

Humans as Individual Beings in the Perspectives of Philosophy, Science, and Technology: A Literature Review of Educational Administration

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Abstract.

Human beings as individual entities constitute a fundamental concept in the fields of philosophy, science, and technology, emphasizing the uniqueness, identity, and potential of each individual. This study aims to examine the concept of human beings as individual entities from the perspectives of philosophy, science, and technology, as well as its implications for educational administration. The study employed a qualitative approach using a literature review method (library research) through the analysis of various relevant scholarly sources published between 2018 and 2025. The findings indicate that, from a philosophical perspective, human beings are regarded as entities possessing self-awareness, freedom, and responsibility. From a scientific perspective, humans are understood as biological and psychological beings who develop through interactions with their environment. Meanwhile, from a technological perspective, human beings remain at the center of the educational process despite the rapid advancement of technology. The implications of this study suggest that educational administration should develop systems that are humanistic, adaptive, and responsive to individual needs while integrating technological advancements without neglecting fundamental human values.

Keywords: *human beings, philosophy of education, science and educational technology.*

I. INTRODUCTION

Human beings as individual beings constitute a fundamental concept in the fields of philosophy, science, and technology, emphasizing the uniqueness, identity, and potential inherent in every person. From a philosophical perspective, humans are understood as entities possessing self-consciousness and the freedom to make choices that shape their lives. This perspective aligns with humanistic thought, which views individuals as active subjects in constructing meaning and purpose in life [1].

From a scientific perspective, human individuality is examined through psychological and biological approaches that explain how individual characteristics are formed and developed throughout the lifespan [2], [3]. Furthermore, motivation theories suggest that internal factors, such as personal needs and intrinsic drives, play a significant role in shaping self-identity [4]. Technological advancements have further expanded discussions of individuality, particularly in the context of digital interactions and identity formation within virtual environments [5], [6]. Technology not only functions as a tool but also influences individuals' ways of thinking and behavior in contemporary society [7].

Numerous studies have demonstrated that individual identity emerges through the interaction of internal and external factors. Internal factors include personality traits, motivation, and self-awareness, whereas external factors encompass social and cultural environments [8], [9]. Individuals with a strong understanding of themselves tend to exhibit higher levels of psychological well-being and greater adaptability [10]. In psychological research, individual differences represent a crucial aspect of understanding human behavior. Each person possesses unique characteristics that influence how they think, behave, and interact with others [11], [12]. In educational settings, these differences indicate that instructional approaches should be tailored to the characteristics and needs of learners [13].

Despite these insights, educational systems continue to rely predominantly on standardized approaches to teaching and learning. Research indicates that educational management practices that fail to address individual needs may hinder the development of students' full potential [14]. At the same time, technological developments in education present both opportunities and challenges. Digitalization enables personalized learning experiences; however, it may also diminish humanistic values if not implemented thoughtfully and responsibly [15], [16].

Although numerous studies have explored humans as individual beings, most have focused on isolated perspectives and have not comprehensively integrated philosophical, scientific, and technological viewpoints within the context of educational administration. This situation reveals a significant research gap that warrants further investigation. Therefore, this study aims to examine the concept of human beings as individuals from philosophical, scientific, and technological perspectives through a literature review approach and to analyze its implications for educational administration.

II. METHODS

This study employed a qualitative approach using a literature review design (*library research*). This approach was selected because the study focuses on a conceptual analysis of human beings as individuals from philosophical, scientific, and technological perspectives. Rather than collecting empirical data from the field, the study relied on the examination of relevant scholarly sources, including journal articles, books, and other academic publications. The literature review approach enabled the researchers to gain a comprehensive understanding of theories and concepts that have been developed by previous scholars regarding human individuality and its implications for education [17].

The research process began with the collection of literature from various academic databases, including Google Scholar, ResearchGate, and other indexed journal repositories. The selected sources were published between 2018 and 2025 to ensure the relevance and currency of the information. Subsequently, the literature was screened based on its relevance to the research topic, publication quality, and alignment with the study objectives. This stage was essential to ensure the validity and credibility of the data used in the analysis. Following the selection process, content analysis was conducted to identify key concepts, major themes, and relationships among variables discussed in the literature [18].

The analysis involved systematically reviewing, categorizing, and synthesizing information from the selected sources. Through this process, the researchers examined how philosophical, scientific, and technological perspectives conceptualize human beings as individuals and explored their implications for educational administration. The findings from different sources were then compared and integrated to develop a comprehensive and interdisciplinary understanding of the topic.

