

# Pseudo-Intellectualism and Artificial Intelligence: A Phenomenological Study of Student Intellectuality in the Digital Age

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**Abstract:** The integration of artificial intelligence (AI) in education has triggered an epistemological crisis that threatens the intellectual character of students. This qualitative study aims to explore the dynamics of student digital literacy in the AI era through a phenomenological approach. The results reveal four crucial phenomena: erosion of articulation independence, dependence on probabilistic algorithms, decreased mental endurance in research, and the emergence of an illusion of competence. The findings show that easy access to AI often replaces the process of cognitive struggle with "pseudo-intellectualism," where academic outcomes no longer reflect depth of internal understanding. The discussion emphasizes the importance of repositioning the role of AI through a "Digital Reflective Pedagogy" model that prioritizes dialectical processes and intellectual honesty. As a solution, educational institutions are advised to shift from product-based assessment to process-based assessment to maintain human agency. This study concludes that strengthening intellectual character is the main defense against cognitive automation to ensure that technology remains a tool for expanding intelligence, not a substitute for human consciousness.

**Keywords:** Artificial Intelligence, Intellectual Character, Critical Digital Literacy, Reflective Pedagogy, Thinking Autonomy

**Abstrak:** Integrasi kecerdasan buatan (AI) dalam pendidikan memicu krisis epistemologis yang mengancam karakter intelektual anak didik. Penelitian kualitatif ini bertujuan mengeksplorasi dinamika literasi digital siswa di era AI melalui pendekatan fenomenologi. Hasil penelitian mengungkap empat fenomena krusial: erosi kemandirian artikulasi, kebergantungan pada algoritma probabilistik, penurunan daya tahan mental dalam riset, serta munculnya ilusi kompetensi. Temuan menunjukkan bahwa kemudahan akses AI seringkali menggantikan proses pergulatan pemikiran (*cognitive struggle*) dengan "intelektualisme semu," di mana hasil akhir akademik tidak lagi mencerminkan kedalaman pemahaman internal. Diskusi penelitian ini menekankan pentingnya reposisi peran AI melalui model "Pedagogi Reflektif Digital" yang mengedepankan proses dialektika dan kejujuran intelektual. Sebagai solusi, institusi pendidikan disarankan beralih dari penilaian berbasis produk menuju penilaian berbasis proses guna menjaga agensi manusia. Studi ini menyimpulkan bahwa penguatan karakter intelektual merupakan benteng utama dalam menghadapi otomatisasi kognitif untuk memastikan teknologi tetap menjadi alat perluasan kecerdasan, bukan pengganti kesadaran manusia.

**Kata Kunci:** Artificial Intelligence, Karakter Intelektual, Literasi Digital Kritis, Pedagogi Reflektif, Otonomi Berpikir.

## 1. Introduction

The era of artificial intelligence (AI) has brought about a fundamental shift in the cognitive landscape of modern education, where the line between digital assistants and thinking agents is becoming increasingly blurred. This transformation is not merely a change in technical tools, but touches on the ontological level of how students understand the nature of knowledge. When machines are capable of producing coherent text synthesis in seconds, students' intellectual structures face unprecedented challenges. This phenomenon creates an accessibility paradox; on the one hand, information is abundant, but on the other, the discriminative ability to filter truth often atrophies. Generative AI such as Large Language Models (LLMs) offer tempting conveniences, which, if not managed with critical awareness, will lead students to a mechanistic mindset that relies on algorithms rather than internal dialectics.

Concerns about this degradation of intellectual character are rooted in how technology affects the way the brain works in processing complex information. Nicholas Carr, in his monumental work, *The Shallows: What the Internet Is Doing to Our Brains*, for example, warns that an instantaneous digital environment tends to shape shallow thinking patterns. Carr notes: *"The faster we surf across the surface of the web the more links we click and pages we browse the less time we spend thinking deeply or focusing on any one thing. We are evolving from being cultivators of personal knowledge into being hunters and gatherers in the electronic forest."*<sup>1</sup>

In the context of AI, this hunt for information becomes even more extreme because students no longer need to "explore the electronic jungle"; they simply wait for the results of the hunt to be presented to them by the system. This risks stifling the deep curiosity that is the main foundation of intellectual character. Intellectual character encompasses honesty, the courage to question, and perseverance in seeking the truth, all of which require time and intensive cognitive effort.

