Lilit SARGSYAN∗
Yerevan State University

FOSTERING CRITICAL THINKING SKILLS IN THE HEIS OF ARMENIA IN THE AGE OF AI-DRIVEN TRANSFORMATION

The concurrent technological advancements and evolving societal needs have posed new challenges for the HEIs of Armenia. To prepare future-proof students capable of navigating the complexities of the modern world it is imperative that the HEIs of Armenia foster a critical thinking (CT) mindset among students. This paper investigates the implementation of CT skills development frameworks in universities in light of AI-driven transformations. A comprehensive framework, incorporating Universal, Mixed, and Infusion approaches, is introduced to nurture CT through various methods, ranging from dedicated courses to cross-disciplinary integration throughout the curriculum. Effective models such as Pearson's RED Model, Bloom's Taxonomy, and the Paul-Elder Model are employed within these approaches, providing guidelines for recognizing assumptions, evaluating arguments, and drawing conclusions. These tools enable students to critically engage with AI-generated insights. Thus, a holistic approach to CT development is essential for cultivating a mindset characterized by integrity, autonomy, and empathy. This mindset equips students to approach AI with skepticism and fosters a culture of innovation and ethical decision-making.

Introduction

Recent technological advancements, expressed in the digitalization of the learning environment, the emergence of support systems for teaching staff, as well as the flexibility of learning, and strengthening of student agency, have been exacerbated since the advent of AI systems. Within this dynamic environment, embedding critical thinking skills into university curricula has emerged as an urgent imperative for Higher Education Institutions (HEIs) globally, including

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∗ lilit.sargsyan@ysu.am   ORCID: 0009-0007-2862-2900

those based in Armenia. This paper explores the imperative need for fostering critical thinking skills in Armenian HEIs amidst the backdrop of AI-driven transformations and the dynamic landscape of the country's emerging AI industry.

The recent paradigm shifts in learning and teaching, characterized by a transition towards learner-centered approaches involving the implementation of Active learning methods in digitized learning environments, higher educational systems have been challenged by new developments in artificial intelligence. Students and academics had to wake up to the reality that dictated a significant adjustment of learning and teaching strategies to ensure the development of analytical thinking and critical thinking skills, considered as high in-demand skills in the priority industry sectors of Armenia. Even though the development of students' CT skills was on the agenda of the continuous professional development of the teaching staff of the HEIs of Armenia, most of the provided upskilling trainings focused only on the acquisition of digital skills. Yet conversely, the purpose of the promotion of digital literacy among teaching staff should have been the competence of developing students' critical and analytical thinking in the digitalized learning environment.

As a result of the subsequent technological advancements students, who most of the time considered themselves as "digital natives" along with academics had to face challenges created by AI.

According to the results of Yerevan State University students' forum discussions and survey conducted by young researchers within the framework of the 1-Month IDEATHON of the "International Hybrid Conference on Applications & Implications of AI in Education" on the attitudes towards AI integration in Higher Education, students express dubious attitudes towards the integration of AI in L&T. While they welcome the efficiency and scalability offered by AI tools, they also express their concern and sense of uncertainty about the possibility of developing their analytical and critical thinking skills. Students who seek employment or have been working in the tech industry, per se, acknowledge the practical value of AI tools, even though they concede that the excessive integration of AI in the tech industry does exacerbate the precariousness of the future of work and makes them reflect on their future employability in the context of the BANI (Stöttinger, 2022) rather than the VUCA concept.

Moreover, given that most HEIs foster sustainability education policy, the exponential spike in AI application has plausibly redirected students' attention from the issue of 'Green Data' to 'Green AI'. Students are enlightened on the ethical and responsible use of AI, due to which they view the impact of AI's application from the spectrum of not only academic integrity in relation to the use of AI in learning but also the imperative of making Green AI (Crawford, 2024) a part of the ESG practices of corporate citizenship, as well as reducing their own AI carbon footprint when navigating through the AI systems.

To help students think critically, supporting them in making judgements, be they related to texts generated by AI, AI-caused polarization or biases, or application of AI in problem-solving or research study, the universities in Armenia should reiterate their commitment to prioritizing the development of students' critical thinking skills, and strive to implement strategies that enable students to adapt and contribute to rapidly changing societal needs.