Overall, the literature review method offers several advantages, particularly in terms of analytical depth and breadth of perspective. It enables researchers to explore phenomena theoretically without the constraints of time and location while facilitating the integration of insights from multiple disciplines. However, this method also has limitations, primarily because it does not involve direct empirical data collection. Consequently, the findings of this study emphasize conceptual and theoretical contributions rather than empirical generalizations. Nevertheless, the results provide a strong theoretical foundation for future empirical studies that may further investigate the role of human individuality in educational administration and practice [19].

III. RESULT AND DISCUSSION

The Concept of Human Beings as Individuals from a Philosophical Perspective

From a philosophical perspective, human beings are understood as entities possessing self-awareness and reflective capacities that distinguish them from other living beings. Self-awareness enables individuals to recognize themselves as unique entities with meaningful existence. Within the philosophy of education, human beings are viewed not merely as objects of instruction but as active subjects endowed with free will and the capacity to determine the direction of their lives [20]. Consequently, education should facilitate the development of individual consciousness and personal growth.

Existentialist philosophy emphasizes that individuals possess the freedom to create meaning in their lives through the choices and actions they undertake. This freedom is accompanied by personal responsibility and accountability for the consequences of those choices. In educational contexts, this perspective implies that learners should be provided with opportunities to develop their potential independently and creatively [21]. Therefore, educational practices should avoid authoritarian approaches and instead foster guided autonomy and self-directed learning.

From the perspective of Islamic educational philosophy, human beings are regarded as both individual and spiritual entities with a relationship to God. Humans are considered *khalifah* (vicegerents) on Earth and bear responsibility for managing and contributing positively to society. This understanding highlights that individuals possess not only rational capacities but also moral and spiritual dimensions that must be developed in a balanced manner [22]. Consequently, education should focus not only on intellectual achievement but also on character and moral development.

Furthermore, human individuality is reflected in differences in talents, interests, personalities, and learning styles. These differences indicate that no two individuals are entirely alike, thereby requiring educational approaches that recognize and accommodate diversity among learners. Uniform educational practices may neglect individual potential and hinder personal development [23]. As a result, personalized and differentiated learning approaches have become increasingly important in contemporary educational settings.

Overall, the philosophical perspective views human beings as holistic, autonomous, and responsible individuals. Educational systems grounded in philosophical principles should promote the comprehensive development of intellectual, emotional, moral, and spiritual capacities. Such an approach provides an important foundation for educational administration aimed at supporting the holistic development of learners [24].

Human Beings as Individuals from a Scientific Perspective

From a scientific perspective, human beings are understood as biological organisms with complex physiological structures and neurological systems that enable thinking, learning, and adaptation. The human brain functions as the center of cognitive activity, playing a critical role in information processing, decision-making, and behavioral regulation. These findings suggest that individual capabilities are closely associated with biological and neurological conditions [25].

Beyond biological aspects, scientific studies also examine human development through psychological and neuroscientific approaches. Individuals possess cognitive, emotional, and social potentials that develop through interactions with their environments. Developmental theories indicate that individuals progress through different developmental stages, requiring educational practices that are aligned with learners' developmental characteristics and needs [26]. Therefore, educational processes should not rely on a one-size-fits-all approach.

Scientific perspectives also emphasize the significant role of environmental influences in shaping individual development. Family, school, and community environments contribute substantially to the formation of personality, identity, and adaptive capacities. Social interaction serves as a fundamental factor in the development of self-concept and behavioral competence [19]. Consequently, educational institutions should create supportive and conducive environments that facilitate optimal individual growth.

Moreover, human beings possess interconnected physical, intellectual, emotional, and spiritual dimensions. Imbalances in the development of these dimensions may result in incomplete personal growth. Therefore, holistic educational approaches are essential to ensure that all aspects of human development are nurtured effectively [27].

Overall, scientific perspectives provide empirical foundations for understanding human individuality. These perspectives emphasize the importance of evidence-based research, observation, and data analysis in understanding human behavior and development. Within educational administration, such insights can inform the design of evidence-based policies and instructional strategies that enhance educational effectiveness and efficiency [18].

Human Beings as Individuals from a Technological Perspective

Rapid technological advancement, particularly in the field of Artificial Intelligence (AI), has transformed various aspects of human life, including education. Technology has enabled learning processes to become more flexible, interactive, and efficient. Nevertheless, these developments have also raised important questions regarding the role of human beings as individuals in the digital era [28].