The integration of AI in the classroom is often viewed solely through the lens of efficiency, without considering the long-term impact on academic integrity. Problems that arise in the field show that many students are trapped in the practice of "cognitive copy-paste," where they transfer their thinking authority to machines. Neil Selwyn in *Education and Technology: Key Issues and Debates* emphasizes that educational technology is never value-neutral. Selwyn argues that every digital tool carries a certain ideology that can change the power relations between teachers, students, and knowledge itself.<sup>2</sup> When AI becomes the main source of answers, there is an erosion of the concept of "struggle" or intellectual struggle. In fact, in the history of educational philosophy, meaningful understanding only arises from a difficult process of intellectual struggle. Without cognitive obstacles, the learning process will only become a meaningless outdoor simulation, where students appear to have mastered the material but fail to internalize the concepts.

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<sup>1</sup> Nicholas Carr, *The Shallows: What the Internet Is Doing to Our Brains*, 2nd ed. (W. W. Norton & Company, 2020), 115.

<sup>2</sup> Neil Selwyn, *Education and Technology: Key Issues and Debates*, 3rd ed. (Bloomsbury Academic, 2021)

In line with these challenges, digital literacy in this era needs to be redefined beyond the technical skills of operating devices. Digital literacy must include a critical-epistemological dimension, namely the ability to understand how data is constructed and the potential biases contained within algorithms. Often, students have overconfidence in AI outputs because of their authoritative and convincing language. This is in line with the concept of *algorithmic bias* described by Safiya Umoja Noble in *Algorithms of Oppression*. Noble reveals that digital systems often replicate human prejudices hidden in their training data.<sup>3</sup> If students do not have the intellectual character to cross-check information, they will become passive consumers of a single narrative produced by artificial intelligence, which in turn narrows their critical thinking horizons.

If we examine this dependence more closely, we find that it has even more serious consequences, namely that it triggers a weakening of critical thinking, or what could be called mental atrophy. In the process of conceptual academic writing, students usually go through the stages of data collection, analysis, and original synthesis. However, the presence of AI drastically cuts this process short. For example, in a class discussion on environmental ethics, students tended to give very uniform and normative arguments because they used similar prompts in AI applications. This uniformity of thinking is an early sign of a loss of intellectual originality. Education should produce unique individuals with diverse perspectives, but the standardization of answers by AI creates a boring and unprogressive intellectual "echo chamber." A strong intellectual character requires one to dare to be different with arguments based on independent reasoning, not just following the trends of words generated by machines.

The uncontrolled application of AI also threatens the development of executive functions in the brains of adolescents who are still in the growth stage. The ability to plan, organize information, and maintain attention becomes dull when all these tasks can be delegated to virtual assistants. Howard Gardner, known for his theory of multiple intelligences, in his discussion of ethics in the digital age, emphasizes the importance of "App Mentality." Gardner and Davis explain that generations who grow up with apps tend to expect instant solutions to real-life problems that are actually complex.<sup>4</sup> When applied to the intellectual realm, this mentality will produce graduates who are procedurally proficient but stumble when faced with ambiguity or problems that do not have standard answers in the AI database. Intellectual character requires resilience in the face of uncertainty, a quality that cannot be taught by algorithms that always strive to provide definitive answers.

