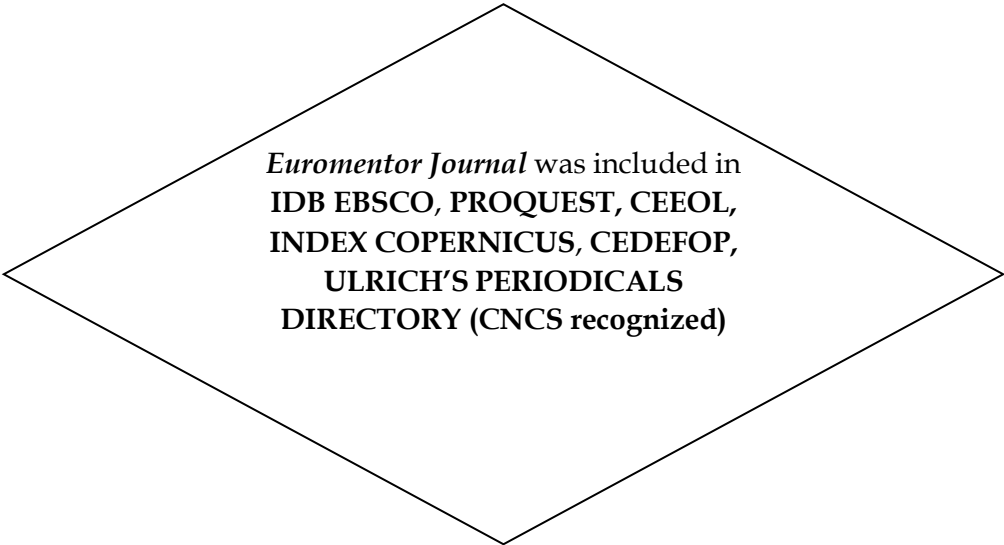


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IN MEMORIAM

ASSOCIATE PROFESSOR PHD. CRISTINA ATHU

The academic community of "Dimitrie Cantemir" Christian University in Bucharest suffered a great loss, at the end of May this year, by the passing away of the late **Associate Professor PhD. Cristina Athu** who left us, far too soon, heading towards a better world.

It is said that every human being is replaceable. It is a technocratic cliché. In reality, every human being is unique, each one having a special mission in this world.

Cristina ATHU, our dear colleague, left a huge void in our souls, because she was an exceptional personality! First of all, she was a brilliant teacher of English language and literature, with extensive professional training and remarkable culture. Then, she stood out in our academic community due to her special character, being an energetic, charismatic person, deeply involved in the life of the Faculty of Foreign Languages and Literatures as Vice-Dean, also having responsibilities at the level of the entire academic community.

She was loved, appreciated and respected by all the pupils, students, their parents, by her colleagues, what is more, by every person she interacted with, being communicative and sociable, open in her relations with the others. She used to rejoice in everyone's success and always had a comforting word making proof of great wisdom!

She knew how to hide her suffering with discretion and dignity, so that her sudden death shocked us all.

What strengthens us is the hope that **the late teacher Cristina Athu** left behind wonderful disciples, tens of generations of students and pupils, whom she trained and moulded, as well as numerous specialized works, books and textbooks, special scientific contributions in the field of specialization for which she worked hard her whole life, passion, creativity and dedication being virtues that shaped the greatness of her personality.

Thus, her memory will stay forever with those whom she initiated and specialized in the mysteries of the English language and literature, with all of us, her colleagues, friends, she will still be alive in the hearts and souls of all those who knew and appreciated her.

If there can be a consolation when being confronted with death, in the case of our late colleague and friend, even if she still had a lot to offer, she probably fulfilled her mission here, on Earth, and God called her to Him, as he needed the best English language teacher, in order to understand the 'feud' of the world we live in today!

In this sense, "*no evil can happen to the good man, to the right man, either in life or in death*".¹ It is one of the arguments uttered by Socrates, in his Defense, in the trial filed against him, resulting in the death sentence. In fact, it is a thought of Socrates uttered before he died: "*No evil can happen to a good man either in this life or in death.*"² Here death is seen as an ethical problem, and the idea that we can infer, regarding the philosophy of death, is that *a man dies as he lives*! Socrates' attitude³ is a definite proof that death cannot be the greatest evil, if you have known how to live and if you are prepared to die. Cristina Athu lived with discretion and dignity and passed away exactly as she lived! What happiness can be greater, for a human being?!

Our colleague and friend, the late Cristina Athu, has physically left us, but we will certainly never forget her, because love overcomes death! We deeply regret the irreparable loss of our colleague and friend and we pray to God to rest her soul and place it among the righteous ones! FAREWELL, BELOVED AND BEAUTIFUL CRISTINA!

Prof. PhD. Hab. Gabriela Pohoată
Editor-in-Chief COGITO & EUROMENTOR

¹ Plato, *Defense of Socrates*, Dialogues, Bucharest, Ira Publishing House, p. 39.

² Idem.

³ G. Pohoată, *The Trial and Death of Socrates*, in *Studies of Moral Philosophy*, Bucharest, Pro Universitaria Publishing House, p. 229-145.

EDUCATIONAL LEADERSHIP IN PHILOSOPHY OF THE ARTIFICIAL INTELLIGENCE MANAGEMENT

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Abstract: *The purpose of this study is to highlight that the use of technology, specifically artificial intelligence, used in all areas of human life and especially in education, is supported by the power of philosophy, bringing human nature closer to technology. The ethical theories of ancient and modern philosophers underline that education can play an important role in creating and defining an ethical programming and control of artificial intelligence. Under the light of moral philosophy, a role of the moral and spiritual leader in education is emerged, along with the role of educators and the use of artificial intelligence, where the moral human will be required and guided by wisdom to prevent risks and ensure benefits. On the other hand, it is necessary to train students in skills and abilities that will help them utilize the philosophy of artificial intelligence, after having previously acquired a philosophy of education that is human-oriented in terms of values, choices, decisions and actions.*

Keywords: *artificial intelligence, political philosophy, ethics, education, free choice, decision, rationality, leadership.*

Introduction: The philosophical perspective of the leader's management of AI

Who is the educator of the political society, who is the one who shapes the citizens so that they think and act according to the service of the political purpose? Rome was one of the most powerful states, but its

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founder was a fratricide. Can the state be the educator of political parties, but also be immoral? Can it claim that the purposes it serves are legitimate and moral under conventional law - which is defined by it - but the state itself be a criminal who is not subject to the law? Could it be that the only difference between the state and a criminal is that the former as the creator and executor of the laws is not arrested by them, while the latter sees the law as its greatest enemy? Or are the citizens like a herd of bloodthirsty wolves, who cooperate opportunistically for the common good, but ultimately fight for more prey in obedience to their greedy nature¹?

But ethics is not something relative, differentiated according to circumstances, it is a course of integration of the human being, structured by objective parameters of human nature. One to be moral is to go objectively from a worse to a better point of natural or political existence. Ethics is a science of human improvement, and it is closely related to politics, since human cannot reach a maximum point of integration outside of political society².

Also, ethics is directly involved with rationality, which is the basic element of distinguishing human from other living beings. One cannot be moral by being irrational or obeying irrational rules. If the integration of man is linked to the full development of his rational capacity, then ethics is an enterprise linked to right reason. Ethics is a kind of rational order that aims at human happiness, which in turn is a rational and not an irrational state, since human is a rational being³.

Today, a new means of attaining happiness has been added to the human moral quiver. Artificial intelligence as an imitation of human intellectual and rational ability promises to improve the human state as the educator of man. But two problems arise here: a) by whom is AI controlled? Is it something independent or is it a tool for realizing the subjective purpose of political society? In other words, does artificial intelligence contribute to the reproduction of the dominant ideology in order to fully align with the goals of the state? b) On the other hand, does artificial intelligence as an educational tool have ethical origins and ends?

¹ Cf. El. Vavouras, "The Machiavellian reality of Leo Strauss", *Dia-noesis: A Journal of Philosophy*, 12, (2022), 265-273.

² Cf. S.A. Triantari, El. Vavouras, "Decision-Making in the Modern Manager-Leader: Organizational Ethics, Business Ethics, Corporate Social Responsibility", *Cogito*, 16, no. 1 (2024), 7-28.

³ Cf. El. Vavouras, "Hobbes' hedonism in front of classical hedonism and the free market 's way out", *Dia-noesis: A Journal of Philosophy*, 13, (2022), 85-114.

Is it intertwined with the nature and individual or political purpose of man, or does it result to subjectivity and relativity? If artificial intelligence has a historicist character, it cannot be related to ethics and political philosophy, which aim in a scientific way at the improvement of human⁴.

So artificial intelligence as an educator of political society is either a means of a subjectivity that attempts to ideologically consolidate itself in history or is a moral extension of human reason that contributes to human natural integration. Especially the leader of the educational process must determine the purpose of this technical means either in the direction of achieving objective goals of improvement for the human condition or in the direction of historical justification of the dominant political ideology⁵.

Artificial intelligence is considered to be the greatest and most important development in technology. Artificial intelligence is entering all fields, art, education, justice, labor market, etc. It is a tool that highlights human power and this gives it deep philosophical significance. From this position, a philosophical overview is attempted through emblematic thinkers. Newer philosophers, such as Marx, Heidegger, Habermas and others gave important opinions, shedding light on the power of artificial intelligence but also on its negative consequences⁶.

Ancient Greek philosophers such as Heraclitus and Aristotle laid first the foundations for the creation of artificial intelligence, as they attempted to describe the mechanisms of learning, perception and reasoning. In particular, Aristotle (384-322 BC) highlighted the beginnings of artificial intelligence in his Rhetoric (Aristotle's Rhetoric I) with the formulation of reasoning, providing patterns of expression, correct premises and speculations, with the aim of arriving at correct conclusions. Aristotle laid the foundations for artificial intelligence in the logic, skill and quality of speech, derived from the quality of the orator's character⁷. From this perspective, artificial intelligence is perceived as a set of intellectual

⁴ Cf. El. Vavouras, "Natural right and historicism: from Thucydides to Marx", *Cogito* 13, no. 1, (2021), 7-20.

⁵ Cf. El. Vavouras, "The political philosophy as a precondition and completion of political economy in the *Ways and Means* of Xenophon", *Dia-noesis: A Journal of Philosophy*, 9, (2020), 183-200.

⁶ G. Chatzivasilou, *Philosophy of artificial intelligence. A journey into the future*, Athens: Dioptra, 2023, 69-83.

⁷ S.A. Triantari, *Ethical and Social Philosophy of Communication. Communication Strategies and Techniques*, Thessaloniki: K. & M. Stamoulis, 2020a, 33-35.

functions utilizing previous experiences that were used in dealing with situations and problem solving.

Aristotelian Rhetoric and Logic was the starting point of the logical information processing, as it was incorporated into artificial intelligence. This labeling contributed significantly to the definition of artificial intelligence (AI), according to which it is a type of algorithms or electronic systems that resemble human mental processes, and possess the ability to generalize, reason, reveal meaning, and learn from past experiences⁸. Artificial intelligence is affecting the way we live and work, and it is believed to be at the center of the upcoming fourth industrial revolution⁹. Artificial intelligence, which has begun to develop rapidly in various fields over time has the potential to revolutionize many different industries such as education, finance and healthcare¹⁰. The advances in artificial intelligence have already brought about substantial changes in education, opening up new opportunities and challenges by providing new methods, ultimately leading to the improvement of learning outcomes¹¹. However, it should be clarified that although artificial intelligence identifies with logical processing imitating human brain processes, it does not include any emotion nor emotional intelligence, which significantly differentiates the human life and decisions in the professional and social environment¹².

Considering that Aristotle gave the reasoning pattern of expression to make later able for a machine to think and imitate human behavior and

⁸ Y. Wang, "Artificial intelligence in educational leadership: a symbiotic role of human-artificial intelligence decision-making", *Journal of Educational Administration*, Vol. 59 No. 3, (2021), 256-270.

⁹ E.C.K. Cheng & T. Wang, "Leading digital transformation and eliminating barriers for teachers to incorporate artificial intelligence in basic education in Hong Kong", *Computers and Education. Artificial Intelligence*, 5, 100171, (2023), 3-9.

¹⁰ B. Tonbuloglu, "An evaluation of the use of artificial intelligence applications in online education". *Journal of Educational Technology & Online Learning*, 6(4), *Journal of Educational Technology*, (2023), 866-884.

¹¹ M.L. Owoc, A. Sawicka, P. Weichbroth, "Artificial Intelligence Technologies in Education: Benefits, Challenges and Strategies of Implementation". In: Owoc, M.L., Pondel, M. (eds) *Artificial Intelligence for Knowledge Management. AI4KM 2019. IFIP Advances in Information and Communication Technology*, vol 599. Springer, Cham. (2021), 1-17.

¹² P.B. Barker, & A.A Grandey, "Service with a Smile and Encounter Satisfaction: Emotional Contagion and Appraisal Mechanisms", *Academy of Management Journal* 49, (2006) Vol. 6, 1229-38.

intelligence, and exercise persuasion through logic¹³, this is not enough to algorithmically simulate human emotions and passions¹⁴. Human thought and behavior is not only a strictly computational process, being a product of information processing¹⁵. Consequently, human communication is completed and ensured by logic and psychological persuasion¹⁶.

This study considers the parameters mentioned above for the effective role of AI in education, which shares much in common with the broader uses of AI (including accountability, justice and privacy management), yet education has particular needs and the nature of its data beget distinct challenges¹⁷. Recent developments in artificial intelligence have the potential to significantly transform education administration by automating daily tasks, facilitating decision-making processes and enhancing overall operational efficiency¹⁸. In this direction, it is understood that the use of artificial intelligence in education requires admission to the philosophy of the first, which approaches two aspects: a. what is that we want and what goals do we want to achieve with a focus on convincing and b. ensuring the ethics of the technologist in the provision and processing of data - information, which will result in the correct decision making and problem solving^{19,20}. It is important that AI philosophy takes us back to Aristotelian rhetoric with its focus on the proper use of speech and the reasoning of arguments that ultimately aim in persuading the audience. The credibility of the orator depends on their ethos with which he invests his speech²¹. In this case the

¹³ S.H. Svaligou, *The interpretation of the image as a sign of visual communication*, Thessaloniki: University Studio Press, 2011, 61-65.

