higher education

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Introduction

The rapid advancement of artificial intelligence (AI) technologies in recent years has fundamentally transformed knowledge production, labor structures, and the nature of learning itself. Information retrieval, analysis, and content generation—activities long considered core human intellectual functions—are now partially substitutable and augmentable by AI systems. This transformation raises fundamental questions: What should humans learn? What should education aim to achieve?

The author's engagement with these questions stems from witnessing how workplace competencies have rapidly changed with AI adoption. What became clear through this experience was that current changes extend beyond simply learning new technical skills; rather, they may involve a fundamental questioning of what “*capability*” and “*skills*” themselves mean. Discussions about AI-era skills have intensified across educational, policy, and industrial domains. Regarding generic skills specifically, the mainstream approach has been “*additive*,” incorporating new capability items such as AI literacy and digital skills into existing frameworks. While such approaches have practical value, they may leave important questions unexamined: On what assumptions have generic skills been defined? Might the emergence of AI be destabilizing those very assumptions?

This paper proceeds from these concerns. It suggests that what is needed in considering AI-era generic skills is not the addition of new skill items but rather a critical re-examination of the assumptions underlying the concept of generic skills itself. To this end, this study aims to conduct an integrative analysis of historical discussions of generic skills and recent international competency frameworks, identifying conceptual shifts that can be commonly observed within them.

Conceptual Foundations of Generic Skills Before AI

Definitional and Terminological Diversity

Generic skills have been discussed using diverse terminology, including transferable skills, soft skills, employability skills, key competencies, and graduate attributes (Andrews & Higson, 2008; Bennett et al., 1999; Jääskelä et al., 2018; Raybould & Sheedy, 2005). This terminological diversity itself reflects the conceptual ambiguity surrounding generic skills. Van Ravenswaaij et al. (2022) note that when skills are usable across various domains, situations, and contexts, researchers employ different terms, each with slightly different emphases.

Despite these terminological differences, a clear recognition is shared among early representative studies. Generic skills refer to abilities applicable across various situations, not limited to specific occupations or specialized fields (Andrews & Higson, 2008; Bennett et al., 1999). The ability to apply competencies acquired in one context to another context—this “*transferability*” has been considered the most important characteristic distinguishing generic skills from specialized or technical abilities. Communication skills, critical thinking, teamwork, and problem-solving represent typical examples, positioned as capabilities that, when combined with specialized knowledge, support both academic success and post-education employment performance.

The assumption structure of the conceptual framework of competence shared by these prior studies will be systematically analyzed in the findings section based on the analytical framework presented in the methodology section.

Historical Evolution: From Liberal Arts to 21st Century Skills

The concept of generic skills was formed within a long intellectual tradition preceding the emergence of the term itself. This paper organizes this history into three phases, focusing on critical junctures when the relationship between education and society significantly changed, and reviews the concept of generic skills from prior research. These phases are: the classical period when educational purpose centered on cultivating civic virtue; the industrialization period when economic utility came to the forefront; and the early 21st century when skills became systematically organized as policy frameworks under the leadership of international organizations.

Phase One: The Classical Liberal Arts Tradition

The origins of generic skills education can be traced to the liberal arts of ancient Greece and Rome. The reason is that liberal arts aimed not at specific occupational skills but at cultivating generic capacities that form the foundation of all intellectual activity. The seven liberal arts comprising the Trivium (grammar, logic, and rhetoric) and the Quadrivium (arithmetic, geometry, music, and astronomy) were not merely a subject system but “*tools for learning*” and “*modes of learning*” (Joseph, 2002). Their educational purpose was not vocational training but cultivating the intellectual foundations for participation in public life as free citizens (*liberalis*) (Joseph, 2002). Liberal arts fundamentally aimed at “*general cultivation of human capabilities*,” and in cultivating abilities applicable beyond specific contexts, can be regarded as the prototype of modern generic skills concepts.