In addition, intellectual honesty is a major issue in this dynamic. The biggest challenge lies in the blurring of the definition of originality. When a student uses AI to refine their language, at what point does human contribution end and machines take

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<sup>3</sup> Safiya Umoja Noble, *Algorithms of Oppression: How Search Engines Reinforce Racism* (NYU Press, 2018)

<sup>4</sup> Howard Gardner and Katie Davis, *The App Generation: How Today's Youth Navigate Identity, Intimacy, and Imagination in a Digital World* (Yale University Press, 2013),

over? This question demands new ethical standards in education. Educational institutions can no longer rely solely on plagiarism detection software, because AI is capable of producing texts that are unique in structure but lacking in intellectual substance. Therefore, the main focus of education must shift from monitoring results to guiding the process. Intellectual character can only flourish in an ecosystem that values the process of hard work, failure in argumentation, and honest revision of thought. Teachers must be able to act as intellectual provocateurs who challenge students to think beyond what is presented on their screens.

Penggunaan dan kemampuan literasi digital pada akhirnya harus mulai mengintegrasikan aspek etika dan tanggung jawab personal. Literasi bukan lagi sekadar tahu cara menggunakan *prompt* yang efektif, melainkan tahu kapan harus berhenti menggunakan AI agar pemikiran orisinal tetap terjaga. Douglas Rushkoff dalam bukunya *Program or Be Programmed* memberikan tesis bahwa jika kita tidak memahami cara kerja perangkat yang kita gunakan, maka perangkat itulah yang akan menggunakan kita. Rushkoff menyatakan: “*We are looking at a computer screen and seeing a person. We are looking at a program and seeing a mind. This is a mistake. The computer is not a mind; it is a tool for the mind.*”<sup>5</sup>

Rushkoff's statement reminds students that AI remains a tool that lacks intellectual conscience. The power to give meaning, value, and context to information remains entirely under human control. Character education in the digital age must be directed at strengthening this human control so that technology remains a servant of human intelligence, not the other way around. In the context of educational sociology, this dynamic also creates a new gap between those who are able to use AI wisely and those who are stuck in superficial use. Students with strong intellectual character will use AI to speed up initial research, find missed references, or dissect complex logic. Conversely, students with weak character will use AI to avoid thinking tasks altogether. This difference in usage patterns will result in a widening cognitive gap in the future. Therefore, research on the dynamics of digital literacy is crucial to map out how education policy should respond to the presence of AI. The strategy taken must be one that strengthens the agency of students, not one that weakens it with unrealistic prohibitions, but also not with neglect without clear direction.

This study focuses on examining the relationship between digital dependence and the formation of cognitive integrity in students, an area that is often overlooked in the discourse on technological efficiency. The main objective of this study is to comprehensively explore how the use of artificial intelligence affects critical thinking habits and intellectual honesty in the independent learning process. The originality of this study lies in its approach, which no longer views digital literacy as merely a technical skill, but rather as a form of "intellectual policy" that demands students' resilience against the temptations of algorithmic instantaneity. The novelty offered is the formulation of a qualitative literacy model that integrates ethical-epistemological

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<sup>5</sup> Douglas Rushkoff, *Program or Be Programmed: Ten Commands for a Digital Age* (OR Books, 2010), 45.

dimensions into the modern pedagogical framework, to ensure that the adoption of technology in the classroom strengthens, rather than replaces, human agency in producing authentic knowledge.

## 2. Methods

This study uses a qualitative design with a phenomenological approach to explore the depth of students' subjective experiences when interacting with artificial intelligence technology. This method was chosen based on the need to understand the "essence" of the phenomenon of intellectual awareness that arises when individuals encounter knowledge automation. Creswell and Poth assert that phenomenological studies are highly relevant for explaining how several individuals collectively experience certain concepts or phenomena but have unique depths of meaning.<sup>6</sup> In this context, researchers play a key role in conducting participant observations and open interviews to capture nuances of behavior that cannot be captured by statistical figures. The focus of data collection is directed at tracking students' thought processes, starting from when they formulate questions (*prompting*), verify the machine's answers, to the process of internalizing this information into a personal argument.