However, one of the complexities of developing critical thinking skills is that there has been a unanimous agreement on the importance of critical thinking leaving very little room for discussion about the ways and means of developing students' CT skills. Moreover, the universities in Armenia have not fostered the policy to consistently implement strategies aiming at developing students' critical thinking skills, monitoring the implementation processes and assessing the outcomes. Hence, universities should demonstrate determination and resilience to gear the curricula reform towards teaching critical thinking to embed a meaningful change.

Literature Review and Methodology

Promoting critical thinking in HE requires a holistic approach, encompassing approaches and strategies that have proved their efficacy for decades and are versatile to the intricacies of AI transformations.

The program of critical thinking skills development among university students commences with the implementation of a 3-legged stool framework entailing a simultaneous exploration of the efficacy of Universal, Mixed, and Infusion approaches (Edwards, 2017). In this paper we will focus only on the advantages each approach offers in fostering critical thinking abilities that are pivotal in the context of the AI transformation of education.

The universal approach, implemented in the dedicated courses on critical thinking, can be characterized as a more linear approach to instilling this vital skill in students. These optional courses are designed to achieve specific Intended Learning Outcomes, emphasizing the theoretical foundations more than practical applications. These theoretical underpinnings include the fundamental works of American and English philosophers and psychologists such as John Dewey, Benjamin Bloom, Michael Scriven, Richard Paul, Linda Elder, and others.

First students are equipped to articulate the theoretical underpinnings of critical thinking skills, thereby grasping their fundamental concepts and methodologies. Secondly, through the analysis of real-world scenarios employing critical thinking strategies, students develop a nuanced understanding of how to apply these skills in diverse contexts. By offering explicit instruction and targeted learning objectives, the universal approach provides a comprehensive framework for nurturing critical thinking capabilities. By the end of the course, students will be able to practice "deliberate reflective thinking" and ultimately turn from

"Unreflective Thinkers" into at least "Practicing Thinkers" (Elder, Paul, 1996). "The Master Thinker" stage will require stackable microlearning rather than stand-alone microlearning provided within the framework of a dedicated course; therefore, the universal approach is potentially developmental and can enhance learners' metacognition and self-awareness.

Conversely, the mixed approach integrates critical thinking strategies across various disciplinary courses, offering a more interdisciplinary and contextualized approach. Lecturers introduce critical thinking principles at the outset of their courses, embedding them within the fabric of subject-specific content. This integration enables students to seamlessly apply critical thinking in research endeavors, resource selection, and pedagogical methodologies such as Case-based Learning and Problem-based Learning. The implementation of these Active learning methods allow students to practice consciously rational thinking learning to "train their thinking", the importance of which was addressed in Dewey's fundamental work "How We Think": "While it is not the business of education to prove every statement made, any more than to teach every possible item of information, it is its business to cultivate deep-seated and effective habits of discriminating tested beliefs from mere assertions, guesses, and opinions; to develop a lively, sincere, and open-minded preference for conclusions that are properly grounded, and to ingrain into the individual's working habits methods of inquiry and reasoning appropriate to the various problems that present themselves." (Dewey, 1910, p. 27-28). Thus, the mixed approach not only enhances students' analytical skills but also underscores the interconnectedness of critical thinking with subject-specific knowledge domains, fostering a holistic understanding of its relevance across disciplines.

In contrast, the infusion approach emphasizes the infusion of critical thinking throughout the entire curriculum, permeating every facet of the learning experience. Adopting a two-way system, this model employs the method of Discovery Learning to engage students actively in the process of knowledge acquisition and application. As elucidated by Hosnan (2014), Discovery Learning exhibits characteristics such as problem-solving, student-centeredness, and the synthesis of new and existing knowledge. Through this approach, students are empowered to explore materials of various origins and hypothesize, create, or synthesize content to test the validity of their hypothesis. By comparing the outcomes of their work with theories, the facilitators of the learning process help them acquire knowledge, cultivating students' independence and creativity. Moreover, the infusion approach allows facilitators to instill in their students the ability to discern patterns, formulate effective inquiry strategies, and collaborate synergistically with their peers. By immersing students in a learning environment where critical thinking is integral, the infusion approach engenders a culture of inquiry and intellectual rigor.