Phase Two: Industrialization and the Emergence of Employability

Following the Industrial Revolution, as labor power became an object of market transaction, education came to be expected to produce “*employable people*.” Within this context, the concept of “*employability*,” referring to workers' ability to secure and maintain employment, emerged (Raybould & Sheedy, 2005). This tendency became decisive in the late 20th century. As the pace of technological innovation accelerated and industrial structures changed rapidly, recognition spread that occupation-specific skills alone were insufficient for navigating professional life. Consequently, interest grew in generic abilities applicable across occupations. The 1991 US SCANS report represented an early policy attempt to reflect this recognition, systematically organizing cross-occupational skills including not only literacy and numeracy but also teamwork and problem-solving. Entering the 2000s, survey results reported that Fortune 500 companies prioritized interpersonal skills and problem-solving abilities over traditional academic skills in hiring (Partnership for 21st Century Learning, 2015), supporting this trend from the industrial side. In this phase, the concept of generic skills shifted its center of gravity from classical “*human cultivation*” toward “*labor market adaptation*,” strengthening its instrumental character.

Phase Three: Systematization and International Expansion of 21st Century Skills

Entering the 2000s, with advancing globalization and awareness of global-scale challenges (SDGs), the need increased for establishing common foundations of skills applicable across

national boundaries. Generic skills became systematically organized as policy frameworks under the leadership of international organizations. The Partnership for 21st Century Skills (P21), established in 2002, proposed the “*Four Cs*”—critical thinking, communication, collaboration, and creativity (Partnership for 21st Century Learning, 2015), while the OECD (2003) defined key competencies as capabilities for “*a successful life and well-functioning society*.” Where P21’s “*Four Cs*” aimed at practical, immediate skill development backed by industry collaboration, OECD’s key competencies set a broader scope of “*well-functioning society*.” This divergence indicates that the question of “*for whom*” generic skills exist was already emergent. At this stage, the scope of generic skills began expanding beyond employability to include social participation and self-realization. However, generic skills were still fundamentally conceived as individual capabilities premised on human-to-human interaction, with collaboration with non-human agents (such as AI) not yet envisioned.

This historical evolution demonstrates that the concept of generic skills has been continually reconstructed in response to social and economic changes. The phases of classical “*human cultivation*,” industrialization-era “*employability*,” and 21st century “*social participation and self-realization*” illustrate a process whereby the meaning of generic skills has been reconstructed according to the social demands of each era. How this concept is being reconstructed in response to AI—a new technological and social change—will be analyzed in the findings section.

Research Methodology

Research Approach

As reviewed in the previous section, the concept of generic skills has been historically reconstructed in response to social and economic changes. However, research that captures at the conceptual level how AI’s emergence is destabilizing the fundamental assumptions of this concept remains insufficient. Addressing this problem requires not empirically verifying the effects of individual skill items or programs, but rather extracting and comparing the assumptions embedded in discussions of generic skills themselves. Therefore, this study adopts conceptual review and theoretical integrative analysis. Conceptual review is an approach that does not aim at comprehensively collecting literature on a specific theme, but rather attempts theoretical integration by extracting and comparing the assumption structures and implicit conceptual frameworks embedded in prior research and policy literature (Jaakkola, 2020). The purpose of this research is to clarify the assumption structures latent in discussions of generic skills and organize at the conceptual level how they are transforming in the AI era.

Construction of Literature Corpus

The “*literature corpus*” in this study refers to the totality of literature selected and constructed as analytical targets. Unlike systematic review approaches that pursue comprehensiveness, conceptual review employs “*purposive sampling*,” deliberately selecting theoretically important literature in light of research purposes (Snyder, 2019). This study constructed its corpus from the following three groups based on the purpose of capturing transformations in the concept of generic skills.

Group One: Foundational Literature on Generic Skills Before AI

This group comprises literature forming the historical foundation of the generic skills concept. It includes two layers. The first layer consists of research on the historical and philosophical foundations of liberal arts education, positioned as reference literature for identifying the conception of capability as “*human cultivation*” that lies at the origin of generic skills. This includes Joseph's (2002) classical study of the Trivium and Nussbaum's (1997) discussion of liberal arts education and human capabilities. The second layer consists of early representative studies that defined and analyzed generic skills primarily in the context of employability, including Bennett et al. (1999), Andrews and Higson (2008), and Bridgstock (2009). By positioning these two layers contrastively, it becomes possible to structurally capture the process whereby the purpose of generic skills shifted its center of gravity from “*human cultivation*” to “*employability*,” and to analyze AI-era transformations within a long historical perspective.

Group Two: International Competency Frameworks

This group comprises policy documents presenting normative educational purposes and achievement goals. It includes the OECD Learning Compass 2030 (OECD, 2024), the Partnership for 21st Century Learning (P21) framework (Partnership for 21st Century Learning, 2015), and OECD (2003) key competencies. These were selected to trace how the purpose and scope of generic skills have expanded.

