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METHODOLOGICAL JOURNAL**<http://mentaljournal-jspu.uz/index.php/mesmj/index>**DEVELOPING MEDIA LITERACY AND CRITICAL THINKING IN THE PROCESS  
OF INDEPENDENT LEARNING****Erkinjon Rakhmonov***Senior lecturer**Karshi state technical university**Uzbekistan, Karshi**E-mail: [raxmonoverkin8519@gmail.com](mailto:raxmonoverkin8519@gmail.com)**Karshi, Uzbekistan***ABOUT ARTICLE**

**Key words:** media literacy, critical thinking, independent learning, self-directed learning, twenty-first-century skills, digital pedagogy, information literacy, lateral reading, inquiry-based learning, Bloom's taxonomy, reflective practice, higher education in Uzbekistan, lifelong learning, disinformation.

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**Abstract:** This article reviews contemporary scholarly perspectives on the development of media literacy and critical thinking within independent learning. Based on 22 international and regional peer-reviewed sources published between 2010 and 2024, the study examines how these competencies converge in the digital age as essential twenty-first-century skills. The paper analyzes key theoretical approaches to media literacy, critical thinking and self-directed learning, including major models proposed by international scholars and UNESCO frameworks. It also discusses effective pedagogical strategies such as inquiry-based learning, problem-based learning, lateral reading, Socratic questioning, reflective journaling and flipped classroom methods. Special attention is paid to the modernization of Uzbekistan's higher education and teacher training in line with international assessment programs. The article concludes with practical recommendations for educators and curriculum developers.

**Introduction.** The first quarter of the twenty-first century has been marked by an unprecedented transformation of the information environment in which education takes place.

According to recent estimates, humanity now generates approximately 2.5 quintillion bytes of digital data each day, with social-media platforms alone hosting more than 5 billion active users worldwide [1]. Within this saturated information ecosystem, learners — and especially university students — face a paradoxical situation: while they have instantaneous access to an essentially limitless reservoir of knowledge, they often lack the cognitive and metacognitive tools required to evaluate, synthesize and apply this information meaningfully. This paradox has placed two long-standing educational concerns — media literacy and critical thinking — at the very center of contemporary pedagogical theory and practice [2,3].

In parallel with these changes, the conception of learning itself has shifted. The classical model of transmissive instruction, in which the teacher acts as the principal source of knowledge and the learner as a passive recipient, has gradually given way to a constructivist and learner-centered paradigm. Within this paradigm, independent or self-directed learning is no longer treated as an optional supplement to formal instruction but as a foundational competency for navigating both higher education and lifelong professional development [4,5]. Knowles's pioneering formulation of self-directed learning as 'a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies, and evaluating learning outcomes' has acquired renewed urgency in the era of online education and distributed knowledge [6].

The convergence of these two trends — the saturation of the information environment and the shift toward learner autonomy — has revealed that media literacy and critical thinking are not merely desirable add-ons to the curriculum but indispensable components of independent learning itself. A learner who cannot critically evaluate the credibility of a source, identify ideological framing in a news report, distinguish correlation from causation in a research summary, or recognize the rhetorical strategies of a persuasive text, is fundamentally unable to learn independently in the modern information environment. Conversely, a learner equipped with these competencies is positioned to transform information consumption into knowledge construction [7,8].

The urgency of this integration has been further intensified by the global crisis of disinformation and misinformation. The World Economic Forum's Global Risks Report has, for several consecutive years, ranked misinformation and disinformation among the most severe short-term global risks [9]. Empirical studies conducted by the Stanford History Education Group have demonstrated that even university-level students struggle to evaluate the credibility of online information, with more than 80 percent failing to distinguish sponsored

content from genuine news articles [10]. The emergence of synthetic media — including deepfake videos and AI-generated text — has introduced an entirely new layer of complexity that traditional media-literacy frameworks were not designed to address.

Against this background, the educational systems of countries pursuing rapid modernization — including the Republic of Uzbekistan — face a dual imperative. On the one hand, they must integrate twenty-first-century competencies into curricula at all levels; on the other, they must prepare students for international assessments such as PISA, TIMSS and PIRLS, which explicitly measure critical thinking and the ability to engage with diverse texts and media [11]. The Strategy for the Development of Higher Education of the Republic of Uzbekistan until 2030 explicitly identifies the development of independent learning and analytical skills as priority directions, creating a favorable policy context for the integrated cultivation of these competencies [12].