The urgency of embedding a national-level policy on implementing the 3-legged framework in the HEIs of Armenia is conditioned by the university students' low level of critical thinking skills (ENQA, 2022), which has affected the quality of students' self-directed learning and research, as well as their employability.

As the leading universities of Armenia assign greater significance to the research component, the implementation of critical thinking strategies in research and problem-solving endeavors appears to be recognized as the imperative universities should deal with, especially in the context of artificial intelligence permeating various facets of society. The tertiary-level institutions of Armenia are struggling to cope with AI-derived risks related to academic integrity misconduct and violations. Therefore, there is an urgent need to equip students with the requisite critical thinking skills for them to navigate through AI's ethical implications. There is a growing realization that the futile attempts of prohibiting AI applications in research should pave the way to the integration of critical thinking approaches into research methodologies and problem-solving frameworks for students to be better equipped to evaluate the ethical implications of AI technologies, and make informed decisions regarding their utilization.

Thus, the introduction of Universal, Mixed, and Infusion approaches to teaching critical thinking offers diverse pathways for fostering it in Tertiary Level Institutions. The universal approach offers a structured framework via specialized courses, whereas the mixed approach incorporates critical thinking across various disciplines. Lastly, the infusion approach seamlessly integrates critical thinking throughout the entire curriculum. Embracing these methodologies enables universities to cultivate students' critical thinking skills, equipping them to adeptly navigate the intricacies of the contemporary world with insight and discrimination.

Since the advent of the Generative Pre-trained Transformer AI system, leading universities of Armenia have prioritized research programs related to AI and its applications. However, the implications of AI in the forms other than AI plagiarism do not become research topics. Moreover, the universities' lack of commitment to promoting the development of students' critical thinking skills in the past was one of the reasons that left universities exposed to the avalanche of a new type of plagiarism created by ChatGPT. Nowadays, as AI continues to reshape the high-tech industry, which has been proclaimed as a priority sector for Armenia, the leading universities choose to embrace these technological advancements rather than fight them, ergo introducing capacity-building strategies to develop their teaching staff's AI digital competencies to enhance students' AI digital literacy, by which they simultaneously demonstrate the universities' agility signified in the ability to sense out the tech industry's market demands. However, according to the survey conducted by the FAST foundation and CIVITA consulting, since 2021 the most in-demand skills have been critical and analytical thinking skills, leaving digital skills at the lower end of the scale. Thus, universities should be nudged to

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adapt and implement various teaching models and skill development strategies for students to acquire the competence of applying consistent principles and criteria when employing AI in any aspect of learning and research, especially while analyzing any synthesized information, and consistently questioning the validity of evidence and derived conclusions.

These approaches are applicable while implementing various Active learning methods by which they 'learn by doing'. As critical thinking entails questioning the validity of evidence and derived conclusions, particularly in the context of AI-generated insights, AI-created algorithms can analyze large datasets and identify correlations, but they may not always capture the nuances and complexities of human experience; that is why students should be encouraged to run the material through the 'reflective cycle' of Kolb's Experiential learning style (Kolb, 1984, p. 41). By applying the 'reflective cycle', students will be empowered to become 'doers' rather than blind followers of AI's lead. The implementation of critical thinking strategies will develop the students' capability to consider the AI-generated content as a 'Concrete Experience', which they must critically analyze and reflect upon. In the stage of 'Reflective Observation,' teachers will facilitate the evaluation of the assumptions and limitations underlying AI-generated conclusions and promote a multi-perspectival approach to analyzing the AI-generated contents. In 'Abstract Conceptualizations' students will be able to evaluate interpretations, matching them with criteria, as well as to make their independent inferences. All these require an ability to assess the reliability of AI algorithms and question the ethical implications of AI-driven decision-making processes. By advocating for transparency and accountability in AI development, students learn how they could deploy the outcomes of the 'reflective cycle' in the stage of 'Active Experimentation'.