Group Three: AI-Era Policy and Analytical Documents

This group comprises recent literature explicitly addressing human capabilities and roles in the AI era. It includes the UNESCO AI Competency Framework for Students (UNESCO, 2024b), UNESCO AI Competency Framework for Teachers (UNESCO, 2024a), World Economic Forum Future of Jobs Report 2025 (World Economic Forum, 2025), and related analytical documents. These were selected to identify qualitative changes in the concept of generic skills accompanying AI introduction. Selection criteria for the third group were: (1) explicitly addressing conceptions of generic skills capabilities in education; (2) having international scope not limited to specific countries or regions; and (3) being normative documents presenting capability definitions or frameworks. EU AI Act and national AI strategy documents, focusing primarily on AI regulation and industrial policy rather than discussing conceptions of generic skills capabilities themselves, were not included as analytical targets in this study.

Table 1 summarizes the key literature corpus and the extracted conceptual statements for each analytical dimension.

Table 1
Key Literature Corpus and Extracted Conceptual Statements

ID	Reference	Source Type	Extracted Conceptual Statement (Author's Summary)	Analytical Role	Purpose of Generic Skills	Locus of Competence	Orientation Toward Change
1	Bennett, Dunne & Carré (1999)	Peer-reviewed article	Generic skills are transferable abilities required for effective performance across diverse employment contexts.	Baseline definition: employability-oriented generic skills	Employability, job performance	Individual capability	Adaptive
2	Andrews & Higson (2008)	Peer-reviewed article	Graduate employability is enhanced through soft skills that enable adaptation to employer expectations.	Reinforcement of instrumental purpose	Labor market alignment	Individual capability	Adaptive
3	OECD (2003) Key Competencies	International framework	Competencies contribute to a successful life and a well-functioning society beyond occupational outcomes.	Expansion of educational purposes	Successful life, social participation	Individual + societal	Adaptive / self-regulatory
4	OECD (2024) Learning Compass 2030	International framework	Education should empower learners to create new value and shape a better future through agency and responsibility.	Human flourishing & transformative purposes	Human flourishing, value creation	Learner agency	Transformative
5	UNESCO (2024b) AI Competency Framework for Students	International framework	Learners must critically evaluate AI outputs, act ethically, and collaborate responsibly with AI systems.	Human–AI relational capability	Ethical AI use, critical judgment	Human–AI relational system	Transformative
6	UNESCO (2024a) AI Competency Framework for Teachers	International framework	Teachers are expected to guide responsible AI use while maintaining human-centered decision-making.	Relational and ethical locus of competence	Human-centered AI governance	Human–AI collaboration	Transformative
7	World Economic Forum (2025) Future of Jobs Report	International report	Human skills such as creativity and resilience remain essential alongside increasing AI-driven automation.	Complementarity of human and AI capabilities	Sustainable work and productivity	Human–technology complementarity	Adaptive / transformative
8	UNESCO (2024)	International framework	AI reshapes learner–teacher relationships, requiring renewed forms of human agency and judgment.	Shift toward transformative agency	Educational and social transformation	Human–AI–social system	Transformative

Analytical Procedures and Framework

Analysis was conducted in the following three stages (see Table 2).

Stage One: Extraction of Assumption Structures

Through close reading of each document, the conception of generic skills capabilities assumed therein was extracted based on the following three analytical dimensions:

- (1) **Purpose:** For what purpose are generic skills positioned as capabilities? (e.g., enhancing employability, social participation, human development)
- (2) **Locus of competence:** Where is capability understood to reside? (e.g., individual internal characteristics, relational/contextual capabilities)
- (3) **Orientation toward change:** What attitude toward change is this capability considered to take? (e.g., adaptation, transformation, proactive engagement)

These analytical dimensions were inductively derived during the process of close reading of prior research. In the cross-sectional reading of the literature groups, it was confirmed that differences in the conception of capabilities implicitly assumed by each document could be consolidated into these three dimensions.

Stage Two: Comparison Among Literature Groups

For each of Group One (pre-AI academic research), Group Two (international frameworks), and Group Three (AI-era policy documents), positions on the three analytical dimensions were organized and differences and directionalities among literature groups were compared. Specifically, characteristic descriptions regarding “*capability purpose*,” “*capability locus*,” and “*orientation toward change*” were extracted from each document’s descriptions, and tendencies by literature group were organized as comparison tables.