¹⁴ S.A. Triantari, *Ethical and Social Philosophy of Communication. Communication Strategies and Techniques*, Thessaloniki: K. & M. Stamoulis, 2020a, 155.

¹⁵ Th. Tassis, *Digital Humanism*, Athens: Armos, 2019, 220-225.

¹⁶ Aristotle, *Nicomachean Ethics*, A-K. Introduction, Translation, Comments: D. Lypourlis, Thessaloniki: Zitros, 2006, 1177a12-20.

¹⁷ H. Khosravi, S.B. Shum, G. Chen, C. Conati, D. Gašević, J. Kay, S. Knight, R. Martínez-Maldonado, S. Sadiq, & Y. Tsai, "Explainable Artificial Intelligence in education". *Computers and Education. Artificial Intelligence*, 3, 100074., (2022), 3-22.

¹⁸ A.K. Saxena, V. García, D.M.R. Amin, J.M.R. Salazar, & D.S. Dey, "Structure, Objectives, and Operational Framework for Ethical Integration of Artificial Intelligence in Educational", *Sage Science Review of Educational Technology*, 6(1), (2023), 88-100.

¹⁹ N. Bostrom, & Y. Eliezer, *The ethics of artificial intelligence*. Cambridge University Press, (2014), 316-334

²⁰ V. Dignum, "Ethics in artificial intelligence: introduction to the special issue", *Ethics and Information Technology*, 20, (2018), 1-3.

²¹ S.A. Triantari, *Ethical and Social Philosophy of Communication. Communication Strategies and Techniques*, Thessaloniki: K. & M. Stamoulis, 2020a, 22-27.

leader or the headmaster of an education institution takes on the role of the ethical technologist. Leadership nowadays is evolving with the inclusion of new technologies and skills, while the use of artificial intelligence in leadership is growing exponentially²². Technical intelligence is considered a useful tool that helps in decision making and managers should treat it as their collaborator²³. Innovative solutions are being developed using artificial intelligence to improve the teaching and learning experience for educational institutions, students, teachers, parents and around the world²⁴. The models of ethical leadership and ethical leaders promote the philosophy of artificial intelligence in its use, as the ethical leader provides guidelines for the management of artificial intelligence, putting their ethical behavior into practice²⁵. Educational leadership in the management of artificial intelligence refers to the ability of educational leaders to effectively manage the implementation and integration of artificial intelligence in educational institutions in order to ethically and effectively achieve their goals, strategy and policies²⁶ to improve teaching and learning.

The ethical nature of technology: The educational leadership aspects of artificial intelligence management

Artificial intelligence and technology in general is not just a natural phenomenon but a work of human nature, as human with their logic stands out from other beings. The dominance of logic lurks the transcendence of the self and brings man face to face with their self-perception and self-esteem, since now all the actions of their life are directly dependent on technology.

At this point, human must realize the responsibility they have towards themselves, towards the Being and the overthrowing of a living

²² J. Milton, & A. Al-Busaidi, "New role of leadership in AI era: educational sector", *SHS Web of Conferences*, 156, 09005, (2023), 1-4.

²³ T. Karakose, & T. Tülübaş, "School Leadership and Management in the Age of Artificial Intelligence (AI): Recent Developments and Future Prospects", *Educational Process: International Journal*, 13 (1), (2024), 7-14.

²⁴ R. Lestari, H.D. Windarwati, & R. Hidayah, "AI-Driven Decision-Making Applications in higher education", In *Advances in media, entertainment and the arts (AMEA) book series*, (2024), 246-268.

²⁵ S.A Triantari, *Leadership. Leadership Theories. From the Aristotelian rhetorician to the modern Leader*, Thessaloniki: K. & M. Stamoulis, 2020b, 242-251.

²⁶ I.C. Igbokwe, "Application of artificial intelligence (AI) in educational management", *International Journal of Scientific and Research Publications*, 13(3), (2023), 300-207.

reality that distinguishes their ontological existence with a virtual reality, without the self-control of a morally valuable system²⁷. The price of facilitating our survival with technology is the transhumanism, which leads humanity to gradually deny its self-determination and unconsciously lose its freedom²⁸.

The remarks above involve three basic dimensions, a. the necessity for man to maintain Aristotelian mediocrity and to seek his self-restraint with prudence and restraint²⁹, b. The virtue of Mediation is guarded by the understanding and awareness of cultivating an ethical technology with the use and management of information by the ethical technologist and c. the necessity for education itself to undertake the cultivation of this awareness and importance for an ethical technology³⁰.

In this context, the parameters that must be developed by the educational leader for the management of artificial intelligence are captured, so that the necessity of the leader's ethics in education regarding the management and use of artificial intelligence will then emerge, in order to avoid any possibility about the mutation of man to which the modern view of digital humanism is opposed^{31,32}. Cooperation between the public and private sectors is one aspect of strengthening education and research in artificial intelligence, while there should also be a broader national strategy for artificial intelligence, with a clear vision and defined goals³³. In education, school leaders will need to become more aware of how schools use AI, both for organizational management tasks and for classroom instruction, which requires a new type of preparation for educational leaders, so that they are better prepared to understand the

²⁷ H. Jonas, *The principle of responsibility*, Inst.-prof. Edited by T. Tassi. Translated D. Samothraki- Th. Stoufis. Athens: Armos, 2018, 512-520.

²⁸ Th. Tassis, *Digital Humanism*, Athens: Armos, 2019, 220-225.

²⁹ S.A. Triantari, *Ethical and Social Philosophy of Communication. Communication Strategies and Techniques*, Thessaloniki: K. & M. Stamoulis, 2020a, 65.

³⁰ G. Chatzivasiliou, *Philosophy of artificial intelligence. A journey into the future*. Athens: Dioptra, 2023, 69-83.

³¹ Th. Tassis, *Digital Humanism*. Athens: Armos, 2019, 220-229.

³² Y.N. Harari, *Homodeus – A Brief History of the Future*. Translated M. Laliotis. Athens: Alexandria, (2017), 231-270.

³³ Pedró, M. Subosa, A. Rivas, & P. Valverde, "Artificial intelligence in education : challenges and opportunities for sustainable development". *MINISTERIO DE EDUCACIÓN*, (2019), 4-31.

ways in which artificial intelligence can be used to influence the educational environment they manage³⁴.

Artificial intelligence can improve efficiency and accuracy during data-driven decision-making by education leaders. However, in order to achieve this, it is important for school leaders to first understand how artificial intelligence works³⁵.

AI policies confront issues such as the human oversight of AI, its technical security, the data privacy assurance, transparency in its use, diversity assurance, fairness and accountability and environmental well-being also³⁶.

Educational leaders should ensure that teaching staff possess the necessary skills and knowledge to effectively use AI technologies in their classrooms, as it is critical that teachers cultivate a set of skills and knowledge necessary to successfully integrate AI into education³⁷.

To support teachers in the digital transformation, it is necessary to understand what challenges they face when using its technologies, in order to prepare them with sufficient digital competences to overcome these difficulties³⁸.

Artificial intelligence is an emerging field that is undergoing a rapid change, given the fact that teachers are probably not familiar with it and that existing curricula are not connected to it. Regarding the development and training of teachers in it, the existing teachers' perspective on artificial intelligence must be considered in order to improve curricula³⁹

³⁴ M. Tyson, "Educational Leadership in the Age of Artificial Intelligence", *Dissertation, Georgia State University*, (2020), 33-75.

³⁵ Y. Wang, When artificial intelligence meets educational leaders data-informed decision-making: A cautionary tale, *Studies in Educational Evaluation*, 100872, (2021b), 1-9.

³⁶ N. Díaz-Rodríguez, J. Del Ser, M. Coeckelbergh, M. L. De Prado, E. Herrera-Viedma, & F. Herrera, "Connecting the dots in trustworthy Artificial Intelligence: From AI principles, ethics, and key requirements to responsible AI systems and regulation", *Information Fusion*, 99, 101896, (2023), 1-20.

³⁷ M. Cukurova, L. Kralj, B. Hertz, & E. Saltidou, "Professional Development for Teachers in the Age of AI", *European Schoolnet Brussels*, Belgium, (2024), 4-32.

³⁸ D.T.K. Ng, J.K.L. Leung, J. Su, R.C.W. Ng, & S.K.W. Chu, "Teachers' AI digital competencies and twenty-first century skills in the post-pandemic world", *Educational Technology Research and Development*, 71(1), (2023), 137-161.

³⁹ T.K. F. Chiu, & C.S. Chai, "Sustainable Curriculum Planning for Artificial Intelligence Education: A Self-Determination Theory Perspective", *Sustainability*, 12(14), 5568, (2020), 4-18.

Public institutional support is necessary to provide funding for curriculum development but also for the formulation of legal and ethical guidelines for artificial intelligence in education⁴⁰. The recognition of artificial intelligence as an advanced form of statistical data processing raises questions about what can (and cannot) actually be achieved through artificial intelligence in education⁴¹.

Ethical issues also arise from the applications of artificial intelligence in education, which aims to cultivate the ethics of artificial intelligence through the development of skills, knowledge and experiences. The ethics of artificial intelligence involves three key issues, a. its management by a moral and spiritual leader⁴², b. the problem of control, i.e., in the event that artificial intelligence is not programmed ethically and technically correct, resulting in bad results with educational and social impact⁴³ and c. the empowerment of transhumanism⁴⁴.

The ethics of educational leadership for artificial intelligence

According to Aristotle, ethics, as well as politics, belongs to the practical intellect, as they both deal with the behavior and character of man towards a fellow man. Ethics has a social character, because it examines the morality of a citizen who, as part of the social whole, develops their morality within it. Politics encourages and strengthens the morality of the citizen. With the presence and power of the law, it forces bad and corrupt people to orient themselves to moral actions and improve their morals⁴⁵.

The interrelationship of ethics with politics is reflected in the leader's personality, where their ethics and character are linked to power and its

⁴⁰ J. Kim, H. Lee, & Y. H. Cho, "Learning design to support student-AI collaboration: perspectives of leading teachers for AI in education", *Education and Information Technologies*, 27(5), (2022), 6069-6104

⁴¹ N. Selwyn, "On the Limits of Artificial Intelligence (AI) in Education", *Nordisk Tidsskrift for Pedagogikk & Kritik*, 10(1), (2024), 3-12.

⁴² S. A. Triantari, *Leadership. Leadership Theories. From the Aristotelian rhetorician to the modern Leader*, Thessaloniki: K. & M. Stamoulis, 2020b, 251.

⁴³ N. Bostrom, "Strategic Implications of Openness in AI Development", *Global Policy* 8, no. 2, (2017), 1-17.

⁴⁴ G. Mastrogeorgiou, *Artificial intelligence and man – An attempt to understand our time*, Athens: Papadopoulos, 2020, 24-39.

⁴⁵ D.N. Koutras, *The practical philosophy of Aristotle*, Athena: T.A Ethics, 2002, 12-46.

management⁴⁶. The inextricable connection between ethics and leadership is mainly developed in education, which also acts as a mentor in preparing students for their near future. Therefore, the requirement of the moral development of the individual, as well as the skills they must develop, is oriented towards how to learn information and manage it through correct questions and answers.

The ethical leader in education can be a powerful role model for both students and teachers. The ethical leader takes on a role in relation to themselves and others and in addition to organizational skills, creative and critical thinking and emotional skills, they must demonstrate ethical behavior in their actions, based on their principles and values⁴⁷.

Almost all definitions of ethical leadership and ethical leader refer to the well-being and happiness that the leader ensures with their ethical values and virtues in the workplace. The leader in the workplace carries some values and attitudes that are manifested through their behavior, with which they can be a role model through the roles they perform for their subordinates, thus succeeding in laying the moral foundations in the corporate culture of the Organization /Company. The formation of an ethical culture, based on honesty, fairness, care, mutual respect and solidarity strengthens the ground for the advent of a culture of trust, where honesty and integrity emerge⁴⁸. Today the leader requires much more moral resources if they really want to develop and inspire a vision and above all they must have imagination and intuition to foresee the consequences of their actions and to be able to organize their future actions in an ethical context⁴⁹.

Under this perspective it is understood that the ethics of school leadership in the management of artificial intelligence is an important factor, as it involves making decisions that affect the well-being and development of students, teachers and the school environment. Good leadership is a mean to combat the misuse of AI tools like ChatGPT by

⁴⁶ S. Wilson, H., Lee, J. Ford, N. Harding, "If philosophers went on a leadership course: A (serious) farce in three Acts", *Leadership*, Vol. 18, Issue 4, 471-497.

⁴⁷ R. Starratt, *Ethical Leadership in Education*, Translated E. Argyropoulou. Thessaloniki: Disigma, 2014, 30-68.

⁴⁸ L.W. Fry, J.W. Slocum, "Maximizing the Triple Bottom Line through Spiritual Leadership", *Organizational Dynamics* 37, Vol.1, (2008), 86-96.

⁴⁹ P.T. Harper, "Business Ethics Beyond the Moral Imagination: A Response to Richard Rorty", In G. Flynn (ed.). *Leadership and Business Ethics*. Netherlands: Springer., (2008), 57-80.

inculcating ethics in character in students. This can be done through effective teaching models, leadership development opportunities, self-awareness, ethics and decision-making training⁵⁰. Decision-making is an area in which the leader can highlight in addition to their morality and spirituality, their ability to influence and reveal intellectual conviction in making strategic and decisive decisions⁵¹. The involvement of artificial intelligence in the educational process must ensure that students are treated fairly. Artificial intelligence tools offered to students should be designed in the best possible way, in terms of teaching, guiding and advising students⁵².