Thus, the cognitive processes responsible for analyzing, evaluating, and synthesizing information will have to become more enhanced in the era of AI transformation, as for making informed decisions and solving complex problems, students will have to be meticulous in applying criteria in evaluating information and arguments and scrutinizing evidence to evaluate its validity, as well as challenging the depth of the AI-generated insights. In the era of AI-driven revolution, characterized by the generation and analysis of immense datasets through machine learning algorithms, students confront the inevitable task of consistently appraising the quality and pertinence of insights produced by AI. This demands the capacity to distinguish between correlations and causations, detect biases, and evaluate the consequences of decision-making processes propelled by AI. Hence, the enhancement of cognitive processes among students forms the crux of learning and teaching, as skills developed due to the enhancement of cognitive processes are considered to be highly sought-after skills in the labor market of Armenia.

Given the leading HEIs' commitment to foster a continuous dialogue with priority industry representatives to maintain leadership in providing educational services, enterprise representatives are invited to contribute to a wide range of educational processes; it seems plausible in light of the imperatives mentioned previously that universities should opt for implementing critical thinking approaches and teaching models that have proved their efficacy not only in education but in the business world as well; Among various models, Pearson's RED Model, Bloom's Taxonomy, and the Paul-Elder Model stand as prominent frameworks in the context of AI transformation.
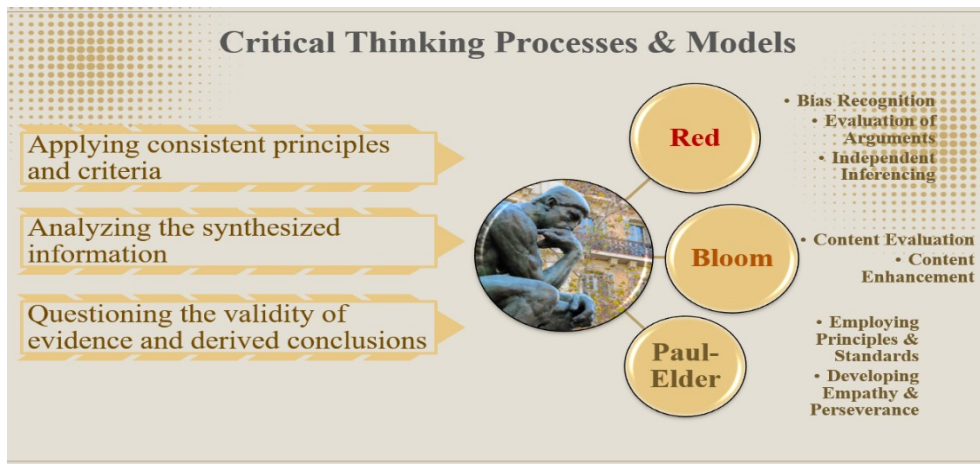

Figure 1. Critical thinking processes and models.

Pearson's RED Model (Pearson TalentLens, 2021), rooted in the Watson-Glaser Critical Thinking Appraisal Assessment, comprises three pivotal components: Recognize Assumptions, Evaluate Arguments, and Draw Conclusions. The `Recognize Assumptions` step necessitates the identification and interrogation of the underlying assumptions shaping AI-presented statements. The `Evaluate Arguments` step involves gauging the credibility and soundness of evidence supporting or refuting the research analyses generated by AI. Finally, the `Draw Conclusions` step entails scrutinizing AI-presented conclusions and formulating well-grounded independent judgements based on prior assessments.

Though there have been numerous reinterpretations of the six tiers of the hierarchical framework of Bloom's Taxonomy (Anderson, Krathwohl, Airasian, Cruikshank, Mayer, Pintrich, Raths, & Wittrock, 2001), the utilization of the taxonomy plays a crucial role in the context of critical thinking skills development as well. As students' progress through the higher-order thinking levels, they acquire the ability to dissect AI-generated content through segmentation.

Evaluating encompasses the appraisal of information, ideas, or solutions in terms of quality, relevance, or credibility. Creating entails amalgamating segmented and previously analyzed elements to form novel ideas or resolve intricate issues.