The informant selection procedure was carried out using the purposive sampling technique, in which participants were selected based on their active involvement in the use of generative AI tools for analytical academic tasks. The number of informants was not determined based on population representation, but on the principle of data saturation, whereby information gathering was stopped when no new themes emerged from the interviews. In line with Michael Quinn Patton's explanation, the strength of the sample lies in the selection of information-rich cases to be studied comprehensively.<sup>7</sup> Researchers conducted semi-structured interviews that gave informants space to describe their inner conflict between the desire to complete tasks quickly and the moral responsibility to maintain the originality of ideas. This technique allowed researchers to enter the students' space of reflection, which is often hidden behind the final results of their writing.

Data analysis was conducted systematically following a thematic analysis model that required precision in the coding and categorization process. The stages began with verbatim transcription of verbal data, followed by repeated readings to gain a holistic understanding of the informants' narratives. The researchers then reduced the data by identifying units of meaning that represented intellectual character dynamics, such as critical thinking, honesty, and independence of thought. Miles, Huberman, and Saldaña explain that qualitative data analysis involves three concurrent activities: data condensation, data presentation, and conclusion drawing through rigorous verification.<sup>8</sup> To maintain data trustworthiness, this study applied source triangulation

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<sup>6</sup> John W. Creswell and Cheryl N. Poth, *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*, 4th ed. (Sage Publications, 2018)

<sup>7</sup> Michael Quinn Patton, *Qualitative Research & Evaluation Methods: Integrating Theory and Practice*, 4th ed. (Sage Publications, 2015),

<sup>8</sup> Matthew B. Miles, A. Michael Huberman, and Johnny Saldaña, *Qualitative Data Analysis: A Methods Sourcebook*, 3rd ed. (Sage Publications, 2014),

and member checking techniques, whereby the analysis results were reconfirmed with the informants to ensure that the researchers' interpretations were consistent with their actual life experiences.

### 3. Results and discussion

Field findings reveal a significant shift in cognitive behavior among students when dealing with generative artificial intelligence systems. The interaction patterns that emerge show a strong tendency to position this technology as the primary epistemic authority in completing academic tasks. In observing the essay writing process, researchers captured the phenomenon of "unconditional acceptance" of the output generated by the machine. Most informants admitted that they often skipped the factual verification phase because the language style generated by Large Language Models (LLMs) appeared very convincing and neatly structured. The appeal of speed in presenting information has shifted priorities away from accuracy and depth of understanding of the material. The data shows that students experience cognitive fatigue more quickly when they must read physical references than when they read summaries produced by artificial intelligence.

Specifically, the dynamics of intellectual behavior found in the field can be categorized into the following crucial points:

**1. Erosion of Articulation Independence:** This phenomenon refers to the weakening of students' ability to transform abstract ideas into coherent language structures without external assistance. In the age of AI, the writing process no longer begins with deep thought, but rather with a command (*prompt*) that generates an instant draft. As a result, students become much more skilled at "cosmetic modifications" such as replacing synonyms or changing the tone of a sentence than at constructing arguments from scratch. This loss of original articulation is deeply concerning because writing is essentially a process of thinking itself; when this process is delegated to machines, students' internal logical structures also deteriorate. They can polish texts to make them look elegant, but they lose the ability to construct narratives that have a "soul" and the identity of independent thought.

**2. Dependence on Probabilistic Algorithms:** There is a new cognitive tendency in which students begin to regard artificial intelligence output as an absolute standard of objective truth. This belief arises because AI presents information based on massive statistical consensus, which is often misinterpreted by students as indisputable facts. This triggers a passive attitude toward epistemic verification, where students rarely question systemic biases or logical flaws that may be hidden in the model's training data. Knowledge is ultimately no longer seen as the result of discourse and empirical proof, but rather as a product of word probability. If this is allowed to continue, students' intellectual character will shift to conforming to algorithms, where truth is only sought through the fastest path provided by machines, without any healthy skepticism.