Nowadays, various concepts have emerged that characterize the use of artificial intelligence in education, namely "Fairness", "Accountability", "Transparency" and "Ethics" - usually referred to by the acronym "FATE"⁵³.

The ethics of AI in education should consider: the legislation on the use of AI in educational institutions, the data to ensure privacy, security and trust, the misuse by malicious actors, the equality and social justice, the responsibility and accountability of machines and the creation of educational programs for students about the ethical dimensions of technology⁵⁴.

As artificial intelligence is increasingly integrated into education, it is necessary to search for methods that ensure fair access and acquisition of experiences in it⁵⁵.

While AI can provide some valuable insight and support decision-making, it should not replace the human judgment and involvement. AI

⁵⁰ J. Crawford, M. Cowling, & K. Allen, "Leadership is needed for ethical ChatGPT: Character, assessment, and learning using artificial intelligence (AI)", *Journal of University Teaching & Learning Practice*, 20(3), (2023), 1-12.

⁵¹ K.A. Phipps, "Spirituality and Strategic Leadership: The Influence of Spiritual Beliefs on Strategic Decision Making", *J Bus Ethics* 106, (2012), 177-189.

⁵² B. Du Boulay, "Artificial intelligence in education and ethics", in *Handbook of Open, Distance and Digital Education*, (2022), 1-16.

⁵³ B. bMemarian, & T. Doleck, "Fairness, Accountability, Transparency, and Ethics (FATE) in Artificial Intelligence (AI) and higher education: A systematic review", *Computers and Education. Artificial Intelligence*, 5, 100152, (2023), 1-10.

⁵⁴ A. Mouta, A. M. Pinto-Llorente & E. M. Torrecilla-Sánchez, "Uncovering Blind Spots in Education Ethics: Insights from a Systematic Literature Review on Artificial Intelligence in Education", *International Journal of Artificial Intelligence in Education*. (2023), 1-37.

⁵⁵ G. Verma, T. Campbell, W. Melville, & B. Park, "Navigating Opportunities and Challenges of Artificial Intelligence: ChATGPT and Generative Models in Science Teacher Education", *Journal of Science Teacher Education*, 34(8), (2023), 793-798.

actions should be predictable and AI-based systems should be governed by transparency⁵⁶ Human responsibility for AI actions must also be ensured. School leaders should involve students, teachers, parents and the around school community in the decision-making process regarding the implementation of artificial intelligence. By seeking different perspectives, leaders can uncover potential unintended consequences and make appropriate and ethical decisions. School leaders should prioritize teaching students about the ethical implications of artificial intelligence technology and its impact in various fields.

That is why students should be trained and acquire skills that strengthen critical and creative thinking and emotional intelligence. The digital revolution should go hand in hand with an educational revolution, in the following main axes: a. the systematic cultivation and development of soft skills, b. an organized plan for training students in new technologies and c. a philosophy of technology, with the aim of preparing young people to face the challenges of an era⁵⁷.

Human ethics and rationality (orthos logos): The benefits of using artificial intelligence in schools

Under the analysis of the benefits of artificial intelligence in schools, an important issue concerning the relationship between intelligence, reason and morality is stirred. This relationship predetermines the advantages but also the risks of the use of artificial intelligence⁵⁸. René Descartes (1596-1650) with his saying “cogito ergo sum” established human reason as the only absolute and certain true knowledge. Human reason can produce indisputable truths. On the basis of human logic, Descartes⁵⁹ set the temporary and later practical rules of ethics⁶⁰.

Descartes in his work of temporal rules emphasized Aristotelian mediation and logic. By linking mediation with logic, the philosopher

⁵⁶ Niemi H., Pea R. D., Lu Y., AI in Learning: Designing the Future, in *Springer eBooks*, (2023), 1-13.

⁵⁷ G. Chatzivasiliou, *Philosophy of artificial intelligence. A journey into the future*. Athens: Dioptra, (2023), 69-83.

⁵⁸ G. Chatzivasiliou, *Philosophy of artificial intelligence. A journey into the future*. Athens: Dioptra, 2023, 69-83.

⁵⁹ Th. Pellegrinis, *The five ages of philosophy*. Athens: Ellinika Grammata, 1998, 340-357.

⁶⁰ S.A. Triantari, *Ethics in Decision Making. Aristotelian Ethics in Decision Making*. Thessaloniki: K. & M. Stamoulis, I. Arch. Harbandidis, 2021, 51-59.

considered that stability and determination can be ensured in the actions of man, who follows the same intermediary state, either adopting the dubious positions, or the sure ones, avoiding tensions and obsessions.

He instated self-control in the combination of mediocrity ("mesotism") and reason, through which the person bridles their desires and passions. The basic orientation and human destiny is the development and cultivation of reasonable thinking that leads to the knowledge of the truth. Through these basic rules Descartes formed a rational ethic theory, which is composed of the necessary knowledge of the principles of the body and the psychology of human.

With his view, Descartes made ethics the crown of human nature. Human is forced to obey moral rules accepted by society until they reach full knowledge of human nature and its function. Therefore, ethics emerges from the possibility of knowing the human body and soul in combination with the imperatives of reason, logic⁶¹.

Thomas Hobbes (1598-1679) argued that man, under the influence of the instinct of self-preservation, commands their reason to adapt to a normative framework of ethics and moral rules, which the leader shapes for the good and benefit of the whole. He proposed a rational ethics imposed on the moral and psychological egoism of man, pursuing a utilitarianism oriented to the benefit of the individual through the benefit of the whole^{62,63}.

Joseph Butler (1692-1752) emphasized on the importance of the moral conscience that guides human in manifesting moral behavior towards the fellow human or with their attitudes towards specific issues. Moral consciousness helps human to overcome the motives of selfishness and to control the urges of their passions. Butler presented the man as a completely hierarchical ontological-moral system, whose behavior in daily life is the expression of this system, which in essence is controlled by moral consciousness⁶⁴. In Kantian ethics, morality is defined as an act in

⁶¹ J. Gottingham, "Cartesian ethics: reason and the passions", *Revue Internationale de Philosophie* 50 (195), (1996), 193-216.

⁶² Th. Pellegrinis, *The five ages of philosophy*, Athens: Ellinika Grammata, 1998, 230-329.

⁶³ S.A. Triantari, *Ethics in Decision Making. Aristotelian Ethics in Decision Making*, Thessaloniki: K. & M. Stamoulis, I. Arch. Harbandidis, 2021. 93-99.

⁶⁴ R. Wedgewood, "Butler on Virtue, Self-Interest, and Human Nature", in P. Bloomfield (ed.), *Morality and Self-Interest*, Oxford: Oxford University Press, (2008), 177-204.

accordance with the moral law, the duty, a morally deontic act with the sole motive of respect for the duty, the moral law. Respect is determined by the will. Man is autonomous by virtue of his rational will to establish for themselves a law, which is universal and reflects the rules of morality without any exception. Kant is not interested in the result of actions, but in the moral value of actions that lies in the rational will and wisdom⁶⁵.

The philosophical view shows that logic, rationality and ethics are clearly not identical, but logic in combination with the moral virtues of human, which reflect the trinity of agency, discretion and judgment⁶⁶, strengthen the dynamics of philosophical analysis in the "problem of control"⁶⁷, which Friedrich Nietzsche highlighted through the concept of personal responsibility, as he envisioned a future- oriented responsibility that is also the future of humanity. Nietzsche sought to delineate human actions within the framework of preventive responsibility so that human can control their will to power.

With preventive responsibility, Nietzsche rejected the teleology of the moral world order and consequently consequentialism, emphasizing the review of actions and decisions or even the alternatives of decisions and their practical application. He identified and distinguished the temporary nature of decisions in the spirit of uncertainty, where they should be reconsidered or revised. It extended responsibility not only to the individual but also to external contingencies and adopted a negotiation ethics, which opens its horizons to the responsibility of the many, giving primacy to collective responsibility⁶⁸⁶⁹.

Nietzsche based the freedom and autonomy of the moral will to power on preventive responsibility. It is a responsibility not limited to moral standards, that connects people and things, that makes people realize not only the moral responsibility they carry in their professional

⁶⁵ G. Bragues, "Theorists and philosophers on business ethics". In *The Routledge Companion to Business Ethics*. Ed. By E. Heath, B. Kaldis & A. Marcoux. London & New York: Routledge Taylor & Francis Group, (2018), 23-37.

⁶⁶ S.A. Triantari, Ethics in Decision Making. Aristotelian Ethics in Decision Making. Thessaloniki: K. & M. Stamoulis, I. Arch. Harbandidis, (2021), 115.

⁶⁷ G. Chatzivasiliou, *Philosophy of artificial intelligence. A journey into the future*, Athens: Dioptra, (2023), 69-83.

⁶⁸ D. Harris, "Nietzsche's Social Account of Responsibility", *Southwest Philosophy Review* 28, no. 1, (2012), 103-110.

⁶⁹ M. Chr. Sardo, From Personal to Political Responsibility: Friedrich Nietzsche and the Politics of Anticipatory Responsibility. [Submitted to the Graduate School in Partial Fulfillment of the Requirements], Northwestern University, (2017), 122-130.

area, but it is a responsibility with a global orientation^{70 71}. This philosophical analysis of human rational and moral control should highlight the advantages and dangers of using artificial intelligence.

The advantages of using artificial intelligence in education should be defined within the framework of justice and ethics, the general principles in planning in every field where artificial intelligence is applied and especially in education⁷²⁷³. In education 4.0, artificial intelligence, virtual reality, augmented reality, as tools available to the school can provide personalized learning experiences to students by adapting teaching approaches according to their individual needs and abilities, to improve the learning outcomes of students⁷⁴.

In addition to teaching, artificial intelligence has potentially interesting applications in educational administration and teacher support, and could even support new pedagogical approaches⁷⁵. By exploiting artificial intelligence, administrative efficiency, learning performance and formative assessment can be improved⁷⁶. Decision-making based on artificial intelligence data can help develop effective strategies to improve the quality of education⁷⁷.

Artificial intelligence is expected to play an important role in reshaping administration, teaching and learning in schools. It will bring new smart teaching tools to schools, shape new ways of teaching and

⁷⁰ Ch. D. Acampora, "Nietzsche, Agency, and Responsibility: 'Das Thun Ist Alles'", *The Journal of Nietzsche Studies* 44, no 2., (2013), 141-157.

⁷¹ S.A. Triantari, *Ethics in Decision Making. Aristotelian Ethics in Decision Making*, Thessaloniki: K. & M. Stamoulis, I. Arch. Harbandidis, 2021, 141-150.

⁷² G. Hatzivasiliou, "The historical emergence of Nietzschean nihilism", *Anti-logos* 2, (2014), 35-46.

⁷³ M. Lipman, *Thinking in education* (2nd ed.), Cambridge University Press, (2003), 105-110.

⁷⁴ M. Çetin, & İ. Karsantık, "Current Trends in School Management: School Leadership in Education 4.0", *In Educational Theory in the 21st Century Science, Technology, Society and Education*, (2022), 197-216.

⁷⁵ W. Holmes, & I. Tuomi, "State of the art and practice in AI in education", *European Journal of Education*, 57(4), (2022), 542-570.

⁷⁶ D.O. Negoită, & M. Popescu, "The use of artificial intelligence in education", *11 Th. International Conference of Management and Industrial Engineering, Romania*, (2023), 208-212.

⁷⁷ A.K. Abdallah, & R.K. Abdallah, Smart solutions for smarter schools. *In Advances in information quality and management*, (2024), 1-14.

learning, and promote innovation in teaching assessment methods and teaching management methods⁷⁸.

Artificial intelligence can also play a critical role in administrative processes in educational institutions, simplifying administrative tasks by automating processes such as scheduling, grading, and student record keeping⁷⁹. This saves time for school headmasters as well as teachers, allowing them to focus more on using time efficiently and supporting students⁸⁰. Artificial intelligence can also play a critical role in administrative processes in educational institutions. AI-powered systems can automate routine administrative tasks such as student record keeping, course scheduling.

AI-powered tools can track student progress, having the ability to significantly improve student learning outcomes, providing personalized learning experiences with the help of knowledge detection and collaborative filtering, and identifying potential learning needs and difficulties in early stage⁸¹. By identifying struggling students earlier, AI-assisted school administrators can provide appropriate interventions and support systems to improve their educational outcomes. Advances in artificial intelligence are fundamentally changing education and improving the skills needed to succeed in classrooms and workplaces⁸². Education systems will need to equip students with interdisciplinary knowledge and transferable skills to remain skilled alongside increasingly developing and capable artificial intelligence, better preparing them for future workplace demands⁸³.

⁷⁸ Y. Liu, S. Saleh, & J. Huang, "Artificial intelligence in promoting teaching and learning transformation in schools", *International Journal of Innovation, Creativity and Change*, (2021), 891-902.

⁷⁹ O. P. Avurakoghene, & A. O. Oredein, "Educational leadership and artificial intelligence for sustainable development", *Shodh Sari*, 02(03), (2023), 211-223.

⁸⁰ T. Satir, & A.T. Korucu, "An Evaluation on the Use of Artificial Intelligence in Education Specific to ChatGPT", *Shanlax International Journal of Education*, 12(1), (2023), 104-113.

⁸¹ F. Kamalov, D.S. Calonge, & I. Gurrib, "New era of Artificial intelligence in Education: Towards a sustainable Multifaceted Revolution", *Sustainability*, 15(16), 12451, (2023), 1-27.

⁸² M. Hashim, I. Tlemsani, & R. Matthews, "Higher education strategy in digital transformation", *Educ Inf Technol*, 27, (2022), 3171-3195.

⁸³ A. S. G. Shaji, "Preparing Students for an AI-Driven world: Rethinking curriculum and pedagogy in the age of Artificial Intelligence", *Partners Universal Innovative Research Publication*, 02(01), (2023), 112-133.