The introduction of the Paul-Elder Model (Paul, Elder, 2010) is conditioned by the fact that this structured approach to critical thinking, known as "elements of thought," promotes intellectual standards that are essential in the era of AI transformation, such as clarity, accuracy, and relevance. Its consistent Critical Thinking stage students should practise employment of intellectual standards to problem-solving and decision-making when using AI systems. The consistent pursuit of relevance in evaluating the purpose, research question, implications and other Elements of Thought in the next stage require continuous training and discipline. Intellectual humility, intellectual empathy and intellectual perseverance are perhaps the most important Intellectual Traits of the homonymous stage that can be developed among students, due to the teaching talent of teachers and CPD training on developing the students' critical thinking skills.

Thus, fostering critical thinking skills among students in tertiary-level institutions is essential in the era of AI-driven transformation. Central to this endeavor are strategies that facilitate critical thinking processes, such as applying consistent principles and criteria, analyzing synthesized information, and questioning the validity of evidence and derived conclusions. Pearson's RED Model, Bloom's Taxonomy, and the Paul-Elder Model offer structured frameworks for promoting critical thinking among students, equipping them with the skills to engage critically with AI-generated insights and decision-making processes. By empowering students to think critically and ethically in an increasingly AI-driven world, universities should strive to prepare future-proof students for them to shape the future of our society.

While pedagogical strategies and teaching models offer structured frameworks for promoting critical thinking skills, it is equally essential to cultivate a critical thinking mindset among students. Moulding the critical thinking mindset (Hitchcock, 2022) will require designing and implementing a long-term capacity-building strategy across faculties for teaching staff to be competent so as to facilitate the students' view of AI-generated content through the lens of integrity, autonomy, and empathy.

Since ChatGPT's unstoppable advancement, the issue of integrity has been in the center of National-level discussions on the AI transformation of HE. Integrity, as one of the bedrocks forming qualities, has been a major source of concern, especially in reference to ethical conduct in research and assessment. Autonomy, playing an important role in self-directed learning, fosters curiosity, independent exploration, and self-discipline, and it is a quality that is most affected in case of excessive use of AI tools. Empathy, on the other hand, in the case of the conscious use of AI, is an invaluable contributor to soft skills. It facilitates the understanding and evaluation of diverse perspectives, promoting collaboration in the pursuit of

research. By instilling these values in students, the teaching staff will lay the groundwork for cultivating a critical thinking mindset that transcends disciplinary boundaries and prepares students to navigate the complexities of the BANI world (Casio, 2020).

In the context of AI-driven transformation, the teaching staff should use scaffolding to help students stay active in the learning process, ask questions, and explore new avenues to avoid heuristic biases and polarization when using AI tools. Heuristic biases, such as the confirmation bias and the availability heuristic, nudge students to accept the distorted perceptions without a second thought and no longer analyze objectively the AI-generated content, while polarization can mislead or devalue the students' research because of the scarcity of resources and perspectives presented by AI. By fostering a critical thinking mindset, academics will encourage students to approach AI technologies with a grain of salt, critically evaluating their strengths, limitations, and most importantly, ethical implications.

Moreover, in Problem-based learning, students rely on their critical thinking mindset to remain creative and discerning in the face of AI-generated content. While AI technologies offer unprecedented power for data analysis and instant content generation, they lack innovation and out-of-the-box ideas. In case of poor prompting students are most likely to get a one-size-fits-all approach because of the replication of existing ideas. By fostering a critical thinking mindset, facilitators will be able to empower students to challenge their preconceived ideas or conventional approaches to research and analysis, as well as seek out novel solutions to complex problems, fostering a culture of innovation and creativity.

Furthermore, a critical thinking mindset equips students to look for cohesion while evaluating the logic, relevance, and authenticity of materials from sources inundated with vast amounts of information. Any academic goal students pursue should require the ability to discern credible sources, evaluate the reliability of evidence, and assess the validity of arguments. In HEIs, the teaching staff should be provided with upskilling as a part of their CPD aiming at equipping teachers with competences for developing certain skills among students, such as the ability to critically analyze contents completely or partially generated by AI, identify logical fallacies, inconsistencies and different types of biases.