Technology provides individuals with unprecedented access to information and learning resources. However, excessive dependence on technology may reduce critical thinking abilities, creativity, and

independent problem-solving skills. This challenge requires educational institutions to maintain a balance between technological utilization and the cultivation of essential human capacities [29]. Therefore, technology should be integrated thoughtfully and responsibly into educational practices.

In the context of artificial intelligence, many tasks traditionally performed by humans can now be automated. However, studies suggest that AI cannot fully replace inherently human qualities such as empathy, ethical judgment, moral values, and character formation [30]. These qualities remain fundamental components of educational processes and underscore the irreplaceable role of human educators.

The concept of human-centered technology further emphasizes that technological innovations should be designed to serve human needs rather than replace human agency. This approach positions human beings at the center of technological development, ensuring that technological advancements contribute positively to individual and societal well-being [31]. In educational contexts, technology should function as a tool that enhances learning quality and supports human development.

Overall, technological perspectives indicate that despite rapid technological progress, human beings remain central to educational processes. Technology should be viewed as a supportive instrument rather than a substitute for human interaction and guidance. Consequently, educational administration should integrate technology strategically while maintaining a strong commitment to humanistic values [32].

Implications for Educational Administration

Understanding human beings as individuals has significant implications for educational administration. Educational administration should focus not only on system management but also on the development of learners' unique potentials. Therefore, educational policies should be formulated with careful consideration of learners' individual characteristics and needs [33].

Educational planning requires comprehensive needs assessments to identify differences in learners' backgrounds, abilities, interests, and potentials. Such an approach enables educational institutions to develop flexible and adaptive systems that promote inclusivity and educational equity [34].

In instructional management, differentiated learning approaches play a crucial role. Educators should adapt teaching methods, instructional media, and learning strategies to accommodate diverse learner needs. Such practices not only improve learning effectiveness but also facilitate the optimal development of individual potential [23].

Curriculum development should likewise incorporate cognitive, affective, and psychomotor domains. Curricula that focus exclusively on academic achievement risk neglecting character formation and moral development. Therefore, curriculum design should adopt a holistic orientation that promotes the development of the whole person [19].

In general, educational administration should integrate philosophical, scientific, and technological perspectives in managing educational systems. Such integration can contribute to the development of educational environments that are humanistic, adaptive, and responsive to contemporary challenges. Through this approach, education can effectively support the development of individuals who are competent, responsible, and capable of contributing positively to society [29].

Relevance of Human Individuality to Contemporary Education

In contemporary education, the concept of human beings as individuals serves as a fundamental principle for learner-centered educational policies and practices. Education is no longer viewed solely as a process of knowledge transmission but also as a means of fostering the comprehensive development of human potential. Since learners possess diverse abilities, characteristics, and needs, educational approaches must accommodate such diversity. Student-centered learning represents one practical implementation of this recognition of individual uniqueness [34].

Furthermore, the demands of an increasingly globalized society require individuals to develop critical thinking, creativity, collaboration, and communication skills. These competencies cannot be effectively nurtured through rigid and teacher-centered educational models. Consequently, educational administration should support innovative learning practices that are flexible and responsive to learner needs. Within this framework, teachers function not only as knowledge transmitters but also as facilitators of personal and intellectual development [26].

The integration of digital technologies in education further highlights the importance of understanding learners as individuals. Technologies such as digital learning platforms, artificial intelligence, and learning analytics enable more personalized learning experiences by accommodating learners' interests, learning styles, and learning pace [28]. Nevertheless, the implementation of technology should continue to prioritize ethical considerations and human values to preserve social interaction and character development.

Contemporary educational challenges extend beyond academic achievement and technological competence. Globalization and digital media have significantly influenced learners' behaviors, often contributing to declines in discipline, responsibility, and social empathy. Therefore, educational institutions must actively promote moral, ethical, and spiritual values as integral components of holistic human development. Character education plays a critical role in preparing individuals who are not only intellectually capable but also socially responsible and ethically grounded [35].

Accordingly, the concept of human beings as individuals remains highly relevant to contemporary education. Educational systems should be designed to respect individual uniqueness, maximize human potential, and prepare learners to adapt to societal changes without losing their fundamental human values. Educational administration plays a strategic role in achieving a balanced integration of technological advancement, individual development, and character formation.