Stage Three: Integration of Conceptual Shifts

Based on Stage Two comparative analysis, directional movements commonly observed across multiple literature groups were identified and theoretically integrated as three conceptual shifts. Each shift was not derived from a single document but represents a structural tendency that emerged from systematic comparison among literature groups.

As this study is a conceptual review, evaluating the validity of individual empirical findings in each document is not the purpose. Rather, it focuses on extracting the structure of conceptions of capability assumed by each document and theoretically organizing patterns of their historical and conceptual transformation.

Findings

Assumption Structures Embedded in Pre-AI Generic Skills Discourse

As the first stage of analysis, Group One foundational literature from before AI was examined based on the three analytical dimensions. First, examining literature on classical liberal education positioned in the first layer of Group One (Joseph, 2002; Nussbaum, 1997) reveals that in the liberal arts tradition, educational purpose was placed on cultivating intellectual and ethical foundations as free citizens, and capability was conceived as holistic qualities

transcending specific occupational contexts. Nussbaum (1997) clearly formulated the purpose of liberal arts education as “*cultivating humanity*,” discussing critical thinking, cosmopolitan imagination, and empathetic understanding of others as essential human capabilities not reducible to specific occupational outcomes. However, moving to employability research positioned in the second layer of Group One (Andrews & Higson, 2008; Bennett et al., 1999; Raybould & Sheedy, 2005), this conception of capability transforms significantly. In the dimension of *purpose*, the value of generic skills tends to be consolidated into the economic purpose of enhancing employability. Early research's positioning of skills as capabilities that support “*job placement and occupational success*” clearly demonstrates this point. In the dimension of *locus of competence*, generic skills are assumed as characteristics inherent in individuals. This assumption is clearly manifested in Bennett et al.'s (1999) description of generic skills as capabilities that individual students “*acquire and demonstrate*,” and in Andrews and Higson's (2008) positioning of them as individual attributes valued by both employers and graduates. Communication skills and critical thinking are conceptualized as things individuals “*possess*,” with their demonstration limited to human-to-human relationships. Finally, in the dimension of *orientation toward change*, flexible adaptation to uncertain environments (adaptability) was positioned as a central value, while the perspective of proactively shaping change was not foregrounded. In other words, it is confirmed that the broad conception of capability as “*human cultivation*” aimed at by classical liberal education converged into three assumptions within industrialization and labor market logic: “*means for employment*,” “*capabilities residing in individuals*,” and “*adaptation to change*.”

The directionality of these assumption structures' transformation becomes clearer through comparison with Group Two (international frameworks) and Group Three (AI-era policy documents). Table 2 summarizes how observed convergence across the literature leads to the three conceptual shifts. Below, conceptual shifts observed among literature groups are presented for each of the three analytical dimensions.

Table 2

Synthesis Process: From Analytical Coding to Conceptual Shifts

Analytical Dimension	Observed Convergence Across Literature	Resulting Conceptual Shift
Purpose	From employability and productivity toward well-being, meaning, and value creation	Shift 1: Skills for Employability → Skills Supporting Human Flourishing
Locus of Competence	From individual traits toward capabilities enacted within human–AI relations	Shift 2: Individual Characteristics → Relational Capabilities for Human–AI Collaboration
Orientation Toward Change	From responding to change toward actively shaping technological and social futures	Shift 3: Adaptive Response → Transformative Agency

From Skills for Employability to Skills Supporting Human Flourishing

The first shift concerns purpose itself – “*what are generic skills for?*” Traditionally, generic skills have been understood as capabilities “*advantageous for obtaining employment*.” In early research represented by Raybould and Sheedy (2005) and Bennett et al. (1999), the value of generic skills was almost entirely consolidated into enhancing competitive advantage in the labor market. That is, “*whether one can obtain a good job*” was the measure of skill value.

However, recent international frameworks clearly seek to transcend this assumption. The OECD Learning Compass 2030 positions creating new value, reconciling conflicting dilemmas, and responsibly shaping the future as core objectives of capability development (OECD, 2024).

UNESCO's AI Competency Framework also centers not on efficient technology utilization but on ethics, dignity, and responsibility, positioning human agency and well-being as fundamental values (UNESCO, 2024b).