The objectives of developing students' critical thinking mindset are multifaceted and encompass dimensions such as curiosity to avoid heuristic biases and polarization when using AI tools. Failure to detect heuristic biases, such as confirmation bias and availability heuristic, will most likely nudge students to accept the distorted perceptions without a second thought and no longer objectively analyze the AI-generated content, while polarization can mislead or devalue students' research because of the scarcity of resources and perspectives presented by AI.

A critical thinking mindset allows students to approach AI technologies with skepticism, critically evaluating the strengths, limitations, and implications. Firstly,

students should be encouraged to remain curious, explore new perspectives and ask questions to gain a deeper understanding of complex issues. Effective soft skills are also essential, enabling students to clearly convey their thoughts and actively listen to others, fostering dialogue and collaboration. Additionally, students should be encouraged to reflect and assess their personal assumptions, comparing them with other viewpoints and perspectives.

Thus, CPD training should be directed not only towards the development of the teaching staff's generic competence of integrating critical thinking strategies into learning designs, but also towards the upskilling of techniques, that help teachers develop the students' ability to assess the authenticity, relevance, and accuracy of resources, as well as the validity of inferences made by AI. The implementation of techniques designed to develop the students' evidence assessment skills should be the crux of the facilitators' teaching repertoire, which will allow them to prepare students for conducting quality research, the important part of which involves discerning credible sources, evaluating the reliability of information, and making informed judgments.
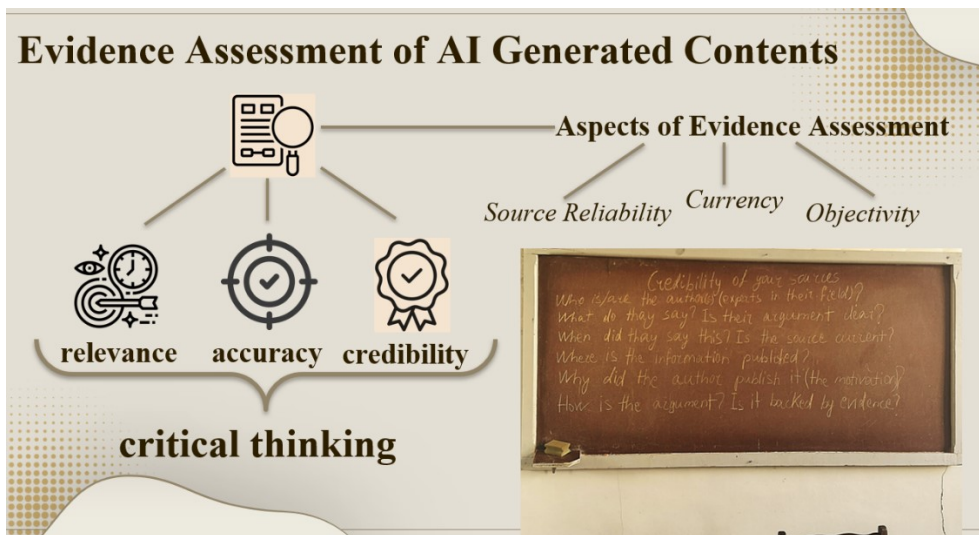

Figure 2. Evidence assessment of AI generated contents.

These practical skills ensure the evaluation of the relevance, accuracy, and credibility of information that prepare students to systematically analyze the reliability and validity of the information in the process of evidence assessment. Putting source reliability under scrutiny, they test the expertise and credibility of the source to avoid biased or inaccurate information. The Currency of information and novelty of research are areas that facilitators should set as a basic requirement for student research. Objectivity is crucial as well, necessitating analysis of

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information for potential bias, and cross-referencing it with other credible sources to corroborate its veracity.

One framework commonly used for evidence assessment is the CRAAP test (Blakeslee, 2004), which consists of five main components: Currency, Relevance, Authority, Accuracy, and Purpose. Currency refers to the timeliness of the source, ensuring that it is up-to-date and relevant to the research topic. Relevance entails assessing whether the source aligns with the research objectives and addresses the researcher's specific information needs. Authority involves scrutinizing the credentials of the source, such as the publication venue and the expertise of the author, to ascertain its credibility and trustworthiness. Accuracy requires evaluating whether the claims made by the source are supported by evidence and whether the information is cited correctly. Finally, Purpose involves examining the motives behind the publication of the source, and discerning whether it serves a particular agenda or bias.