School leaders play a critical role in integrating AI education into their curriculum and ensuring that students acquire the necessary competencies in this technology-driven age. Due to the support of artificial intelligence, teachers in the future will be able to reduce their workload, concentrating their focus on creating innovative lesson plans, offering personalized guidance to each student⁸⁴.

All these advantages presuppose the morally rational human intervention in which the ethical philosophical consideration acquires practical importance, so that the algorithms that influence the correct use of artificial intelligence, not only in schools but also in human life, are understood and recognized, limiting the risks and ensuring the freedom of humans and preventing the loss of democracy.

The moral value of free will in preventing the risks and challenges of using artificial intelligence in education.

Nowadays, school leaders are trying to figure out how to smoothly introduce artificial intelligence into their schools, recognizing the potential that this technology offers, but at the same time knowing that there are also various risks and challenges that need to be considered⁸⁵.

Artificial intelligence often relies on data collection and analysis, a fact that raises concerns about the privacy and security of students' and teachers' personal data. The use of artificial intelligence as a teaching aid in the classroom is concerned that this technology will be used as a Trojan horse that will capture and report any unobserved aspects of teacher performance⁸⁶.

Artificial intelligence is not just a technological product, but contains intelligence within it, a fact that refers to the imitation of the written and spoken human logic of speech.

Artificial intelligence and its derivatives in the context of an excessive rationality of machines can evolve from Pandora's box, where significant benefits arise from the use of artificial intelligence with the help of man, to

⁸⁴ S. Grassini, "Shaping the Future of Education: Exploring the potential and consequences of AI and ChatGPT in educational settings", *Education Sciences*, 13 (7), (2023), 692.

⁸⁵ M. Fullan, C. Azorín, A. Harris & Mi. Jones, "Artificial intelligence and school leadership: challenges, opportunities and implications", *School Leadership & Management*, 1, (2023), 8.

⁸⁶ R. Luckin, & W. H. Holmes, "Intelligence Unleashed: An argument for AI in Education", (2016), 8-49.

Prometheus' box which leads to oppression, lack of democracy and the unfreedom of man. Therefore, there is an important factor that cannot be overlooked: the ethics of artificial intelligence rests in the hands of those who create it and provide the machines with information. In education the use of artificial intelligence is in the hands of the educational leader and teachers, i.e. it is left to their free will for an ethically rational use with benefits for students or for an unethically rational use with risks and negative consequences for students. Every time the teacher and especially the headmaster of a school takes a decision to manage, artificial intelligence directly relates his ethics to the happiness and well-being of the students.

This marking brings us back to Kantian ethics in which the moral act or decision does not only presuppose a good motive, but also needs a good purpose, the happiness of the whole⁸⁷⁸⁸. Kant is not interested in the result of actions, but in the moral value of actions that lies in rational will and judgment⁸⁹.

Kant's individual pure will, where choice is supervised by reason, is opposed to Nietzsche's will to power, which catalyzes all moral barriers to man's will to increase his power. According to Nietzsche, moral rules are set in the service of human purposes, without evaluating and justifying the actions and wills of man based on commonly accepted ethics⁹⁰. In the context of the pursuit of an ideal morality and ideal happiness, Nietzsche advocates the will to power as an inner commandment above all else and can lead respectively to growth or degeneration. The will to power is man's dominant will to show power and dominance, to enter into contracts and agreements, to make decisions, which he can at the same time dissolve according to their will and interests. Human, depending on the direction their will power will take them, becomes active or anti-active, and heads towards good or self-destruction⁹¹. Nietzsche's ethical view is

⁸⁷ S.A., Triantari, *Ethics in Decision Making. Aristotelian Ethics in Decision Making*, Thessaloniki: K. & M. Stamoulis, I. Arch. Harbandidis, 2021, 62-68.

⁸⁸ K. Androulidakis, *Kantian Ethics. Fundamental issues and perspectives*, Athens: Smili, 2017, 150-190.

⁸⁹ G. Bragues, "Theorists and philosophers on business ethics", in *The Routledge Companion to Business Ethics*. Ed. By E. Heath, B. Kaldis & A. Marcoux. London & New York: Routledge Taylor & Francis Group, (2018), 23-37.

⁹⁰ Lee F. Kerckhove, "Nietzsche's Critique of Kant's Moral Philosophy: A Study in Revaluation", *Dissertations*. 3607, (1996), 87-127.

⁹¹ S.A. Triantari, *Ethics in Decision Making. Aristotelian Ethics in Decision Making*, Thessaloniki: K. & M. Stamoulis, I. Arch. Harbandidis, 2021, 193-194.

confirmed in the existence of the risk of mismanagement of teacher performance data, shared use without consent, or used to make biased decisions. AI systems can inherit biases from the data they are trained on. For example, AI-powered scoring systems may be unintentionally biased against certain racial or socioeconomic groups.

Over-reliance on artificial intelligence systems, as the experience of using ChatGTP in schools has shown, can lead to a decline in human interaction and critical thinking skills⁹². Students may become overly dependent on AI for their learning and development, which could potentially hinder their problem-solving skills and creativity.

The exaggeration or not of the dependence of teachers or students on artificial intelligence systems depends on an important parameter that Aristotle emphasized: the moral responsibility of man in the practical application of the decision before acting and he discussed the requirement of controlling the motivation of an act. In the *Nicomachean Ethics*, and specifically in the definition of virtue, he identified the criteria of the human action motivation which are discretion and agency⁹³.

Aristotle connected rational human decisions and actions with happiness, the well-being of people. Therefore, teachers and students, before developing any skills and abilities related to the use of artificial intelligence, should be trained in digital humanism, where it allows human to first know themselves, their strengths and moral values. Thus, in the Pandora's box of the benefits they wish to derive from artificial intelligence, they must include the Aristotelian trinity of virtues to ensure happiness and avoid self-destruction⁹⁴. These are the virtues of mediocrity ("mesotism"), intention ("prohairesis"), and wisdom ("phronesis") that are interrelated and can predetermine human choice and will. According to Aristotle, mediocrity defines the inner interpersonal relationship of man and expresses the contrast between excess and deficiency. Mediocrity dominates the passions and is a driving force for evaluation in the manifestation of the psychological

⁹² X. Zhai, "ChatGPT User Experience: Implications for Education", *Social Science Research Network*, (2022), 18.

⁹³ H.K. Tsoukas, *If Aristotle was a managing director. Essays on leadership and management*, Athens: Kastanioti, A.E., 2004, 30-75.

⁹⁴ J. Duffy, "The good writer: Virtue ethics and the teaching of writing", *College English*, 79, 3, (2017), 229-250.

manifestations of human behavior and desires⁹⁵. According to Aristotle, mediocrity defines the inner interpersonal relationship of man and expresses the contrast between excess and deficiency. Mediocrity dominates the passions and is a driving force for evaluation in the manifestation of the psychological manifestations of human behavior and desires. Intention (prohairesis) is a dynamic parameter that the philosopher considered responsible for the commission of evil, which does not come from ignorance, but from the personal choice, which is a consequence of decision-making and this way he emphasized in the power of responsibility⁹⁶. Aristotle attributed two meanings to the definition of intention (prohairesis): a. The moral intention of the individual during the process of the act⁹⁷. b. The ability of the individual to choose the means they will use for whatever they do, in order to reach the realization of the goal⁹⁸⁹⁹. Human thinks, meditates the purposes and the means to achieve goals. Both Aristotle and much more the stoic Epictetus emphasized on the intention of human through the predilection as a force of expression of human freedom¹⁰⁰. The control of intention (prohairesis) is taken over by the third virtue of wisdom (phronesis), which dominates in Aristotle's ethics. Wisdom is a habit, an addiction to the right choice and action¹⁰¹. With this Aristotelian view of moral human free will we can understand the individual risks of using artificial intelligence. The adoption of artificial intelligence in schools may lead to the automation of some tasks traditionally performed by teachers and other staff members. While this may increase efficiency, it may also lead to job displacement and fewer employment opportunities in the education sector. Limited access to AI tools and technologies can prevent individuals and communities from reaping the benefits of AI. Integrating AI into

⁹⁵ S.A. Triantari, *Ethics in Decision Making. Aristotelian Ethics in Decision Making*, Thessaloniki: K. & M. Stamoulis, I. Arch. Harbandidis 2021, 26-30.

⁹⁶ A. Manos, *Ancient philosophy as an art of life*, Athens: Kardamitsa 2013, 25-52.

⁹⁷ Aristotle, *Nicomachean Ethics*, A-K. Introduction, Translation, Comments: D. Lypourlis. Thessaloniki: Zitros, (2006), 1163a, 1164b, K 1178a.

⁹⁸ M. Dragona-Monachou, (1978-79). "The option in Aristotle and Epictetus". *Philosophy* 8-9, 265-310.

⁹⁹ Aristotle, *Nicomachean Ethics*, A-K. Introduction, Translation, Comments: D. Lypourlis. Thessaloniki: Zitros, (2006), 1112b, 1113b.

¹⁰⁰ S. A Triantari, *Ethics in Decision Making. Aristotelian Ethics in Decision Making*, Thessaloniki: K. & M. Stamoulis, I. Arch. Harbandidis, 2021, 22-25.

¹⁰¹ Th. Skaltsas, *The golden age of virtue. Aristotelian Ethics*, Athens: Alexandria, 1993, 19-40.

schools can exacerbate pre-existing inequities. Schools with limited resources may struggle to adopt AI technologies, leading to a digital division between privileged and disadvantaged students. Increased use of artificial intelligence in classrooms may reduce interpersonal interaction between students and teachers. This loss of human connection can be detrimental to students' emotional and social development. The future requires the cooperation of planning and leadership under the eye of the moral rational decision and action of man. The stakes are high as what is to come is unknown, and leaders will need to be adaptive in managing AI machines and machine developers¹⁰².

Conclusions

1. Artificial intelligence is the most important development in technology. It permeates all sectors, art, education, justice, labor market, etc. It highlights the human power and man's relationship with technology, which decisively shapes their future. The study underlines the power of philosophy as a big picture for man and technology, and especially when it finds application in education.

2. The ethical nature of technology is emphasized in order to bring out the aspects of educational leadership in the management of artificial intelligence. Management requires an ethical technologist, and in this case an ethical educational leader who makes decisions and manages AI tools responsibly and conscientiously, guided by ethical values that protect the interests of teachers and students.

3. The analysis of the benefits, as well as the challenges from the risks that the use of artificial intelligence can bring, are analyzed from the perspective of moral consideration, highlighting an important issue concerning the relationship between intelligence, reason and ethics. A relationship that predetermines the advantages but also the risks of using artificial intelligence. The philosophical view shows that logic, rationality and ethics are clearly not identical, but logic combined with the moral virtues of man, which reflect the trinity of agency, choice and judgment, strengthen the dynamics of philosophical analysis in the "problem of control", so that emerge an ethical programming of artificial intelligence in schools.

¹⁰² A.M. Smith, M. Green, "Artificial Intelligence and the Role of Leadership", *Journal of Leadership Studies*, 21605. (2018),1 -3.

4. The moral value of free will emerges through the term of intelligence, as artificial intelligence includes the intellect and refers to the imitation of the human logic of speech, written and spoken. Its derivatives in the context of an excessive rational capacity of machines can lead to oppression, lack of democracy, unfreedom and self-destruction of human. In education the use of artificial intelligence is left to the school leader and teachers, and comparatively to the free will of the individual for a morally rational use with benefits for students. From the point of view of Nietzsche's and Kant's moral consideration, and much more of their predecessor Aristotle, it emerges that the moral value of the human will is based on the triptych, mediation, option and judgment, which support human choice and action as a preventive measure to avoid the dangers that the misuse of artificial intelligence in schools can cause. An ethically correct choice and action in the management of artificial intelligence ensures the happiness and well-being of teachers and students in schools.

5. The morally rational use of artificial intelligence requires the training of students in skills such as critical and creative thinking, communication skills, organization, cultivation of moral principles and values, emotional skills. The digital revolution in order to deliver benefits to people, should be accompanied by the educational revolution or the cultivation of a philosophical education that leads to understanding and relating it to the philosophy of artificial intelligence, delineating and defining its use and contributing decisively to the active and not abusive use by a person.

6. The major problem in the use of artificial intelligence is the delimitation of purpose. This artificial thinking tool is a tool to serve ideological or political goals. The point is to have an objective, i.e., scientific-philosophical, direction, so that this tool aims at the improvement of human and not at the control of him. Philosophy only, as knowledge of the nature and purpose of human, can define the appropriate use of means to achieve moral ends.

7. A final problem is the possibility of independence of this artificial intelligence tool from the human control. Can artificial intelligence think autonomously without human control? And if it reaches this level of self-determination, what purposes will it serve, if not some human purposes? Will man be an obstacle to the unfolding of this artificial intellectual autonomy, and the word ethics will be empty of content, since we can no longer speak of the improvement of the human substance, but of the unknown pursuits of a rationally thinking machine? Certainly, artificial

intelligence as an art, i.e., as an imitation of nature, as an imitation of the human rational character¹⁰³, can never be fully autonomous from human, because reason is the nature and the end of human, and therefore artificial intelligence will remain something deeply human.

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¹⁰³ Cf. El. Vavouras, "Machiavelli's Ethics on Expansion and Empire", *Conatus - Journal of Philosophy*, 8(2), (2023), 703-723.