**3. Decline in Mental Endurance in Research:** Research activities that should involve diligent literature research, critical reading of classic texts, and comparison of

various perspectives are now often considered inefficient or time-consuming. The presence of AI creates a shortcut that reduces the research process to mere questions and answers in a chat window. This decline in mental endurance has resulted in a lack of alternative perspectives in students' academic work. They tend to stick to the single narrative presented by AI and are reluctant to explore more complex primary sources. As a result, their writing becomes homogeneous and lacking in intellectual dialectics. Without practicing patience in researching literature, students' ability to synthesize complex information will experience cognitive dullness, as they lose the valuable experience of manually sorting and selecting data.

**4. Illusion of Competence** The sophistication of AI in generating neatly structured answers creates a psychological trap in the form of a false sense of competence. Students feel that they have truly mastered a topic simply because they have successfully prompted intelligent and authoritative-sounding answers from the machine. However, this competence is superficial because it is not accompanied by a deep understanding of basic logic and the relationships between concepts. This is evident when spontaneous oral tests are conducted; many students appear to stutter and have difficulty explaining the reasoning behind the arguments in their own writing. This illusion of competence is very dangerous for intellectual character development because it instills a sense of confidence that is not based on real cognitive capacity, thereby inhibiting students' desire to continue learning and exploring the material honestly.

This tendency to accept information instantly is in line with the warning given by Shoshana Zuboff in her work, *The Age of Surveillance Capitalism*. Zuboff highlights how digital technology can shape human behavior through the modification of a highly persuasive information environment.<sup>9</sup> In the context of education, the subtle coercion of AI algorithms makes students feel that there is no longer any need for quiet reflection. This creates a generation that is accustomed to constant stimulation but weak in internal reflection. Intellectual character, which should be strengthened through the practice of patience in learning, is eroded by the promise of efficiency offered by technology corporations. This finding is reinforced by informants' acknowledgments that their satisfaction in learning is now more often associated with the speed of completing tasks than with the satisfaction of successfully solving difficult problems.

Further observational data shows a decline in synthesis skills. Synthesis requires the ability to connect different ideas into a coherent whole. However, students today more often use AI to perform this task of combining ideas. As a result, the connections between paragraphs in their work often feel mechanical and lack the author's "spirit." Sherry Turkle in *Alone Together: Why We Expect More from Technology and Less from Each Other* explains that dependence on digital assistants can reduce our capacity

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<sup>9</sup> Shoshana Zuboff, *The Age of Surveillance Capitalism: The Fight for a Human Future at the New Frontier of Power* (PublicAffairs, 2019)

for meaningful conversation with ourselves.<sup>10</sup> The thinking process is an internal dialogue that requires private space within the human mind. When AI takes over this role, this internal dialogue is interrupted, and what remains is only the results of data processing without any emotional or intellectual involvement from the student.

In terms of intellectual honesty, it was found that the definition of plagiarism is beginning to shift among students. Many informants believe that if the text generated by AI is unique and undetectable by software such as Turnitin, its use is considered ethically acceptable. This view reveals a lack of understanding about the nature of authorship. They equate the role of AI with that of a dictionary or traditional search engine, when in fact AI performs generative actions that should be the work of the human brain. This phenomenon creates what is known as "pseudo-intellectualism," where academic output appears to be of very high quality, but does not reflect the actual growth of the author's intellectual capacity. This dishonesty is often not recognized as an ethical violation, but rather as a form of intelligent adaptation to the changing times.

Furthermore, the interview results revealed latent anxiety among students about their future abilities if access to AI was revoked. A lack of confidence emerged when they were asked to write on paper without the aid of digital devices. This shows that technology has become an inseparable "cognitive prosthesis." The intellectual character that should be independent has turned into a character that is symbiotic with digital infrastructure. This condition is in stark contrast to the idealism of classical education, which emphasizes self-control and autonomy of thought. As stated by Albert Borgmann in *Technology and the Character of Contemporary Life*, technology tends to replace activities that require physical and mental involvement with commoditized convenience.<sup>11</sup> Knowledge is now treated as a commodity that can be ordered instantly, rather than as the result of long character development.