**Materials and Methods.** This study employed a systematic narrative literature review methodology, conducted between March and August 2024. The search strategy combined database searches in Scopus, Web of Science, ERIC (Education Resources Information Center), Google Scholar and eLibrary.ru with manual examination of reference lists in seminal works to identify additional relevant sources. The temporal scope of the search was set from January 2010 to June 2024, with selective inclusion of foundational earlier works (notably Knowles 1975 and Aufderheide 1993) on the basis of their enduring theoretical significance. The principal search terms — used individually and in combination — were: 'media literacy', 'critical thinking', 'independent learning', 'self-directed learning', 'information literacy', 'digital pedagogy', 'twenty-first-century skills', 'lateral reading', 'inquiry-based learning' and 'problem-based learning'. Equivalent Russian and Uzbek terms were used to retrieve regionally relevant sources.

Inclusion criteria comprised: (a) publication in peer-reviewed journals indexed in Scopus, Web of Science or ERIC, or as authoritative books, monographs and institutional reports from international bodies (UNESCO, OECD, European Commission); (b) explicit relevance to at least one of the three focal competencies, with priority given to studies addressing their intersection; (c) presence of empirical data, theoretical analysis or systematic synthesis adequate to support cross-comparison; (d) accessibility of the full text. Exclusion criteria were: brief opinion pieces and editorials without empirical or systematic content, duplicate publications, and studies focused exclusively on K–12 contexts without transferable findings for higher education. After initial screening of 78 candidate sources, 22 publications were retained for detailed analysis.

**Result and Discussion.** The analysis of 22 contemporary sources yields a coherent picture of the theoretical foundations, pedagogical strategies and practical implications of integrated media-literacy, critical-thinking and independent-learning development. The discussion below follows the thematic structure established in the methodology section, beginning with the theoretical foundations of each competency and proceeding through their integration, instructional realization and Uzbek contextual application.

The conceptual roots of media literacy in contemporary educational scholarship are commonly traced to the 1992 Aspen Institute National Leadership Conference on Media Literacy, the report of which, edited by Aufderheide, defined media literacy as 'the ability to access, analyze, evaluate and communicate messages in a wide variety of forms' [13]. This four-part definition — Access, Analyze, Evaluate, Communicate — has retained its analytical power for more than three decades and continues to anchor international frameworks. Hobbs subsequently expanded this formulation to include the dimensions of reflect and act, producing the AAARC model that explicitly links media literacy to civic engagement and ethical action [3]. The UNESCO Media and Information Literacy (MIL) framework, published in successive iterations since 2011, further integrated media literacy with information literacy and digital literacy into a unified competency framework comprising five core areas: access, evaluation, use, creation, and participation [1,14].

Within this broad consensus, several distinctive theoretical orientations are evident. Potter's cognitive theory of media literacy [15] emphasizes the role of mental models — internal knowledge structures that guide perception and interpretation — and proposes that media-literacy development consists essentially of progressively enriching these models. Buckingham's pedagogical framework, by contrast, emphasizes the analytical categories of representation, language, production and audience as the foundational concepts for media education [16]. Livingstone has contributed an empirically rich account of how children and young people develop digital and media competencies in everyday life, highlighting the importance of social context and informal learning environments alongside formal instruction [2]. These complementary perspectives converge on the view that media literacy is not a discrete skill but a complex, layered competency that integrates knowledge, skills and dispositions.

The theoretical landscape of critical thinking is, if anything, even more variegated. The 1990 Delphi Report, coordinated by Facione on behalf of the American Philosophical Association, produced a consensus definition based on the convergent judgments of 46 experts in the field, identifying six core cognitive skills (interpretation, analysis, evaluation, inference,

explanation and self-regulation) and a set of associated affective dispositions [17]. Paul and Elder developed a comprehensive framework that combines eight elements of reasoning (purpose, question, information, inference, concept, assumption, implication, point of view) with nine intellectual standards (clarity, accuracy, precision, relevance, depth, breadth, logic, significance, fairness) and seven intellectual traits (humility, courage, empathy, autonomy, integrity, perseverance, confidence in reason) [18].

The theoretical foundations of independent (self-directed) learning trace back, as noted earlier, to Knowles's foundational formulation in the mid-1970s [6]. Subsequent theoretical development has refined this initial conception in important ways. Garrison's three-dimensional model identifies self-management (external control over learning context), self-monitoring (cognitive and metacognitive responsibility) and motivation as the constitutive dimensions of self-directed learning. Brookfield emphasizes critical reflection as the defining feature of authentic self-direction, distinguishing genuine autonomy from mere instructional independence and arguing that uncritical self-direction may simply reproduce existing biases [4]. Candy's four-dimension framework distinguishes personal autonomy, self-management, the independent pursuit of learning, and learner control of instruction. These complementary models share the recognition that self-directed learning is not the absence of structure but a particular kind of structure in which the learner exercises progressively greater agency over the goals, means and evaluation of learning.