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LEADERSHIP IN EDUCATION: COMPARATIVE BIBLIOMETRIC ANALYSIS

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Abstract: *The research on educational leadership has received significant attention over more than half a century, resulting in an abundant literature on this topic. A series of studies and research have revealed that educational leadership is an extremely complex and important phenomenon. Despite this, there is a gap in the specialized literature regarding the presentation of this knowledge through a bibliometric analysis. The present study aims to provide an overall image of the evolution of this concept by identifying articles published in indexed journals in the Web of Science Core Collection (WoS) and Scopus. The search was conducted using the terms: "educational leadership, leadership in education, school leadership, professor leader." The search yielded a total of 3089 articles in WoS and 2723 articles in Scopus, with the oldest article dated back to 1946 and the most recent published in Scopus on April 12, 2024. The research represents a comparative view of the two databases, addressing the general profile of articles, the annual distribution of article frequencies, the most productive researchers, the most influential articles in terms of the number of citations, and a hierarchical ranking of articles according to the countries and journals in which they were published. The contribution of the research lies in the use of systematic methods for performing a complex bibliometric analysis on the topic of educational leadership. In this sense, certain collaboration models between authors, universities, and countries in the two databases are presented and analyzed. The conclusions provide important information for researchers regarding the detailed evolution of educational leadership through the existing literature. Starting from the study of the most influential articles, the main research directions of authors over approximately 80 years were identified, as well as the existing gaps in this field, both conceptually and empirically.*

Keywords: *education, leadership, educational leadership, teacher leader.*

Introduction

Leadership and strategic management are both issues of central importance in improving performance in schools and colleges, and are

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therefore at the center of today's educational debate¹. Although both central concepts play an important role in understanding the organization in educational institutions, the distinction between educational management and educational leadership remains an ever-current subject of debate. Thus, most studies in the field of education refer to educational management from the perspective of taking responsibility for the proper functioning of a system in an educational institution in which others participate. In contrast, educational leadership is defined as the act of influencing others in educational environments to achieve goals and requires actions of a certain kind².

1. A comprehensive research on the evolution of educational leadership in the form of a bibliometric analysis is currently lacking. Therefore, this paper starts from the following questions:

1. How has the concept of "educational leadership" evolved over the years?

2. Is there a parallel approach to the two databases (WoS and Scopus) on this topic?

3. Who are the most productive researchers by number of articles published in WoS and Scopus?

4. What are the most productive countries and journals by number of articles published in the two databases?

5. What are the most frequently cited articles by total number of citations?

6. In order to capture a more eloquent picture of the evolution of this concept, the research was based on the method of bibliometric analysis, using quantitative methods to synthesize and systematize the bibliographic data associated with a delimited body of literature³. The main purpose of this bibliometric analysis was to highlight the broad trends in the production and dissemination of knowledge on the topic of educational leadership, as well as an assessment of the quality of

¹ T. Bush and M. Coleman, *Leadership and Strategic Management in Education*, London, Paul Chapman Publishing, 2000, p.31.

² M. Connolly, C. James & M. Fertig, *The Difference between Educational Management and Educational Leadership and the Importance of Educational Responsibility*. Education Management Administration & Leadership, 47, 504-519, 2019.

³ I. Zupic & T. Cater, *Bibliometric methods in management and organization*. Organizational Research Methods, 18(3), 429-472, 2015. Retrieved from <https://doi.org/10.1177/1094428114562629>,

research in the field and the integration of its main results⁴. Essentially, the study examined 2726 articles from the WoS database and 2229 articles indexed in Scopus, published between 1946 and 2024, conducting an in-depth analysis of the relationship between authors, citations, sources and keywords using specific bibliometric analysis software. The research conclusions highlight both the complexity and importance of educational leadership, as well as the timeliness of this topic.

2. Literature Review.

The way a leader sets a goal and motivates multiple people to act with dedication to achieve an objective, as well as the methods used to induce desired behavior, represents a highly debated topic, generating a series of research studies and specialized studies. In the context of educational leadership or teacher leadership, this concept has undergone significant revolutions throughout the 20th century. The idea of educational leadership was first introduced in the early 1970s as part of the advocacy for the professionalism of teaching staff in the United States, aiming to ensure high-quality education.

Among the first authors in this field, Scopus database mentions Buckingham B. R, in 1927, with an article defining leadership in education as the ability to put people together to achieve a common goal, using mental power, knowledge, competencies, and certain aspects related to character and inter-relations⁵.

The first books that explicitly address educational leadership as a revolutionary process within education date back to the early 1970s. For example, in 1974, Sarthory's work "Educational Leadership, Renewal And Planning: Synthesis," provides an overview of the concepts related to educational management, noting a certain confusion between various concepts and terms used by educators to describe their activities and competencies in organizing and administering educational institutions. A model of educational leadership is described that defines leadership as the capacity to introduce and maintain an organizational renewal process. The

⁴ Philip Hallinger and Jasna Kovačević, *A bibliometric review of research on educational administration: science mapping the literature, 1960 to 2018*, Review of Educational Research 89(3), 2019.

from <https://doi.org/10.3102/0034654319830380>.

⁵ B.R. Buckingham, *Leadership in Educational Research*. *The Journal of Educational Research*, 15(4), 239-245, 1927. <https://doi.org/10.1080/00220671.1927.10879739>

model consists of six elements perceived as phases or stages of planned organizational renewal:

- Evaluating educational needs,
- Evaluating the current state of the organization,
- Translating needs into new and revised programs,
- Implementing new and revised programs,
- Managing new and revised programs,
- Monitoring and evaluating programs⁶.

Additionally, the types of competencies and abilities necessary to function efficiently in each phase of the model have been observed, along with the implications for leadership development programs. A suggested program for training educational administrators using this model would include a leadership team of three to nine members in each school district and an instructional team of professors from an institution or consortium of higher education institutions. This team would "train" the leadership team in organizational renewal abilities, but not in a traditional manner, so that team members learn the necessary skills and competencies and use them as needed.

Little J.W. considers this concept of the teacher-leader to be an important resource for redefining and revitalizing the profession of pedagogy, which is no longer just a technocrat and implementer of ideas from decision-makers, but must transform into a reflective teacher, actively participating in decision-making at all levels ⁷. The main paradigms that have dominated the scientific concept of leadership throughout the 20th century are presented in the works of authors such as House and Aditya, in 1997⁸. However, attention to this topic gained momentum at the beginning of the 21st century. The main theories related to the teacher's perspective on educational leadership belong to authors such as Johns H. and Moser R., in 2001⁹, and J. Murphy, in 2005¹⁰.

⁶ Joseph A. Sarthory, *Educational leadership, renewal, and planning: a synthesis*, New York, MSS Information Corp, 1974, p. 58.

⁷ J.W. Little, *Constructions of teacher leadership in three periods of policy and reform activism*, in: *School Leadership and Management*, 23, 2003, 201–419 p.

⁸ R.J. House & R.N. Aditya, *The Social Scientific Study of Leadership: Quo Vadis?*, *Journal of Management*, 23, 409–473, 1997. Retrieved from <http://dx.doi.org/10.1177/014920639702300306>

⁹ H. Johns, R. Moser, *From trait to transformation: The evolution of leadership theories*. *Education*, vol.110, 2001, p.115–122.

Implementation of educational leadership has gained momentum over the past two decades, with teachers taking on more leadership roles both at the instructional and organizational levels. The role of the teacher-leader has become a crucial element in the implementation of educational reforms¹¹. According to authors M. Katzenmeyer and G. Moller, the development of teacher-leaders aims to ensure quality education by consolidating the professionalism of teaching staff¹². Therefore, the approach and perception of teachers as leaders of their own activities, leaders of the class, leaders of personal and organizational development, without focusing on a hierarchical position, lead to the improvement of the educational process and implicitly influence continuous improvement. Thus, any teacher interested in change and development can be a leader, regardless of whether they have a hierarchical position. The teacher as a leader leads a group of students, exercising power over the main phenomena that occur in the classroom and school, being a friend and confidant to students, sometimes a substitute for parents, offering life models to disciples or even support in improving anxiety states.

Analyzing theories related to the teacher's perspective on educational leadership, authors Johns H. and Moser R. highlight that the teacher-leader functions efficiently in the professional community and has a major impact on student learning, contributing to the improvement of quality and pedagogical activities¹³.

An important aspect is the applicability of the concept in various fields, including education. Thus, educational leadership/paideutic (teacher leadership) has been identified and defined, and this concept has undergone significant revolutions throughout the 20th century. The idea of educational leadership was first introduced in the early 1980s, as part of the advocacy for the professionalism of teaching staff in the United States, aiming to ensure high-quality education.

T. Bush, in 2003, proposes a perspective on school leadership based on six educational management models: frontal, collegial, political, subjective,

¹⁰ L. Murphy, *Transformational leadership: A cascading chain reaction*. Journal of nursing management. 13. 128-136, 2005. Retrieved from <http://doi.org/10.1111/j.1365-2934.2005.00458.x>.

¹¹ B.S. Billingsley, *Recognizing and supporting the critical roles of teachers in special education leadership*. Exceptionality, 15, 2007, p. 163-176.

¹² M Katzenmeyer, G. Moller, *Awakening the sleeping giant: Helping teachers develop as leaders* (2nd ed.), Thousand Oaks, CA: Corwin Press, 2001.

¹³ H. Johns, R. Moser, op. cit.

ambiguous, and cultural. We note that these models are given significant attention in educational management and leadership literature, and their analysis is based on criteria such as:

- 1. Level of concordance on institutional goals/ objectives;
- 2. Sense and validity of structures within educational institutions;
- 3. Relationship between the institution and its external environment;
- 4. Most suitable leadership strategies for the educational institution¹⁴.

Thus, based on the six educational management models, ten leadership models have been identified, as observed in the following table.

Tabel 1: Typology of management and leadership models

The management model	The leadership model
Frontal	Managerial
Collegial	Participatory Transformational Distributive
Political	Transactional
Subjective	Postmodern Emotional
Ambiguous	Circumstantial
Cultural	Moral Of training (centered on learning)

(Source: T. Bush and D. Glover, 2003)

Specialized literature, analyzing multiple pragmatic research activities in the educational domain, particularly in the United Kingdom, has identified and defined the principles and styles of leadership adopted by various teaching staff to optimize the educational process¹⁵. Based on these studies, starting from 2008, Cambridge University initiated the International Teacher Leadership project, within which a comprehensive set of techniques, methods, instruments, and supporting materials was developed to support

¹⁴ T. Bush, T. and D. Glover, *School Leadership: Concepts and Evidence. A Review of Literature Carried out for National College for School Leadership*. National College for School Leadership, Nottingham, 2003.

¹⁵ S. Swaffield, *Critical friendship, dialogue and learning, in the context of Leadership for Learning*, *School Leadership & Management*, 28:4, 323-336, 2008,

<https://www.tandfonline.com/doi/abs/10.1080/13632430802292191>.

teacher-leaders in the process of consolidating the professionalism of teaching staff¹⁶. The concept of educational leadership has undergone significant evolution over the past three decades. This evolution is characterized by the convergence of two pivotal domains: Education and Management. The following are key aspects of this evolution¹⁷:

➤ **Interdisciplinary Paradigm:** the research findings provide an in-depth analysis of the evolution of the educational leadership theme, situated at the confluence of two pivotal domains: Education and Management. This confluence generates numerous practical and theoretical ramifications. An interdisciplinary paradigm emerges, as evidenced by publications in respected journals that address various topics, including the variables underlying effective education, the ramifications of educational management, teacher development and training, as well as the nuanced impact of leadership styles on both schools in general and individual students in particular.

➤ **Theoretical Foundations:** the concept of leadership has been extensively studied and debated over the years. Different theories and models have been proposed to understand leadership, such as Transformational Leadership, which emphasizes the importance of inspiring and motivating others. The concept of leadership is crucial for organizational success, and it is essential to understand the different dimensions and models of leadership, including the situational approach, which emphasizes adapting leadership styles to specific situations.

➤ **Historical Context:** the concept of management has a long history, dating back to the early 20th century. The evolution of management has been marked by the development of different schools of thought, such as the classical school, the human relations school, and the systems school.

➤ **Recent Developments:** in recent years, there has been a growing emphasis on the importance of leadership in education. The concept of transformative leadership has gained significant attention, as it emphasizes the need for leaders to inspire and motivate others to achieve educational goals.

¹⁶ D. Frost, *From professional development to system change: teacher leadership and innovation*, Professional Development in Education (special issue on Teacher Leadership and Professional Development), nr. 38 (2), 2012, p. 74-82.

¹⁷ Richard L. Hughes, Robert C. Ginnett & Gordon J. Curphy, *Leadership-Enhancing the Lessons of Experience*, (10th ed). New York, NY: McGraw-Hill, 2002.

In summary, the concept of educational leadership has evolved significantly over the past three decades, reflecting the convergence of different disciplines and the development of various theories and models. Based on these aspects, educational leadership theorists have identified several trends over the last three decades in this field¹⁸:

1. Shift from Autocratic to Democratic Leadership

Educational leadership has evolved from an authoritarian approach to a more democratic one, where teachers and students are involved in decision-making and the educational process.

2. Increased Focus on Teacher Empowerment

In recent decades, educational leadership has focused on encouraging and supporting teachers, giving them more autonomy and responsibility in the educational process.

3. Emphasis on Collaboration and Teamwork

Educational leadership has become more collaborative, with an increased emphasis on communication and cooperation between teachers, students, and parents.

4. Use of Technology in Educational Leadership

Technology has become an essential tool in educational leadership, providing new opportunities for communication, organization, and evaluation of the educational process.

5. Focus on Student-Centered Learning

Educational leadership has focused on student-centered learning, with an increased emphasis on the experience and participation of students in the educational process.

6. Emphasis on Continuous Professional Development

Educational leadership has become more concerned with the continuous professional development of teachers, providing them with opportunities for training and improving their skills and knowledge.

7. Increased Accountability and Transparency

Educational leadership has become more transparent and accountable, with an increased emphasis on evaluating and reporting educational outcomes.

¹⁸ X. Wei, T. Xu, R. Guo, *et al.* Physiology education in China: the current situation and changes over the past 3 decades. *BMC Med Educ* **24**, 408, 2024.

<https://doi.org/10.1186/s12909-024-05395-1>.

8. Focus on Diversity, Equity, and Inclusion

Educational leadership has focused on promoting diversity, equity, and inclusion, with an increased emphasis on respect and acceptance of all students and teachers.

9.Emphasis on Data-Driven Decision Making

Educational leadership has become more data-driven, with an increased emphasis on using data to make decisions and evaluate educational outcomes.