The emergence of intellectual "echo chambers" is also an interesting finding in this study. Because AI models work based on the probability of the most common words appearing, the arguments generated tend to be moderate, normative, and avoid controversy. Students who use this tool continuously gradually begin to adopt a similar style of thinking. They become reluctant to explore radical ideas or those that differ from the mainstream because AI never suggests such things. This uniform mindset threatens intellectual diversity in academic environments. Creativity, which requires the courage to make mistakes and jump beyond the boundaries of standard logic, is hampered by algorithms that always strive to provide the safest and most generally acceptable answers.

On the other hand, there is a small group of informants who exhibit different behavior, using AI as a debating opponent. They do not blindly accept the machine's answers but continue to ask follow-up questions to test the consistency of the AI's

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<sup>10</sup> Sherry Turkle, *Alone Together: Why We Expect More from Technology and Less from Each Other* (Basic Books, 2011)

<sup>11</sup> Albert Borgmann, *Technology and the Character of Contemporary Life: A Philosophical Inquiry* (University of Chicago Press, 1984)

answers. This group shows that strong digital literacy can be a shield against the negative impacts of AI. However, they are very few in number compared to the majority of students who are stuck in passive use. This striking difference confirms that a person's innate intellectual character, such as a strong sense of curiosity and healthy skepticism, plays a crucial role in determining whether AI will be an enlightening friend or a master that shackles their minds. Without a strong character foundation, technology will only accelerate the process of intellectual dumbing down across all levels of education.

This study also found that interaction with AI has changed the way students deal with intellectual failure. In conventional learning methods, when students make mistakes in logic, they receive feedback from teachers that encourages them to try again in a different way. However, AI often provides the "correct" answer instantly, so students never experience the constructive process of "getting it wrong." In fact, throughout the history of science, failure has been an essential component in the formation of intellectual resilience. Without room for error, students become extremely vulnerable and easily discouraged when faced with real-world problems that cannot be solved with a single click. They lose the art of struggling through the maze of ignorance, which is at the heart of every great human discovery.

Field data also highlights the changing role of educators in the eyes of students. Educators are no longer seen as a source of knowledge, but merely as assessors of final results. Students feel that they can learn more from AI than from formal lectures. This perception is very dangerous because it ignores the human dimension of education, such as moral guidance, character role models, and the transfer of values that cannot be done by machines. Character education requires physical and emotional presence between teachers and students. When students spend more time dialoguing with machines than with humans, intellectual empathy becomes depleted. They become technically intelligent but humanistically impoverished, which will ultimately damage the social order of education in the long term.

## **Discussion**

Interpretation of field findings shows that the presence of artificial intelligence in the educational ecosystem has triggered a very serious epistemological crisis. This crisis is marked by the increasingly blurred line between cognitive assistance and total replacement of thinking. The phenomenon of "pseudo-intellectualism" that appears in the research data confirms a massive failure in the process of knowledge internalization. If we review this through the lens of Social Constructivism Theory developed by Lev Vygotsky, education should function as a scaffolding process within the Zone of Proximal Development (ZPD). Vygotsky emphasized that human cognitive development is highly dependent on social interactions that challenge individuals to exceed their current abilities through the help of others who are more

skilled.<sup>12</sup> However, in interactions with AI, this scaffolding process often breaks down. The machine does not provide the cognitive challenges necessary to trigger growth, but instead directly presents ready-made results without any negotiation of meaning. As a result, students remain at a static level of cognitive development even though their work appears highly sophisticated and professional on paper.