Cross-sectionally examining these frameworks reveals that the purpose of generic skills is shifting from economic values such as employment and productivity toward capabilities that support human flourishing. This represents not merely a shift in emphasis but a transformation in the very reason for skills' existence – “*what are skills for?*” This directionality resonates with the capabilities approach's perspective, which focuses not only on what humans “*can do*” but on what they “*are able to become,*” attending to conditions whereby each person can realize their potential. This suggests that the transformation in skills conception occurring in the AI era is not a transitory policy trend but rather exists on the extension of a long intellectual tradition that has questioned educational purpose from human utility toward human possibility.

From Individual Characteristics to Relational Capabilities Supporting Human-AI Collaboration

The next issue concerns where capabilities are understood to reside. In conventional generic skills discourse, capabilities have been primarily understood as characteristics inherent in individuals. Communication skills, critical thinking, and problem-solving abilities were all conceptualized as attributes that individuals acquire and demonstrate.

However, this assumption is significantly destabilized in AI-era frameworks. UNESCO requires learners and teachers to possess the ability to critically evaluate AI outputs, the judgment to utilize and control AI according to context, and the capacity for ethical oversight of AI use (UNESCO, 2024a, 2024b). These are not capabilities that can be completed as solitary individual abilities but rather capabilities that emerge within human-AI interaction.

The World Economic Forum also notes that the reason human skills are less substitutable by AI is that they are demonstrated in relational and context-dependent ways (WEF, 2025). This can be interpreted as generic skills conceptually transforming from “*individual characteristics*” to “*relational capabilities supporting human-AI collaboration.*” For example, considering a situation where a teacher evaluates and revises AI-generated text, that judgment emerges not solely from the teacher's individual capability but within relational conditions including AI output characteristics, the learner context being addressed, and alignment with educational objectives. This demonstrates how the “*locus*” of capability is expanding from within individuals' minds into collaborative systems of humans and AI.

From Adaptive Response to Transformative Agency

The remaining shift concerns what attitude toward change generic skills are considered to take—that is, orientation. In conventional discourse, the ability to flexibly adapt to uncertain environments (adaptability) has been emphasized. As symbolized by the phrase “*people who can respond to change,*” the ideal in conventional generic skills discourse was the ability to respond passively and flexibly to environmental change. The OECD Learning Compass 2030 positions learners as agents who shape society and the future, presenting “*agency*” and “*transformative competencies*” as core concepts (OECD, 2024). In the AI era, capabilities are required not only to respond to technological change but to proactively engage with how AI should be integrated into society.

From this, it can be concluded that generic skills are shifting their orientation from mere adaptive capacity to transformative agency that leads change. This shift suggests the importance of capabilities that do not simply accept social changes brought by AI technology as a “*given environment*” but rather proactively engage with its directionality.

Discussion

Significance of Conceptual Shifts: Beyond “Addition”

The three conceptual shifts identified above demonstrate that the redefinition of generic skills in the AI era represents not the addition or emphasis of individual skills but rather a reconstruction of the conception of capability itself. An “*additive*” approach that adds new skill items such as AI literacy or prompt engineering to existing lists cannot capture the essence of this change. What is being questioned is not the content of skills (what) but rather the purpose of skills (why), the locus of capability (where), and orientation toward change (how— more fundamental assumptions).

These three shifts are not independent of each other but are organically interrelated.

First, as the purpose of skills expands from “*employability*” to “*human flourishing*,” a broader conception of capability becomes necessary that cannot be captured by the narrow criterion of “*whether one can produce results at work.*”

Next, as AI joins as a collaborative partner, the “*locus*” where capability resides changes. For example, whereas conventional critical thinking was assumed to be completed within an individual's mind, in situations of collaborating with AI, it is first demonstrated within dynamic exchanges between human and AI—judging the credibility of information AI presents, comparing it with one's own specialized knowledge, and selecting according to context. Capability changes its character from what individuals “*possess*” to what “*emerges*” within specific relationships and situations.

Furthermore, what is required in AI-integrated society is not only adapting well to changes AI brings. The capacity to judge—for what purposes to use AI, where to set its limits, and what role to assign it in society—and to shape that directionality itself is required. This is what is meant by “*transformative agency beyond adaptation.*”

In other words, these three shifts can be understood as the same structural change—the transformation of “*the conditions under which capabilities function*” brought about by AI's emergence—projected onto three different dimensions: purpose, locus, and orientation.