In guiding students through evidence assessment, facilitators should employ a series of guiding questions to facilitate critical thinking and discernment. Here is the list of questions students should ask themselves and each other in self-directed learning and collaborative technologically enhanced learning:

Who is/are the author(s) (expert(s) in their field)?
What do they say? Is their argument clear?
When did they say this? Is the source up-to-date?
Where is the information published?
Why did the author publish it (the motivation)?
What is the argument like? Is it backed up by evidence?

Furthermore, university staff can leverage various pedagogical strategies and teaching methodologies to enhance the students' skills in evidence assessment. Active learning approaches, such as case studies, group discussions, and hands-on research projects, provide students with opportunities to apply evidence assessment techniques in real-world contexts. Scaffolded assignments and formative feedback will enable students to refine their evidence assessment skills iteratively, gradually building proficiency and confidence in discerning credible sources and evaluating information critically.

Results and Conclusions

Before embedding critical thinking within Higher Education on a national level to meet the challenges posed by AI-driven transformation, the leading HEIs of Armenia should refocus their staff capacity on building strategies towards enhancing their teaching staff's competence aimed at developing their students' critical thinking skills.

The introduction of the first two legs of the stool framework helps learners navigate through the theoretical underpinnings drawing from the foundational work of the American philosopher John Dewey (1910), who referred to critical thinking as 'reflective thinking', the mental acts which should be conducted in accordance with the principle of making inferences based on ample amounts of aggregated data to avoid polarization or biases, which are often the case in AI-generated texts. Notably, by addressing the issue of polarization in decision-making processes, the teaching staff focus on exploring the ways of introducing rational thinking in all the phases of critical thinking. Reflection playing a pivotal role in the process of rational thinking is of equal significance when students are engaged in content-crafting activities by means of AI. Reflective thinking helps them assess critically the generated contents and by maintaining steady dialogue with AI through prompts they lead AI to the desired outcome.

Benjamin Bloom's higher-order thinking perspective and the conceptualization of critical thinking by Michael Scriven and Richard Paul provide a nuanced understanding of the intellectually disciplined process involved in active and skillful information processing. The introduction of Pearson's RED Model, based on the Watson-Glaser Critical Thinking Appraisal assessment, as well as the Paul-Elder model is useful in refining the students' critical thinking and enhancing their self-directed, self-disciplined, self-monitored, and self-corrective thinking, consistent with the current trends in the skills which are desirable in today's work environment.

The analysis of critical thinking conceptualizations through direct or indirect introduction reveals the multifaceted nature of critical thinking, expressed in questioning assumptions, providing a detailed account of the cognitive processes involved, such as identifying and analyzing arguments, evaluating and deciding, experimenting and re-evaluating. The incorporation of Active learning methods, such as Kolb's Experiential learning, Problem-based learning (PBL), Case-based learning, and Inquiry-based learning in the context of the AI-driven transformation of HEIs will help to develop strategies for enhancing the cognitive processes in L&T. The given methodology efficiently promotes a deeper understanding of teaching materials, encourages the students' analytical thinking, and facilitates the application of the acquired knowledge to practical situations.

In the ambitious pursuit of developing critical thinking skills in the students enrolled in the HEIs of Armenia in the era of AI-driven transformation, it is pivotal to foster student agency by transcending Active learning methods for them to be able to hygienize information aggregated by AI, then critically assess the AI synthesized outcome, and by evaluating it formulate independent arguments. This strategy is applicable across all disciplines and is crucial at both undergraduate and postgraduate levels of study.

The approach to designing the strategy for developing the students' critical thinking in alignment with the work market's most in-demand skills will increase

the students' and graduates' employability. To set a foundation for effective critical thinking and empower the critical thinking mindset, program designers and educators should focus on the cultivation of the students' observational, questioning, inferential, experimenting, and argument analysis abilities.

As the HEIs in Armenia are embracing this integrative approach, they are reinforcing their commitment to upskilling their teaching staff, aiming at equipping students with the essential critical thinking skills that transcend disciplines, thus preparing them for the challenges of the dynamic modern world and the uncertainties of the future.