Dependence on AI output reflects the loss of intellectual autonomy, which is crucial in shaping students' character. Intellectual character cannot grow in a vacuum of instant gratification, because it requires determination and cognitive fortitude to face uncertainty. Paulo Freire, in his book *Pedagogy of the Oppressed*, sharply criticizes the "banking model of education," in which students are regarded as empty vessels that passively receive deposits of information. Freire argues that true education must be based on *problem-posing education*, a method that demands dialogue and critical thinking to solve oppressive realities.<sup>13</sup> The presence of AI that provides single, authoritative answers risks reviving the bank-style education model in a much more modern and seductive digital form. Students become alienated from the process of seeking truth because they merely become operators of a system whose fundamental workings they do not understand. This transformation from learner to mere data curator signifies a shift in identity from producer of knowledge to consumer of algorithms.

This erosion of critical thinking is exacerbated by the loss of the moment of "struggle" or intellectual wrestling that should be at the heart of any meaningful academic activity. In educational philosophy, cognitive difficulty is considered fuel for neural development and mental maturity. When AI cuts through all these difficulties through text automation, what remains is only the outer shell of an empty intellectual process. This is in line with the concept of *Technology* proposed by Neil Postman, in which a culture submits to the supremacy of technology without deeply considering its human impact. Postman warns that technology tends to eliminate context and history, transforming knowledge into mere ephemeral or temporary information.<sup>14</sup> In the age of AI, students lose the ability to see the lineage of thought; they only see text that appears suddenly without knowing the long intellectual debate behind the birth of an idea. Without an understanding of the history of ideas, their intellectual character becomes very shallow and easily swayed by misleading information.

The absence of this struggle also affects the quality of the arguments produced. A strong argument is usually born from a thesis, antithesis, and synthesis that is exhausting. However, AI provides instant synthesis that kills the antithesis stage. Students no longer feel the need to find flaws in their own logic because machines have presented them with seemingly perfect logic. This is what educators fear as "mental atrophy," where students' thinking muscles become weak because they are rarely used to lift heavy intellectual burdens. Education that places too much emphasis on technical efficiency will ultimately produce graduates who are skilled but lack strong

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<sup>12</sup> 12. Lev S. Vygotsky, *Mind in Society: The Development of Higher Psychological Processes* (Harvard University Press, 1978)

<sup>13</sup> Paulo Freire, *Pedagogy of the Oppressed*, 30th Anniversary ed. (Continuum, 2000),

<sup>14</sup> Neil Postman, *Technopoly: The Surrender of Culture to Technology* (Vintage Books, 1993)

roots of thought. They may be able to complete tasks quickly, but they lose the ability to give deep meaning to what they do.

Furthermore, the sociological impact of the massive use of AI is the standardization of thinking that threatens global intellectual diversity. Because AI algorithms are trained based on statistical distributions from existing databases, they tend to produce answers that represent the majority view or a safe "middle ground." If students consistently use these tools as their primary reference, the uniqueness of individual perspectives will gradually disappear. Jaron Lanier, in *You Are Not a Gadget*, argues that software design often forces humans to adapt their behavior to the limitations of machines. Lanier states: "*The person is design. The computer is just a physical representation of that design. When we ask a computer to think, we are really just asking it to play back a simulation of what we thought a person sounded like when they were thinking.*"<sup>15</sup>

This awareness is crucial because it shows that AI does not actually think; it merely replays simulations of human thinking. If students do not have the critical digital literacy to deconstruct these simulations, they will be trapped in a uniform mindset and lose the ability to innovate beyond the limitations of algorithms. A strong intellectual character requires the courage to be an anomaly, whereas AI is designed to minimize anomalies for the sake of statistical accuracy.