IV. CONCLUSION

Human beings as individuals represent a multidimensional concept that can be understood through philosophical, scientific, and technological perspectives. From a philosophical perspective, individuals are viewed as autonomous beings endowed with self-awareness, freedom, and responsibility. From a scientific perspective, human individuality is shaped by the interaction of biological, psychological, and environmental factors that influence personal development and behavior. Meanwhile, from a technological perspective, rapid technological advancement provides significant opportunities for individual growth and learning, while simultaneously presenting challenges related to maintaining human values and identity in the digital era.

The findings of this study demonstrate that understanding human beings as individuals has important implications for educational administration. Educational policies, curriculum development, instructional management, and learner services should be designed to accommodate individual differences, including learners' abilities, interests, needs, and developmental characteristics. Educational administration should therefore adopt a human-centered approach that supports the holistic development of learners' intellectual, emotional, moral, social, and spiritual dimensions.

Furthermore, the integration of philosophical, scientific, and technological perspectives provides a comprehensive framework for developing educational systems that are adaptive, inclusive, and responsive to contemporary challenges. Technology should be utilized as a supportive tool to enhance learning quality while preserving the essential human values that constitute the foundation of education. Ultimately, educational administration should strive to create learning environments that respect individual uniqueness, foster personal growth, and prepare learners to become competent, responsible, and ethically grounded members of society.

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REFERENCES

- [1] G. Biesta, "Risking ourselves in education: Qualification, socialization, and subjectification revisited," *Educational Theory*, vol. 70, no. 1, 2020, pp. 89-104.
- [2] D.P. McAdams and J.L. Pals, "A new Big Five: Fundamental principles for an integrative science of personality," *American Psychologist*, vol. 77, no. 3, 2022, pp. 204-218.
- [3] K. Illeris, *Contemporary Theories of Learning: Learning Theorists in Their Own Words*, 2nd ed., Routledge, 2021.
- [4] R.M. Ryan and E.L. Deci, "Intrinsic and extrinsic motivation from a self-determination theory perspective: Definitions, theory, practices, and future directions," *Contemporary Educational Psychology*, vol. 61, 2020, Art. no. 101860.
- [5] N. Selwyn, *Education and Technology: Key Issues and Debates*, 3rd ed., Bloomsbury Academic, 2021.
- [6] W. Holmes, M. Bialik, and C. Fadel, *Artificial Intelligence in Education: Promises and Implications for Teaching and Learning*, Center for Curriculum Redesign, 2022.
- [7] OECD, *OECD Digital Education Outlook 2021: Pushing the Frontiers with Artificial Intelligence, Blockchain and Robots*, OECD Publishing, Paris, 2021.
- [8] D. Oyserman, "Identity-based motivation and educational outcomes," *Educational Psychologist*, vol. 56, no. 3, 2021, pp. 145-158.
- [9] H.R. Markus and S. Kitayama, "Culture and the self: Implications for cognition, emotion, and motivation," *Perspectives on Psychological Science*, vol. 16, no. 1, 2021, pp. 45-60.
- [10] R.F. Baumeister and K.D. Vohs, "Self-regulation and the executive function of the self," *Social and Personality Psychology Compass*, vol. 15, no. 6, 2021, pp. 1-14.
- [11] P.K. Jonason and R.A. Sherman, "Personality and individual differences in education and behavior," *Personality and Individual Differences*, vol. 171, 2021, pp. 110-118.
- [12] R.W. Robins and J.L. Tracy, "The self and identity in personality psychology," *Handbook of Personality Psychology*, vol. 2, no. 1, 2021, pp. 221-240.
- [13] D.H. Schunk, *Learning Theories: An Educational Perspective*, 8th ed., Pearson Education, 2021.
- [14] A. Supriyanto, "Manajemen pendidikan berbasis kebutuhan individu peserta didik [Educational management based on individual learner needs]," *Jurnal Manajemen Pendidikan Indonesia*, vol. 14, no. 2, 2022, pp. 88-97.
- [15] L. Hogg, "Humanistic education in the digital era," *International Journal of Educational Research*, vol. 115, 2022, pp. 101-110.
- [16] D.R. Garrison, *E-Learning in the 21st Century: A Community of Inquiry Framework for Research and Practice*, 4th ed., Routledge, 2021.
- [17] N. Apriyani, W. Yuspiani, and W. Wahyuddin, "Hakikat manusia sebagai makhluk pedagogik: Tinjauan filosofis dan implikasinya dalam pendidikan [The nature of humans as pedagogical beings: A philosophical review and its implications for education]," *Jurnal Inovasi Penelitian Pendidikan dan Pembelajaran*, vol. 5, no. 1, 2025, pp. 347-359.
- [18] M.N. Huda, S. Fitriani, and L. Rahmawati, "Hakikat manusia sebagai makhluk pedagogik dalam perspektif pendidikan [The nature of humans as pedagogical beings from an educational perspective]," *JUPEIS: Jurnal Pendidikan dan Ilmu Sosial*, vol. 2, no. 1, 2023, pp. 10-18.
- [19] R. Putra, "Integrasi sains dan agama dalam pendidikan [The integration of science and religion in education]," *Jurnal Pendidikan Islam*, vol. 11, no. 2, 2022, pp. 145-156.
- [20] U. Hasanah, "Filsafat pendidikan dan konsep manusia [Educational philosophy and the concept of human beings]," *Jurnal Filsafat Pendidikan*, vol. 5, no. 1, 2019, pp. 15-27.
- [21] M. Yusuf, "Filsafat manusia dalam perspektif pendidikan [Human philosophy from an educational perspective]," *Jurnal Pendidikan dan Kebudayaan*, vol. 8, no. 2, 2020, pp. 120-132.
- [22] E. Eldarifai, A. Rahman, and M. Karim, "Manusia dalam perspektif filsafat pendidikan Islam [Human beings from the perspective of Islamic educational philosophy]," *Jurnal Kolaboratif Sains*, vol. 6, no. 3, 2023, pp. 210-220.
- [23] P. Lestari, "Individual differences in learning and their implications in education," *Education Journal*, vol. 4, no. 2, 2020, pp. 89-97.
- [24] J.F. Sitorus, R. Simanjuntak, and M. Nainggolan, "Hakikat manusia dalam filsafat pendidikan [The nature of human beings in educational philosophy]," *Innovative: Journal of Social Science Research*, vol. 3, no. 2, 2023, pp. 200-210.