The structural intersections among the three competencies become apparent when their constituent elements are placed in juxtaposition. All three frameworks foreground the role of evaluation — of sources, of arguments, and of one's own learning processes; all three emphasize the importance of metacognitive awareness; and all three require the disposition to question, to suspend judgment, and to engage with diverse perspectives. The Facione skills of interpretation, analysis and evaluation are precisely those required to navigate the contemporary media environment; the AAARC model's analyze and evaluate components are core critical-thinking operations; and the metacognitive monitoring central to both Halpern's and Garrison's models is the same cognitive function under different names. This convergence supports the increasingly common scholarly judgment that media literacy, critical thinking and self-directed learning are not three separate competencies but three facets of a single integrated competency complex appropriate to the twenty-first-century information environment [7,23].

Translating this theoretical integration into pedagogical practice requires explicit instructional strategies that target the three dimensions simultaneously. Inquiry-based

learning, in which students formulate questions, gather and evaluate evidence, and construct evidence-based responses, addresses all three dimensions: it requires independent goal-setting (self-directed learning), critical evaluation of evidence (critical thinking), and engagement with diverse media sources (media literacy). Problem-based learning operationalizes the same integration around authentic real-world problems, with documented evidence of improved analytical and self-regulated learning outcomes [5,24]. Project-based learning extends this approach over longer time-frames and typically incorporates media production, thereby exercising the Hobbs 'create' and 'act' dimensions in addition to the analytical components. The flipped-classroom model relocates direct-instruction components to out-of-class self-study, freeing in-class time for higher-order analysis, evaluation and collaborative critical engagement.

Several additional pedagogical strategies contribute to integrated competency development. Socratic questioning — the systematic use of probing questions to test the foundations and implications of claims — directly cultivates critical-thinking dispositions and provides a model of internal interrogation that learners can subsequently apply to their own self-directed inquiry. Concept mapping externalizes mental models and renders them available for critical examination and revision. Reflective journaling cultivates the metacognitive monitoring central to both self-directed learning and critical thinking. Collaborative discussion and debate exercise the perspective-taking and reasoned-argumentation skills central to all three competencies. Modern variants such as the KWHL chart (Know–Want to know–How to find out–Learned), the INSERT method (Interactive Notation System for Effective Reading and Thinking), and SWOT analysis applied to media texts provide concrete instructional structures that have been widely adopted in pre-service teacher training in Uzbekistan and other Central Asian countries [11,12].

Table 1 summarizes the principal pedagogical methods reviewed, with their primary focus areas mapped against the three constitutive competencies.

**Table 1. Pedagogical methods for integrated development of media literacy, critical thinking and independent learning**

Method	Description	Media literacy	Critical thinking	Indep. learning
Inquiry-based learning	Students pose questions, gather evidence, construct answers	High	High	High

<b>Method</b>	<b>Description</b>	<b>Media literacy</b>	<b>Critical thinking</b>	<b>Indep. learning</b>
Problem-based learning	Authentic real-world problems drive learning sequence	Medium	High	High
Flipped classroom	Direct instruction at home; analysis and discussion in class	Medium	High	High
Lateral reading	Investigate source via parallel tabs before reading content	High	High	Medium
SIFT method	Stop, Investigate, Find, Trace heuristic for online content	High	High	Medium
Socratic questioning	Probing questions to test foundations and implications	Medium	High	Medium
Reflective journaling	Systematic written reflection on learning and reasoning	Medium	High	High
KWHL chart	Know–Want to know–How–Learned graphic organizer	Medium	Medium	High
INSERT method	Marking text with codes for known, new, contradictory information	High	High	Medium
SWOT applied to texts	Analyzing Strengths, Weaknesses, Opportunities, Threats of arguments	High	High	Medium

The integration of digital pedagogy provides additional leverage. Mishra and Koehler's TPACK framework — Technological, Pedagogical and Content Knowledge — articulates the integrated competence required of teachers who effectively incorporate digital tools into meaningful learning. Learning management systems such as Moodle, Edmodo and Canvas provide infrastructure for asynchronous independent learning, formative assessment and collaborative discussion. Open educational resources expand the range of authentic materials available for media analysis. Specialized fact-checking tools (such as Snopes, PolitiFact, and the reverse-image search functions of major search engines), browser extensions for media

verification, and academic databases for triangulating claims provide concrete technological supports for lateral reading and source evaluation. E-portfolios offer a venue for cumulative documentation of independent learning, while collaborative platforms support distributed inquiry projects. In each case, the digital tool is most effective when integrated within a deliberately designed pedagogical structure rather than substituted for it.