10.Focus on Building Strong School Communities

Educational leadership has focused on building strong school communities, with an increased emphasis on collaboration and involvement of teachers, students, and parents in the educational process.

Based on the search results, here are the key advantages of using Web of Science (WoS) and Scopus compared to Google Scholar for researching educational leadership:

1. Better bibliometric data coverage and wider journal selection: Scopus in particular covers over 22,000 journals, compared to only 11,000 in WoS. This provides a more comprehensive set of publications on educational leadership¹⁹.

2. More accurate citation data: Studies have shown that WoS and Scopus provide more accurate and reliable citation counts compared to the sometimes inflated numbers in Google Scholar. This is important for citation-based analyses²⁰.

3. Structured data and export capabilities: WoS and Scopus offer structured bibliographic data that can be easily exported, allowing for more rigorous analysis. Google Scholar's unstructured data makes it more challenging to work²¹.

4. Refined search capabilities: The search interfaces of WoS and Scopus allow for more refined searches by fields like affiliation,

¹⁹ Bergman, Elaine M. Lasda, *Finding Citations to Social Work Literature: The Relative Benefits of Using Web of Science, Scopus, or Google Scholar*, *The Journal of Academic Librarianship* 38(6), 2012, p. 370-379.

²⁰ Kiduk Yang & Lokman I. Meho, *Citation Analysis: A Comparison of Google Scholar, Scopus, and Web of Science*, *Proceedings of the American Society for Information Science and Technology* Volume 43, Issue 1, 2007, p. 1-15,
<https://doi.org/10.1002/meet.14504301185>.

²¹ Judit Bar-Ilan, *Which h-index? A comparison of WoS, Scopus and Google Scholar*, *Scientometrics*, Vol. 74, No. 2, 2008, p. 257-271, DOI: 10.1007/s11192-008-0216-y.

publication year, and document type. Google Scholar's broader web-crawling approach can return less targeted results.

5. Historical coverage: WoS and Scopus provide more comprehensive historical coverage of publications, allowing researchers to trace the evolution of educational leadership research over time. Google Scholar's coverage can be more uneven, especially for older publications²².

In summary, the structured data, refined search capabilities, and more reliable citation metrics make WoS and Scopus preferable to Google Scholar for in-depth, rigorous research on the topic of educational leadership. The broader coverage of Scopus in particular seems to be an advantage over WoS for this field.

Although empirical discoveries about leadership in schools represent a more solid basis compared to 40 years ago, most studies and research are predominantly prescriptive, based more on values than on data²³. Therefore, a large number of studies on educational leadership are noted, but there is no bibliometric study. This study aimed to fill this gap in literature by using bibliometric analysis.

3. Research methodology

3.1. Setting the Research Objectives.

The purpose of this research theme is to identify the importance and evolution of the concept of educational leadership by analyzing studies from both the Web of Science (WoS) and Scopus databases, focusing on pedagogical theory and practice. The main objective of this research is to create a comparative table of the two databases, ultimately highlighting the key references in the process of forming and manifesting the teacher leader in professional learning communities at different levels.

The research aims to explore the following key concepts:

1. Research Design: This involves the planning and organization of the research methodology, including the selection of research methods, data collection, and analysis procedures.

2. Research Theme: This refers to the specific topic or area of investigation, which in this case is the concept of educational leadership.

²² Ibidem.

²³ Philip Hallinger, *Leadership for learning: lessons from 40 years of empirical research*, Journal of educational administration, Volume 49 (2), 2010.

3. Research Problem: This is the specific issue or question that the research aims to address, such as the evolution of educational leadership in professional learning communities.

4. Research Object: This is the specific aspect or phenomenon being studied, which in this case is the concept of educational leadership.

5. Research Subject: This is the group or individual being studied, which in this case could be teachers or educational leaders.

6. Research Purpose: This is the overall goal or objective of the research, which in this case is to analyze the evolution of educational leadership.

7. Research Objectives: These are the specific, measurable, achievable, relevant, and time-bound (SMART) goals that the research aims to achieve, such as identifying the key factors influencing the evolution of educational leadership.

The research will involve a comprehensive review of existing studies on educational leadership, including theoretical and practical perspectives. The findings will provide insights into the evolution of educational leadership and its implications for professional learning communities at different levels.

3.2. The Search Strategy.

The data were retrieved sequentially from both databases: Web of Science (WoS) and Scopus, and the generated results were then compared. Both databases allowed for refining the search in education and educational research using the same terms and domains. The initial results, based on the quantitative analysis of the data, confirmed the conclusions of other comparative studies of these databases²⁴, showing that the WoS journal classification system had a higher precision than the Scopus database. The scanning process was conducted on April 15, 2024. The search was performed in the "theme" area, which includes the title, abstract, author keywords, and plus keywords. The search was conducted using the terms: educational leadership, leadership in education, school leadership, leadership in school, educational management. Using these terms, we aimed to identify all possible variants of the concept. The initial

²⁴ Qi Wang and Ludo Waltman, *Large-scale analysis of the accuracy of the journal classification systems of Web of Science and Scopus*, Journal of Informetrics, 2016, vol. 10, issue 2, 347-364.

search yielded 3040 results in WoS and 2723 in Scopus. After refining the results by excluding documents from domains unrelated to education and articles published in 2024, the results were 2726 articles in WoS and 2229 articles in Scopus. We note that both articles classified as "Review" and "Early Access" (271 articles) were preserved, considering that the research was conducted at the beginning of January 2024 and the time until their inclusion in volumes could extend.

The two databases, WoS and Scopus, were used to identify a comprehensive set of articles published on the topic of educational leadership over the past 80 years. Unlike Google Scholar, both databases offer the ability to identify a set of published documents and export bibliographic data. In both search engines, we used the "source" field to search for the English keyword "educational leadership." Based on this English phrase, documents were identified under various titles but included the two words explicitly, and subsequently, articles that did not explicitly refer to this concept or had no relevance to the educational domain were excluded.

3.3.Data analysis

The data analysis was conducted using VOSviewer version 1.6.20. The analysis followed the five-step process suggested by Zupic and Cater , in 2015, as follows²⁵:

1. Research design (formulating the research question and selecting the appropriate bibliometric method for the research question),
2. Compilation of bibliometric data (selecting the database, filtering, and downloading),
3. Visualization,
4. Analysis (selecting the appropriate software and cleaning the data),
5. Interpretation (identifying and interpreting the findings).

The basic procedures of educational leadership analysis and scientific cartography were used in the data analysis ²⁶ . Initially, authors, institutions, and publications on this topic were identified. Subsequently, scientific cartography aimed to illustrate the dynamics of scientific fields

²⁵ I. Zupic & T. Cater, *Bibliometric methods in management and organization*. Organizational Research Methods, 18(3), 429-472, 2015. Retrieved from <https://doi.org/10.1177/1094428114562629>.

²⁶ E.C. M. Noyons, H.F. Moed, & A.F.J. Van Raan, *Integrating research performance analysis and science mapping*. Scientometrics, 46(3), 591-604, 1999. Retrieved from <https://doi.org/10.1007/BF02459614>.

and disciplines²⁷. To achieve a high-performance analysis, the frequency distribution of "educational leadership" research was analyzed by year, most productive authors, journals, and countries, as well as by the number of articles, most frequent keywords, and most influential articles based on the number of citations. On the other hand, scientific cartography presented information on the keywords used, co-authors, and collaboration models between institutions and countries. Using terms such as educational leadership, leadership in education, school leadership, leadership in school, educational management, our goal was to identify all conceptual variations imaginable, especially the evolution and global perception of the teacher leader role. By focusing exclusively on the phrase "educational leadership" and using the same keywords and refinement categories, the alternative search conducted in both WoS and Scopus databases yielded the following results.

Table 2: “Educational Leadership” database Wos and Scopus

Criteria	WoS	Scopus
Initials documents	3040	2723
Documents after refining by time and categories	2794	2425
Articles	2115	1708
Book Chapters	352	275
Books	39	170
Conference paper	158	126
Review	133	126
Retracted Publications	1	1
Documents published in 2024	82	102
Documents for analysis	2726	2229
Most prolific author	Hallinger, P (54 articles)	Hallinger, P (9 articles)
University with the most articles	University of Texas (64 articles)	National Institute of Education - Singapore (23 articles)
	UNIVERSITY OF VIRGINIA	
Main sources	Educational Administration Quarterly	Journal Of Educational Administration

²⁷ I. Zupic & T. Cater, *op. cit.*

	(160 articole)	(46 articole)
Country with the most articles	United States (1142 articles)	United States (720 articles)
Most citations of an article	1027	544
Average citations per document	11.14	7.3

Source: author's own research, based on data extracted from WoS and Scopus

The number of "Scopus citations" for a document can differ from the number of citations provided by WoS for the same document due to differences in the size and coverage of these citation databases²⁸.

Co-citation analysis provided an additional perspective on academic impact by examining the frequency with which authors or documents were cited together. This allowed for the identification of key publications that significantly influenced the articles on educational leadership, as well as insights into the development of the educational leadership concept. Using this data, the VOSviewer software²⁹ generated a matrix that formed the basis for a social network map, visualizing the relationships between frequently cited authors across the two databases.

4.Results analysis.

Table 3 below presents the main information about the data. Consequently, the study investigated a total of 4955 articles from the two databases, published in 611 sources, between 1946-2024. As shown in the table, the average number of citations per article differs between the two databases, being significantly higher in WoS (11.33) compared to Scopus (7.3). Additionally, an impressive number of author keywords were used in both databases. The number of authors in single-author articles is 199, and 1343 articles with multiple authors.

²⁸ Ibidem.

²⁹ Nees Jan van Eck and Ludo Waltman, *Citation-based clustering of publications using CitNetExplorer and VOSviewer*, *Scientometrics* 111(2), 2017, https://www.researchgate.net/publication/313671612_Citation-based_clustering_of_publications_using_CitNetExplorer_and_VOSviewer

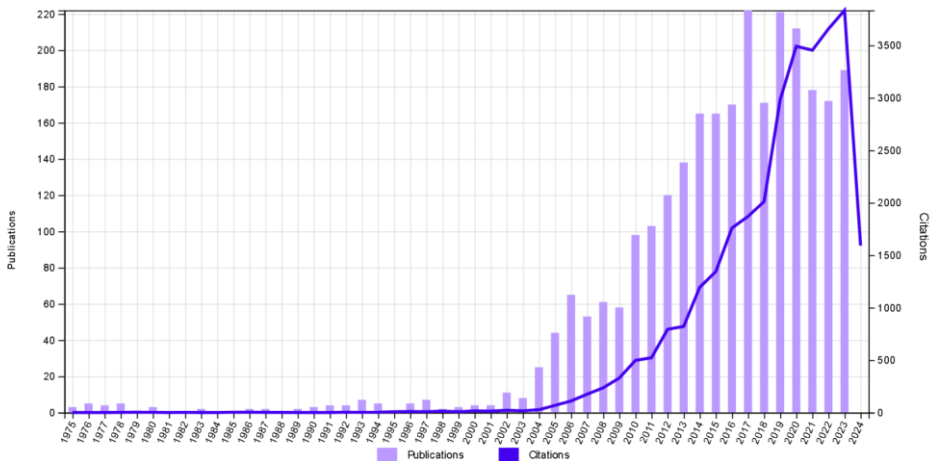
Table 3: Main Information about the Articles:

Description	WoS	Scopus
Timespan	1975-2024	1946-2024
Sources	406	205
Documents	2726	2229
References	56161	29431
Keywords Plus (ID)	1112	873
Author's Keywords (DE)	2858	2353
Authors	198	158
Authors of single-authored documents	441	246
Authors of multi-authored documents	2285	1983
Co-Authors per doc	2.12	1.98
International co-authorships	20.78	17.3

Source: author's own research, based on data extracted from WoS and Scopus

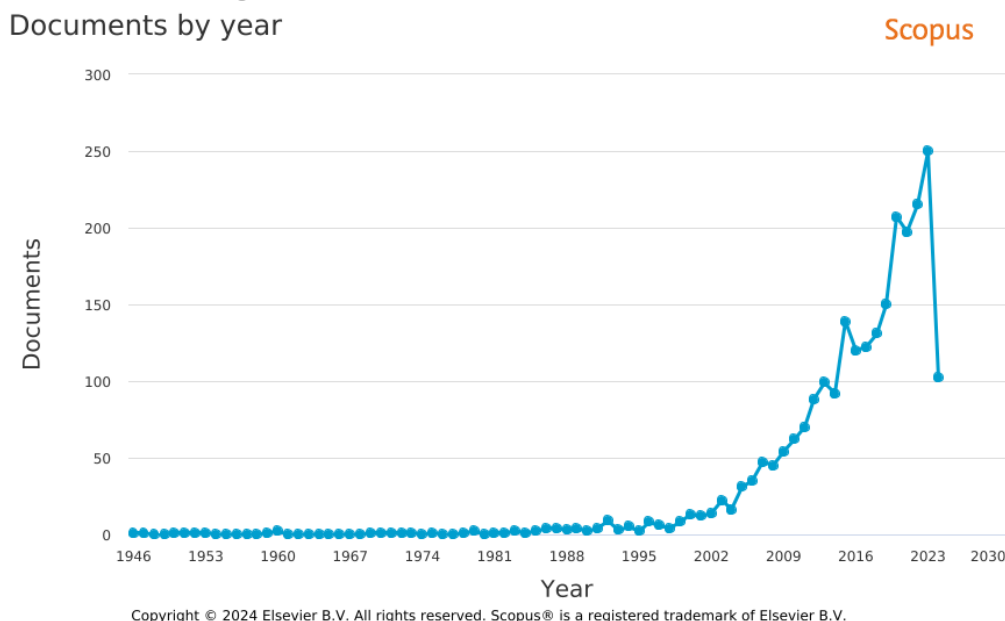
The first question of the research focused on the temporal distribution of the frequency of results related to educational leadership. Figures 1 and 2 illustrate the frequency distribution of articles by year and citation trajectory, with the first article in WoS dated 1975 and in Scopus dated 1946. The year 2017 became the most prolific year in WoS, producing a total of 222 published articles, while the year 2023 is the year with the highest number of citations (3833). We note that between the years 2010 and 2020, 1553 articles were published, representing 56% of the total articles published in WoS.