- [25] R. Mortier, H. Haddadi, T. Henderson, D. McAuley, and J. Crowcroft, "Human-data interaction: The human face of the data-driven society," *Computer Communications*, vol. 120, 2018, pp. 1-10.
- [26] A. Rahman, "Konsep manusia dalam pendidikan modern [The concept of human beings in modern education]," *Jurnal Ilmiah Pendidikan*, vol. 9, no. 1, 2021, pp. 60-72.
- [27] A. Nurfadhil, M. Damopoli, and Y. Yuspiani, "Hakikat manusia dalam perspektif pendidikan Islam [The nature of human beings from the perspective of Islamic education]," *Jurnal Teknologi Pendidikan*, vol. 7, no. 1, 2025, pp. 25-36.
- [28] C.K.Y. Chan and L. Tsi, "Artificial intelligence in education: Opportunities and challenges," *Higher Education Studies*, vol. 13, no. 2, 2023, pp. 1-10.
- [29] H. Kurniawan, "Teknologi dan transformasi pembelajaran di era digital [Technology and learning transformation in the digital era]," *Jurnal Edutech Indonesia*, vol. 8, no. 1, 2024, pp. 55-67.
- [30] P. Hendriawan, D. Siregar, and R. Putri, "Artificial intelligence dan eksistensi manusia dalam pendidikan modern [Artificial intelligence and human existence in modern education]," *Paradigma: Jurnal Ilmu Pendidikan*, vol. 12, no. 1, 2024, pp. 33-44.
- [31] M. Riedl, "Human-centered artificial intelligence and its implications," *AI Magazine*, vol. 40, no. 3, 2019, pp. 5-15.
- [32] D. Sari, "Peran teknologi dalam meningkatkan kualitas pembelajaran [The role of technology in improving learning quality]," *Jurnal Teknologi Pendidikan*, vol. 6, no. 2, 2022, pp. 78-90.
- [33] A. Nugroho, "Administrasi pendidikan berbasis humanistik [Humanistic-based educational administration]," *Jurnal Manajemen Pendidikan*, vol. 10, no. 2, 2021, pp. 101-112.
- [34] T. Wibowo, "Kurikulum berbasis individu dalam pendidikan modern [Individual-based curriculum in modern education]," *Jurnal Kurikulum dan Pembelajaran*, vol. 5, no. 1, 2023, pp. 34-46.
- [35] S. Atiqoh and B. Maunah, "Manusia sebagai makhluk yang dapat dididik dalam perspektif pendidikan Islam [Human beings as educable beings from the perspective of Islamic education]," *Adabiyah: Jurnal Pendidikan Islam*, vol. 9, no. 2, 2024, pp. 120-134.