Assessment of integrated competency development presents distinctive challenges. Traditional multiple-choice testing, while administratively convenient, is poorly suited to the evaluation of higher-order thinking, evaluative judgment and self-regulation. The literature points instead toward authentic assessment, in which students are required to perform complex tasks that approximate the demands of real-world media engagement — for example, evaluating a contested news story, producing a media analysis essay, or designing a research-based multimedia presentation [3,11]. Analytic rubrics that explicitly identify dimensions corresponding to each of the three competencies allow for differentiated formative feedback. Self-assessment and peer assessment, supported by structured rubrics and protocols, simultaneously develop the metacognitive monitoring central to self-directed learning while distributing the assessment burden. Portfolios that document growth across multiple performances over time capture developmental trajectories that single-moment tests cannot.

The Uzbek higher-education context presents both distinctive opportunities and specific challenges for the integrated development of these competencies. On the opportunity side, the Strategy for the Development of Higher Education until 2030 [12] and successive Presidential decrees on educational modernization create a favorable policy framework. Uzbekistan's participation in PISA, TIMSS and PIRLS assessments — and the consequent need to develop the analytical and text-engagement skills these assessments measure — has further raised the profile of integrated competency development. Pre-service teacher training programs at institutions such as the Shahrizabz State Pedagogical Institute have incorporated methods such as KWHL, INSERT and SWOT into the formal curriculum, providing institutional foundations on which further integration can be built [11].

On the challenge side, several constraints require explicit attention. First, the linguistic landscape of digital media literacy is overwhelmingly English-language, while Uzbek-language fact-checking infrastructure and curated educational resources remain comparatively underdeveloped. This places an additional burden on instruction and creates a need for systematic development of Uzbek-language teaching materials, fact-checking partnerships and verified open educational resources. Second, the integration of these competencies requires substantial professional development for in-service teachers, many of whom completed their

own training in a more transmissive pedagogical paradigm. Third, the assessment culture of higher education in the post-Soviet space has historically privileged factual recall and standardized testing; transition to authentic, performance-based assessment requires both institutional commitment and capacity-building. Fourth, the digital infrastructure of regional and rural institutions remains uneven, constraining the deployment of digital-pedagogy strategies.

Several international experiences provide instructive parallels. Finland's national media-literacy curriculum, integrated across school subjects and supported by the Finnish National Audiovisual Institute, has been widely cited as a model for whole-system integration [9]. Estonia's e-school infrastructure has enabled the systematic deployment of independent-learning platforms supported by national assessment frameworks. The UNESCO MIL Curriculum for Teachers [14] provides a comprehensive framework that has been adapted to multiple national contexts. The European Commission's Digital Education Action Plan and the OECD's Future of Education and Skills 2030 framework articulate compatible competency goals that can inform Uzbek curriculum development. Adapting these international models to the Uzbek context — rather than importing them wholesale — represents the appropriate strategic approach.

**Conclusion.** The systematic review of 22 contemporary scholarly sources presented in this article confirms that media literacy, critical thinking and independent learning, while preserving their distinctive theoretical lineages, have converged in twenty-first-century educational scholarship into an integrated cluster of foundational competencies. The convergence is driven jointly by the transformation of the information environment — characterized by exponential growth in available content, pervasive algorithmic mediation, and the proliferation of disinformation — and by the parallel shift toward learner-centered, constructivist pedagogical paradigms. Within this context, none of the three competencies can be fully developed in isolation from the others: media literacy without critical thinking degenerates into mere information consumption; critical thinking without media literacy lacks contemporary relevance; and independent learning without both is exposed to the manipulation of an unmediated information environment.

The principal pedagogical strategies emerging from the literature — inquiry-based and problem-based learning, the flipped classroom, lateral reading, the SIFT method, Socratic questioning, reflective journaling, the KWHL and INSERT methods, and SWOT analysis applied to media texts — all share the common feature of engaging multiple competencies simultaneously within authentic learning tasks. Their effectiveness is amplified when

integrated with appropriate digital infrastructure and supported by authentic, rubric-based assessment that captures performance across multiple competency dimensions. Successful institutional implementation requires coordinated alignment at the levels of curriculum, instruction, assessment and professional development.

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