Figure 1. Times Cited and Publications Over Time in WoS.



Source: author's own research, based on data extracted from WoS

Figure 2. Publications Over Time in Scopus.



Source: author's own research, based on data extracted from Scopus

Regarding the publications in Scopus, they have shown a clear increase starting from 2007 (47 articles, compared to 35 in 2006), and the peak was reached in 2023 with 251 articles. The fact that in the last 4 years (2020-2023), the number of articles on the topic of educational leadership in Scopus is on an upward trend, totaling approximately 800 publications, indicates both an increased attention on the topic of educational leadership and its implications, as well as the tendency of the main researchers in the field to orient themselves towards the Scopus database.

Table 4: The most prolific authors by the number of articles

Autori	Articole în WoS	Citări (f)
Hallinger P	54	2362
Eacott S	31	278
.Brooks J. S.	27	248
Arar K	25	204
Opłtaka I	23	61
Yioungh MD	23	167
.Bush T	8	200
.Dorczak R	8	142
.Hammad W	8	176

Gümüs S	7	63
Torrance D	7	78

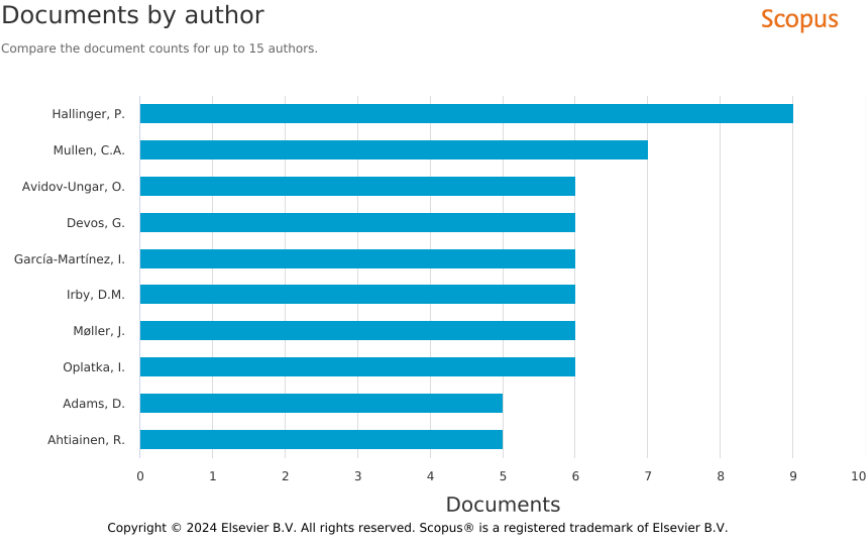
Source: author's own research, based on data extracted from WoS

Table 4 represents a classification of the top ten authors. Most of the authors (95%) have published one or two articles on educational leadership. Reading the data in the table, we can observe that Hallinger P. is the most productive author, with 54 articles; Eacott S. is the second most productive and cited author, and Brooks J.S. is the third most productive and cited author, with 27 articles.

If we analyze the number of citations, these three authors are the most productive and the most cited authors in our research, with P. Hallinger being the most cited, having 2,362 citations.

Another very important aspect that we can extract from Table 4 is the classification of the top ten authors, who together have 135 articles, but only the top five have published the most articles, with ten or more articles on the topic, while the rest have less than ten articles.

Figure 3. The most prolific authors by the number of articles in Scopus.

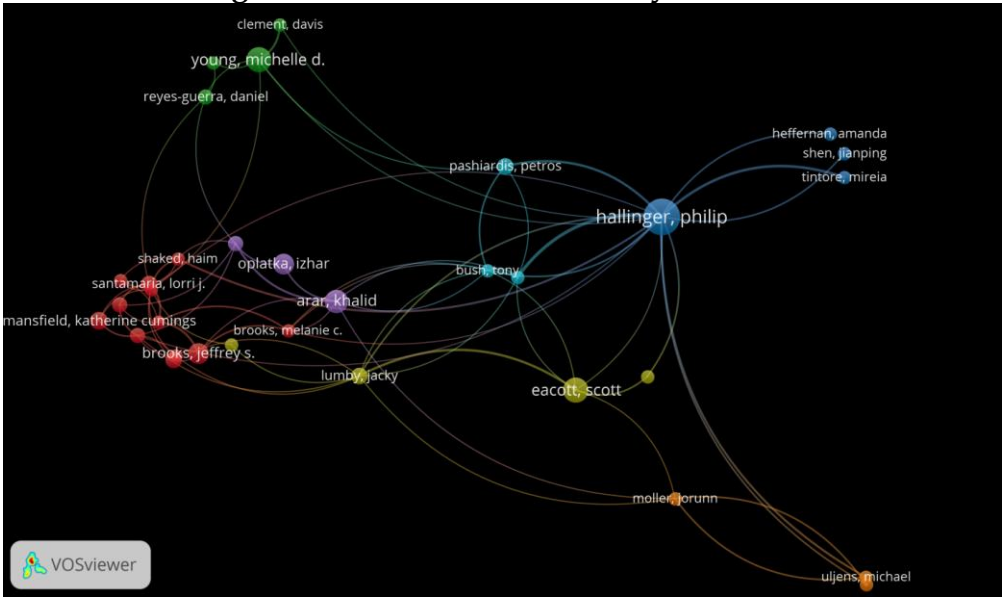


Source: author's own research, based on data extracted from Scopus

According to Figure 3, we note that the same author, Hallinger P., is at the top of the most prolific authors in Scopus, with a significantly smaller number of articles (9), followed by Mullen with 7 articles, and six other authors, each with 6 articles. Among these, we mention Oplatka I, who has

an impressive number of articles in WoS (23). Notably, P. Hallinger stands out as a leading figure in both databases, both in terms of the number of articles and the impact of his work through citations by other authors, reflecting the importance of his studies in the field, coupled with a rich experience as a university professor in various centers on different continents. To further clarify the relationships between the main authors in the field and the circulation of ideas and concepts specific to educational leadership, we created a map based on the citations used by the most prolific authors, as shown in Figure 4.

Figure 4: Network of authors by citations



Source: Author's own research, based on data extracted from WoS

Figure 4 illustrates the networks between 38 authors, grouped into 11 clusters, with seven significant clusters and four separate positions. The blue cluster, with Hallinger as the central figure, has connectivity with all the other clusters and encompasses seven notable authors: Bush, Tony, Pashiaridis, Petros, and Heffernan W. This prominence is attributed to Hallinger's extensive contribution, comprising 63 studies in the field, 54 in WoS and 9 in Scopus. Particularly remarkable are the 10 authors in the purple cluster, given their interactions with authors from the blue, orange, and yellow clusters. The largest group is the red cluster, comprising 12 authors, including notable figures such as Carpenter Bradley and Guillaume Rene. Additionally, the authors Young M.D., Clement D., and

Berkovich I. from the green cluster should not be overlooked, as their recently published studies in 2022 may catalyze new research themes in the field of educational leadership.

An important role is played by the Educational Leadership Preparation Programs (ELPPs), which have expanded beyond the walls of universities and include the recruitment and selection of candidates, a focus on curriculum, instructional strategies, program delivery methods, internship practices, and training programs for school principals³⁰. The authors are from different countries and universities, indicating a high level of international collaboration and a growing global interest in this topic.

The third question addressed the most productive journals in terms of the number of published articles. The key determinants of scientific journals reveal that the most prolific sources are Educational Management Administration Leadership, International Journal of Leadership in Education, and Journal of Educational Administration. The combined number of articles published in these three journals constitutes approximately 20% of the total publications. Consequently, it is evident that these three journals have made substantial contributions to research on educational leadership and have played a crucial role in establishing it as a recognized field of study.

Table 5: The ten most prolific sources by article count in WoS

Sources	Articles	Citations
Educational Administration Quarterly	160	2801
Educational Management Administration Leadership	151	2453
Journal Of Educational Administration	145	2123
Journal Of Research On Leadership Education	139	1457
International Journal Of Leadership In Education	119	675
School Leadership Management	87	1329
Journal Of Educational Administration And History	79	246
International Journal Of Educational Management	61	472
Leadership And Policy In Schools	45	358

Source: Author’s own research, based on data extracted from WoS

³⁰ D. Clement, M. Thornton, Nash A. Miles & K. Sanzo, *Attributes of Highly Diverse Principal Preparation Programs: Pre-enrollment to Post-completion*, Leadership and Policy in Schools, 21:1, 64-80, 2022. DOI: 10.1080/15700763.2021.2022708

According to the information provided in Table 5, the articles in the dataset were published across 252 different journals, with these journals collectively accounting for 987 articles, which represents approximately 36% of the total publications analyzed. This indicates that the quantitative research conducted is comprehensive and relevant.

The research on educational leadership in the WoS database was primarily published in the journals listed in the table, with the top three journals - Educational Administration Quarterly, Educational Management Administration Leadership, and Journal of Educational Administration - standing out as particularly influential and impactful, as evidenced by their high citation counts.

Table 6: The ten most prolific sources by article count in Scopus

Sources	Articles	Citations
Journal Of Educational Administration	48	1583
International Journal Of Educational Management	44	1683
International Journal Of Leadership In Education	37	1112
Educational Management Administration And Leadership	35	1983
Management In Education	31	775
Academic Medicine	29	628
School Leadership And Management	23	547
Educational Administration Quarterly	18	471
Frontiers In Education	18	455
Sustainability Switzerland	16	399

Source: Author’s own research, based on data extracted from Scopus

The Scopus database presents in the top 10 the same journals that are also present in WoS, but in a slightly different hierarchy, with a smaller number of articles and citations. The Journal of Educational Administration published 48 articles in Scopus, compared to 145 in WoS.

Table 7: The Ten Most Productive Countries based on the Number of Articles

Country	Articles in Wos	Articles in Scopus
The United States of America	1147	686
England	283	234
Australia	247	183
Canada	163	110
Spain	122	118

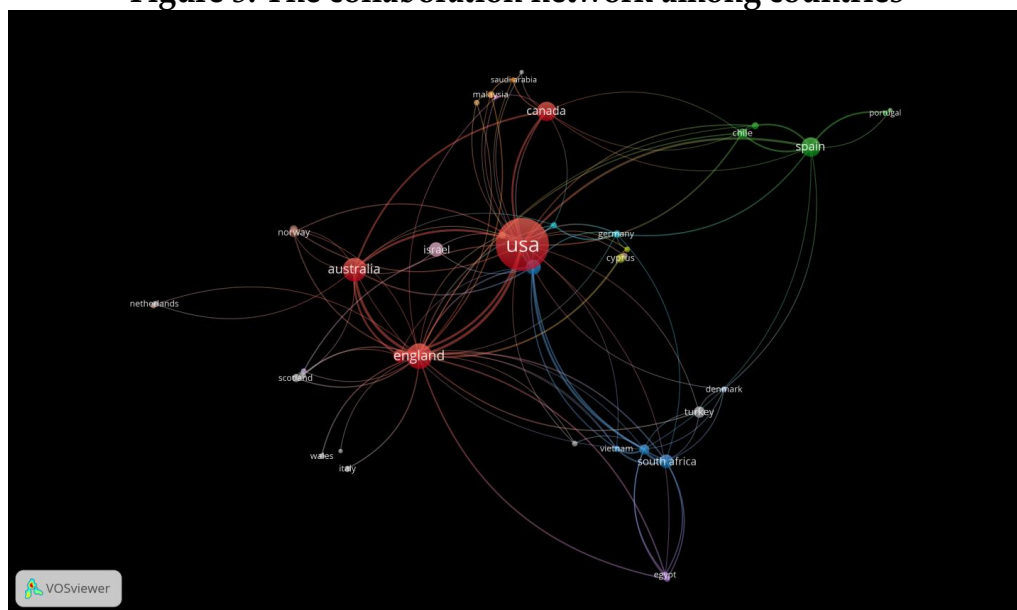
China	90	47
Africa de Sud	79	46
Israel	77	57
New Zealand	30	3,6
Tailand	26	2,7
Turkey	44	52

Source: Author's own research, based on data extracted from WoS and Scopus

The fourth question aimed to examine the distribution of articles by the countries in which the most articles were written or developed. The results show that the United States, the United Kingdom, and Australia are the most productive countries in both the WoS and Scopus databases. Researchers from the United States have contributed the most to the definition, conceptualization, and implementation of educational leadership through numerous theoretical and empirical studies. The genesis of educational leadership studies is primarily found in the United States and the United Kingdom, and then disseminated to nations such as Thailand, China, and Australia. Moreover, the rapid development observed in other countries suggests a correlation between the expansion of the field and its productivity.

Analyzing the countries with the highest productivity, Table 7 delineates the number of articles corresponding to each country. The results indicate that the United States is at the forefront of the group, with a total of 1,833 studies in the two databases, representing 41.9% of the analyzed corpus. Closely following, the United Kingdom occupies the second position with 517 articles, followed by Australia with 430 articles and Canada with 283 articles. In both databases, the hierarchy of the top 10 countries is almost identical, with the only notable difference being the appearance of Russia in Scopus, with 52 publications, in the 9th position.

Figure 5: The collaboration network among countries



Source: Author's own research, based on data extracted from WoS

Figure 5 illustrates the collaboration network between countries, with the graph summarizing 94 countries grouped into 14 clusters. Four clusters are formed by a single country without relationships with other clusters or countries, such as Poland, Romania, Latvia, and Indonesia. As shown, the United States is at the center of the most important cluster (red) consisting of seven countries: Austria, Cyprus, Finland, Germany, Ireland, and Switzerland.