Positioning Generic Skills Development in Universities as a “Third Educational Domain”

This paper's analysis also offers important implications for higher education. The institutionalization of generic skills development as an educational domain in universities has existed since before AI. Programs developed under various names—leadership education, entrepreneurship education, career education, innovation education—each constitute a “*third educational domain*” distinct from traditional disciplinary fields (first domain) and professional occupational training (second domain) (Compagnucci & Spigarelli, 2020; Rubens et al., 2017).

The existence of this “*third domain*” has not been sufficiently consciousness in previous research. Individual programs (entrepreneurship education, leadership education, etc.) have been researched independently, but the structural commonality that they commonly serve the function of “*developing generic capabilities not limited to specific disciplinary fields*” has not necessarily been explicitly discussed. What this paper has found through cross-sectional analysis of literature is the fact that these diverse programs have formed generic skills education as one independent educational domain within the common context of expanding universities' educational functions.

This recognition of the “*third domain*” has particularly important meaning in the AI era. The three conceptual shifts clarified in this paper—orientation toward human flourishing, transition to relational capabilities, and shift to transformative agency—all pose educational challenges that cannot be adequately addressed within conventional disciplinary education or vocational training frameworks. Generic skills required in the AI era include interdisciplinary and practical capabilities such as ethical judgment, human-AI collaboration, and proactive engagement in social transformation, which are precisely the educational content the “*third domain*” should assume.

Therefore, the redefinition of generic skills in the AI era also demands re-examination of how universities' “*third domain*” itself should be. Verifying the extent to which conceptions of capability implicitly assumed by current leadership education and entrepreneurship education align with the conceptual shifts presented in this paper will become an important task for future educational practice and research.

Historical Continuity and Discontinuity

This paper's analysis also suggests that the transformation of generic skills in the AI era is occurring within historical continuity rather than representing complete rupture. As reviewed in Section 2, the concept of generic skills has been continually reconstructed in response to social and technological changes from classical liberal arts' “*human cultivation*” through the industrial era's “*employability*” to 21st century skills' “*social participation*.” The transformation in the AI era also exists as an extension of this historical process.

However, the AI-era transformation also contains elements historically unprecedented. This is the point that capability demonstration premises interaction with non-human agents (AI). From the liberal arts era to the present, generic skills have been consistently conceived within human-to-human relationships. AI's emergence fundamentally questions this assumption, and therein can be found the moment of discontinuous transformation.

Conclusion

This paper has conducted integrative analysis of historical discussions and international frameworks concerning generic skills, presenting the redefinition of generic skills in the AI era as three conceptual shifts: (1) from employability to human flourishing; (2) from individual characteristics to relational capabilities supporting human-AI collaboration; and (3) from adaptive response to transformative agency that leads change. This study's contributions lie in structuring AI-era generic skills discourse not as “*enumeration of new skills*” but as “*transformation of capability conception itself*,” positioning this transformation from both historical continuity and discontinuity, and making visible that generic skills development in universities has formed a “*third educational domain*.”

However, this study has limitations. Given the conceptual review methodology, literature selection involves the author's judgment and comprehensiveness is not guaranteed. Moreover, the analysis relies primarily on literature from international organizations. Japan's "*Fundamental Competencies for Working Persons*" and "*Zest for Living*" are limited to reference for historical context, and how these frameworks correspond to the three conceptual shifts presented in this paper should be left to future comparative research. Future development requires case studies of educational programs using this paper's conceptual framework, comparative research considering cultural and regional contexts including Japan, and interdisciplinary empirical research on the specific content and cultivation methods of "*relational capabilities*" supporting human-AI collaboration. It is hoped that this paper's findings will serve as one contribution to future research and educational practice as a theoretical foundation for reconsidering what an "*educated person*" should be in AI-integrated society.

Declaration of Generative AI and AI-Assisted Technologies in the Writing Process

During the preparation of this manuscript, the author used Claude (Anthropic) for the following limited purposes: (1) assistance with English-language expression and grammar refinement, (2) support in organizing and structuring the literature review, and (3) formatting the manuscript according to conference submission guidelines. The author takes full responsibility for the intellectual content, analytical framework, research findings, and all arguments presented in this paper. All sources were independently identified, reviewed, and critically evaluated by the author. The AI tool was not used to generate original ideas, research conclusions, or theoretical contributions.

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Contact emails: seimiya@ldcjp.com
rie@hosei.ac.jp