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Լ. Սարգսյան – *Հայաստանյան բուհերում քննադատական մտածողության հմտությունների զարգացումը՝ ԱԲ-ի ազդեցությամբ պայմանավորված վերափոխումների դարաշրջանում.* ՀՀ բարձրագույն կրթության ոլորտում նոր մարտահրավերներ են առաջանում՝ պայմանավորված ժամանակակից տեխնոլոգիական առաջընթացով և հասարակության փոփոխվող կարիքներով: Բուհերի շրջանավարտները կկարողանան արդյունավետ կերպով բավարարել ժամանակակից աշխարհի փոփոխվող պահանջները ուսանողների շրջանում քննադատական մտածողության խթանման դեպքում: Սույն հոդվածը ուսումնասիրում է քննադատական մտածողության հմտությունները ՀՀ բարձրագույն կրթության բնագավառում ինտեգրելու կարևորությունը՝ արհեստական բանականությամբ պայմանավորված փոխակերպումների համատեքստում: Քննադատական մտածողության հմտությունների զարգացման համար բուհերում պետք է ներդրվի համապարփակ մի շրջանակ, որ կներառի քննադատական մտածողության զարգացմանն ուղղված ունիվերսալ, խառը և ինֆուզիոն մոտեցումներ, որոնց ներդրումը իրականանալու է տարբեր ձևաչափերով: Քննադատական մտածողության հմտությունների խթանման համար պետք է կիրառվեն նաև այնպիսի մոդելներ, ինչպիսիք են Փիրսոնի RED մոդելը, Բլումի տաքսոնոմիայի կոգնիտիվ ունակությունների որոշ մակարդակները ներառող մոդելը և Paul-Elder-ի մոդելը: Այս շրջանակների

կիրառումը ինարավորություն կտա ուսանողներին քննադատական մոտեցում ցույց տալ արհեստական բանականության օգնությամբ ստեղծված բովանդակությունների վերլուծության և կիրառման, ինչպես նաև արհեստական բանականության կողմից առաջարկված եզրահանգումների ճանաչման, փաստարկների գնահատման և եզրակացություններ անելու ժամանակ։ Այսպիսով, քննադատական մտածողության հմտությունների ինտեգրումը Հայաստանյան բուհերում շատ կարևոր է արհեստական բանականության պատճառով առաջացած տրանսֆորմատիվ փոփոխությունների դարաշրջանում։

Բանալի բառեր. քննադատական մտածողության հմտություններ, ԱԲ-ի ազդեցությամբ պայմանավորված տրանսֆորմատիվ փոփոխություններ, քննադատական մտածողության մոտեցումներ և մոդելներ, ակտիվ ուսումնառության մեթոդներ, ապացույցների գնահատում

Л. Саргсян – *Развитие навыков критического мышления в вузах Армении в эпоху трансформаций под влиянием ИИ.* – Современные технологические достижения и изменяющиеся потребности общества поставили новые задачи перед системой высшего образования РА. Для подготовки студентов к предстоящим вызовам и развития их способности правильно ориентироваться при решении задач современного мира крайне важно, чтобы у студентов развивалось критическое мышление (КМ). В данной статье рассматривается возможность внедрения разных подходов развития КМ у студентов в условиях преобразований, вызванных влиянием искусственного интеллекта. Введение всеобъемлющей структуры, включающей универсальный, смешанный и инфузионный подходы, предполагает различные способы развития КМ, начиная с специализированных курсов и заканчивая интеграцией через дисциплины и весь учебный план. Выбранные модели, такие как RED-модель Пирсона, таксономия Блума и модель Пола-Элдера, используются в качестве эффективных и гибких инструментов, которые могут быть применены в рамках подходов к развитию КМ. Эти инструменты предоставляют руководства для распознавания предположений, оценки аргументов и выведения заключений, что позволяет студентам критически анализировать данные, созданные ИИ. Таким образом, целостный подход к развитию КМ у студентов позволяет им подходить к ИИ со скептицизмом и способствует развитию культуры инноваций и принятия правильных этических решений.

Ключевые слова: навыки критического мышления, трансформация ИИ, подходы и модели критического мышления, методы активного обучения, оценка доказательств

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