In response to these dynamics, the world of education must immediately reformulate ethical standards and intellectual honesty in a more fundamental way. The assessment paradigm must shift from being product-oriented to process-oriented. Teachers need to create spaces for dialectics in the classroom that force students to account for every word they write verbally and argumentatively. This can be done through the Socratic pedagogical model, in which the teacher acts as an examiner who continuously asks provocative questions to uncover the assumptions behind the AI's answers. In this way, AI is repositioned as a dialogue partner or "debating partner," rather than a substitute for the teacher's authority or the students' own common sense. Intellectual characteristics such as the courage to admit ignorance and the honesty not to claim the work of a machine as one's own must be core material that is taught explicitly and consistently.<sup>16</sup>

Education can no longer rely solely on digital plagiarism detection, which often lags behind AI technology. Instead, educators must build a "fortress of integrity" within students. This includes instilling a sense of pride in work produced through one's own efforts. Students need to be taught that the writing process is a process of self-discovery, and delegating this process to machines is a loss of opportunity for growth as human beings. Here, the role of character education becomes vital in providing a strong ethical foundation for students in utilizing technology without losing their humanity.

Strengthening critical digital literacy must also include an understanding of the political economy behind the development of artificial intelligence. Students need to

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<sup>15</sup> Jaron Lanier, *You Are Not a Gadget: A Manifesto* (Alfred A. Knopf, 2010), 32.

<sup>16</sup> Safiya Umoja Noble, *Algorithms of Oppression: How Search Engines Reinforce Racism* (NYU Press, 2018)

be fully aware that AI is not a neutral entity; it is produced by corporations with specific profit agendas that may have hidden biases. Safiya Umoja Noble in *Algorithms of Oppression* reminds us that digital bias often reinforces existing social injustices. Noble demands transparency in search and generative systems so that users are not deceived by the false claims of machine objectivity. In the context of intellectual character, digital literacy means having the courage to reject the dominance of AI narratives if they do not correspond to empirical reality or universal human values. A strong intellectual character is one that can maintain its human agency amid intense pressure from automation, by continuing to verify, reflect, and take concrete action in the real social world.

This awareness is crucial because it shows that AI does not actually think; it merely replays simulations of human thinking. If students lack the critical digital literacy to deconstruct these simulations, they will be trapped in a uniform mindset and lose the ability to innovate beyond the limitations of algorithms. A strong intellectual character requires the courage to be an anomaly, whereas AI is designed to minimize anomalies for the sake of statistical accuracy.

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#### **4. Conclusion**

Digital transformation through the integration of artificial intelligence in education has placed students' intellectual character at a crucial crossroads. The findings of this study confirm that the use of AI without critical digital literacy tends to give rise to the phenomenon of pseudo-intellectualism, where technical proficiency in producing text exceeds the depth of actual conceptual understanding. The erosion of thinking autonomy and the loss of cognitive struggle processes pose a real threat that can stifle students' critical thinking and originality of argument. Education no longer faces merely technical challenges regarding how to detect cheating, but rather existential challenges regarding how to maintain human agency so that humans remain sovereign subjects of their knowledge amid the encroachment of algorithmic automation.

This study suggests that the solution to this problem lies in repositioning the role of technology through the Digital Reflective Pedagogy model. This strategy requires a paradigm shift in assessment from one that previously focused solely on the final product to one based on dialectical processes and verbal accountability for arguments. Educational institutions need to integrate reflective journals and Socratic methods into the curriculum to ensure that every interaction with AI remains a conscious and controlled learning activity. By positioning artificial intelligence as a dialogue partner rather than an absolute authority, students are forced to continue activating higher-order cognitive functions such as critical analysis, epistemic verification, and creative synthesis, which are the main pillars of intellectual character.

The success of navigating education in the AI era ultimately depends on human character traits that cannot be simulated by machines, namely integrity, honesty, and wisdom. Teachers play a vital role as moral compasses who guide students to understand that the value of an educated person does not lie in the speed with which they produce answers, but in their determination to seek the truth. Strengthening digital literacy, which includes ethical and political-economic dimensions, is an important safeguard to ensure that technology continues to function as a tool for expanding human cognition, rather than as a substitute for consciousness. Through a balance between the wise adoption of technology and the strengthening of strong character, the future of education can be directed towards creating a generation that is not only digitally proficient but also has the inner depth to lead the advancement of civilization in an authentic way.

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