The second largest cluster (green) is centered on Canada and five other countries. South Africa, Thailand, and four other countries form the third cluster (blue), with prominent collaboration links, as clarified by Hallinger's research activity at Mahidol University in Bangkok. Spain, along with four other countries, forms cluster four (yellow). England is at the center of cluster five (violet), while New Zealand, Singapore, Greece, and Scotland form cluster six (cyan).

Regarding the fourth question, Table 8 presents the top 10 most cited articles in the educational leadership domain from the WoS database. The most important article, based on the number of citations, is "The Impact of Leadership on Student Outcomes: An Analysis of the Differential Effects

of Leadership Types" by Robinson and Lloyd, in 2008³¹. When considering the total number of citations presented in the table, this specific article represents approximately 36% of the total number of citations. Specifically, this study highlights a correlation between transformational leadership and educational leadership, elucidating their significant impact on teacher effectiveness in influencing student outcomes. The article also advocates for the pursuit of impact studies on efficient teaching and learning among teachers in the field of leadership studies.

Table 8: The ten most cited articles

Title	Author(s)	Journal	Citations
The Impact of Leadership on Student Outcomes: An Analysis of the Differential Effects of Leadership Types	Robinson, Viviane M. J.; Lloyd, Claire A.; Rowe, Kenneth J.(2008)	Educational Administration Quarterly	1027
Instructional Leadership and the School Principal: A Passing Fancy that Refuses to Fade Away	Hallinger, Philip (2005)	Leadership And Policy In Schools	348
Educational leadership and student achievement: The exclusive search for an association	Witziers, B; Bosker, RJ; Krüger, ML (2003)	Educational Administration Quarterly	324
Culturally Responsive School Leadership: A Synthesis of the Literature	Khalifa, Muhammad A.; Gooden, Mark Anthony; Davis, James Earl (2016)	Review Of Educational Research	313
Bringing context out of the shadows of leadership	Hallinger, Philip (2018)	Educational Management Administration & Leadership	265
Systematic Review of Key Leader Practices Found to Influence Student	Hitt, Dallas Hambrick; Tucker, Pamela	Review Of Educational Research	157

³¹ Viviane Robinson, Claire Lloyd & Kenneth Rowe, *The Impact of Leadership on Student Outcomes: An Analysis of the Differential Effects of Leadership Types*, 2008. Educational Administration Quarterly 44(5), Retrieved from <http://doi.org/10.1177/0013161X08321509>.

Achievement: A Unified Framework	D. (2016)		
A review of the empirical research on teacher leadership (2003-2017) Evidence, patterns and implications	Dong Nguyen; Harris, Alma; Ng, David (2019)	Journal Of Educational Administration	83
The Nature and Effects of Transformational School Leadership: A Meta-Analytic Review of Unpublished Research	Leithwood, Kenneth; Sun, Jingping (2012)	Educational Administration Quarterly	211
Principals' leadership and teachers' motivation Self-determination theory analysis	Eyal, Ori; Roth, Guy (2011)	Journal Of Educational Administration	150

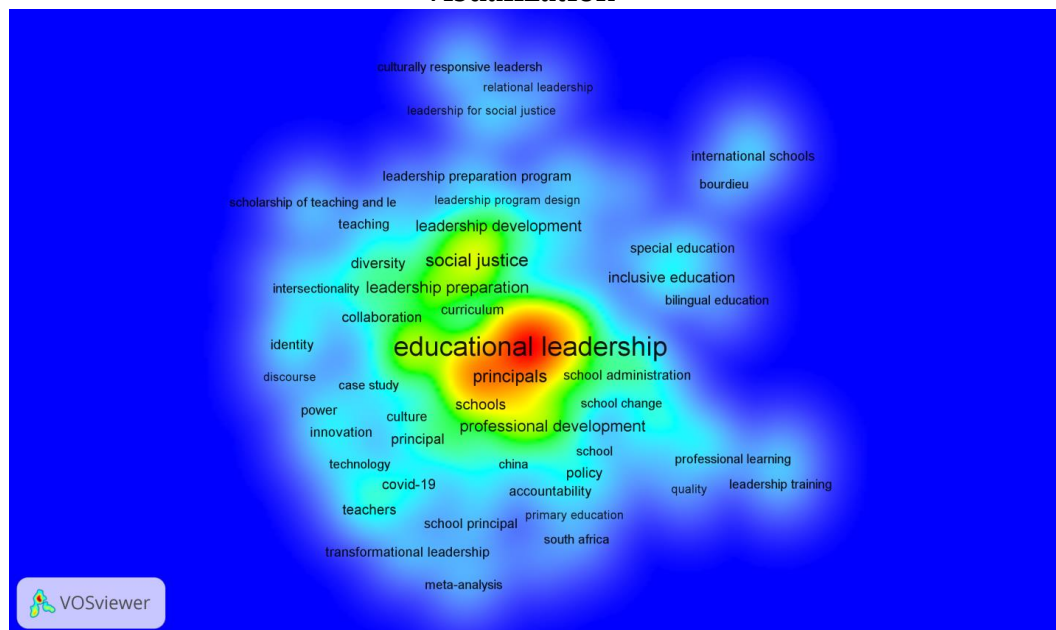
Source: Author's own research, based on data extracted from WoS and Scopus

Most studies in the analyzed literature conclude that there is no research that examines the impact of school leaders on student learning,³² as leadership focuses on roles beyond the classroom (politics, decisions), and ultimately addresses the effectiveness of student learning.

A particular importance is attached to identifying and analyzing the key words used by authors and their relationships. The processing of data using VosViewer software showed that the terms that appeared most frequently, aside from the term "educational leadership" (447 occurrences), were "leadership" (212 occurrences), "school leadership" (84 occurrences), "social justice" (66 occurrences), and "directors" (59 occurrences), "higher education" (58 occurrences), "education" (41 occurrences), "preparation for leadership" (37 occurrences), and "professional development" (34 occurrences). The analysis highlights the importance of identifying and analyzing key words used by authors and their relationships. The top 10 key words provide valuable insights into the focus of the analyzed literature, with "leadership" being the most frequently occurring term.

³² J.A. Wenner & T. Campbell, *The Theoretical and Empirical Basis of Teacher Leadership: A Review of the Literature*, Review of Educational Research 87 (1), 134-171, 2017, <http://doi.org/10.3102/0034654316653478>.

Figure 6: The most frequent keywords used by authors: Density visualization



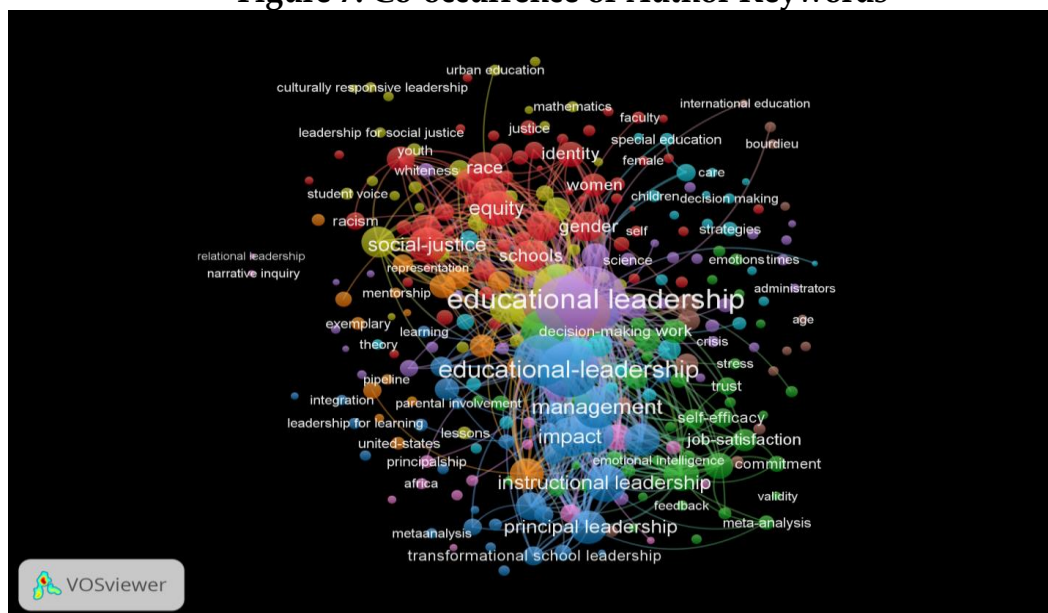
Source: Author's own research, based on data extracted from WoS

Figure 6 presents the most frequently used author keywords in educational leadership research. The findings indicate that 2,868 different terms were used as author keywords, of which 148 have a significant presence in documents. The two allocations "educational leadership ($f=266$)" and "educational-leadership" ($f=212$) are very well connected with "leadership ($f=238$)", "school leadership" ($f=217$) and "school improvement ($f=22$)". These relationships between keywords point to researchers' concern for improving institutional education, as well as the attention paid to the training of teacher leaders. Other commonly used keywords include "performance ($f=117$)", "achievement ($f=122$)", "principal leadership ($f=121$)", "improvement ($f=101$)" and "leadership preparation ($f=24$)". Additionally, notable author keywords include "educational administration ($f=23$)", "educational management ($f=21$)", "schools ($f=15$)", "leadership preparation ($f=94$)", "education ($f=187$)" and "higher education ($f=29$)".

Figure 7 illustrates the co-occurrence of key words used by the author. As a criterion, a minimum of 2 co-occurrences of key words were considered, and the analysis was performed on 46 key words. The analysis yielded six clusters, indicating evident links between diverse concepts,

such as "educational leadership-leadership training-social management." The proximity of words like "educational leadership," "leadership development," "school leadership," and "administration" to "distributed leadership" shows both a stronger relationship between these concepts and the identification of the main variables of an efficient school leadership.

Figure 7: Co-occurrence of Author Keywords



Source: Author's own research, based on data extracted from WoS

The co-occurrence analysis and clustering of key words provide valuable insights into the relationships between diverse concepts in educational leadership. The proximity of key words highlights the importance of considering multiple factors in an efficient school leadership.

The research findings provide an in-depth analysis of the evolution of the educational leadership theme over the past three decades, situated at the confluence of two pivotal domains: Education and Management. This confluence generates numerous practical and theoretical ramifications.

In particular, an interdisciplinary paradigm emerges, as evidenced by publications in respected journals that address various topics, including the variables underlying effective education, the ramifications of educational management, teacher development and training, as well as

the nuanced impact of leadership styles on both schools in general and individual students in particular.

Based on the search results, the main variables of effective school leadership include:

1. Defining the Vision, Values, and Direction: effective school leaders are able to clearly define the school's vision, values, and direction, which helps guide the school's improvement efforts³³.

2. Improving Conditions for Teaching and Learning: successful school leaders focus on enhancing the conditions for effective teaching and student learning, such as supporting teachers and creating a positive school culture³⁴.

3. Instructional/Pedagogical Leadership: research shows that instructional or pedagogical leadership, where leaders focus on improving teaching and learning processes, is important for promoting better academic outcomes for students.

4. Transformational Leadership, which involves inspiring and motivating staff, has been linked to positive effects on student engagement.

5. Distributed Leadership: effective school leadership is often widely distributed, with leadership roles and responsibilities shared across the school community. This can have a greater influence on school and student outcomes.

6. Personal Traits and Behaviors: a small number of personal traits and behaviors, such as emotional understanding, can explain a high proportion of the variation in leadership effectiveness.

7. Relationships and Collaboration: successful school leaders focus on building strong relationships and collaboration with teachers, parents, and the local community. This helps create a positive school climate.

8. Professional Development: effective school leaders prioritize the professional development of teachers and principals to continuously improve teaching and leadership practices.

In summary, the key variables of effective school leadership span visionary direction-setting, instructional focus, transformational

³³ Kenneth Leithwood, Alma Harris & David Hopkins, *Seven Strong Claims about Successful School Leadership*. School Leadership & Management. 28. 27-42, 2008. DOI:10.1080/13632430701800060

³⁴ Kenneth Leithwood, op.cit.

behaviors, distributed responsibilities, personal traits, relationship-building, and professional development. Successful school leaders are able to leverage these factors to positively impact teaching, learning, and student outcomes.

Conclusions:

The primary objective of this research is to identify the importance and evolution of the educational leadership concept by analyzing existing studies in pedagogical theory and practice. The current study reveals the bibliometric profile of published research on educational leadership between 1946 and 2024, using the Web of Science and Scopus databases.

The comparative analysis demonstrates unequivocally that Web of Science includes a significantly broader spectrum of articles on this topic, totaling 19% more articles than Scopus (2726 compared to 2229). Considering the fundamental questions highlighted in the introduction of this study, the Web of Science database offers more voluminous information regarding authors, sources, universities, and countries involved in investigating this subject, as well as complex interrelations between them due to citation frequency. Both databases, however, have enabled the creation of networks or maps that can illuminate the interconnections between authors, universities, and countries, thereby facilitating the monitoring of the emergence and progression of essential concepts in the field of educational leadership.

The comparative analysis found that the first articles appeared in the United States and the United Kingdom, but starting from the 2000s, the volume of published articles increased significantly globally, in countries such as Australia, China, Cyprus, Turkey, South Africa, and others. Document and keyword analyses revealed that "leadership" replaced "administration" and "management" as the dominant driving force in the content of educational management, administration, and leadership from 2012. Additionally, two domains were identified for future development of educational leadership: continuous improvement of its impact on education and international contribution to the formation of future generations.

Regarding the limitations of this study, it is important to acknowledge that the research utilized exclusively the Web of Science and Scopus databases, which could have led to the omission of relevant works indexed in other databases or journals, or even books published by various publishers. Another potential limitation lies in the selection of

search keywords, which were limited to the lexical families of the terms "leadership" and "education." Considering the substantial number of studies analyzed (approximately 4955 publications cumulated in the two databases), we consider that the study's limitations are minimal. As a result, the conclusions drawn offer a comprehensive and realistic description of this concept.

Based on the search results, the key trends in educational leadership over the past three decades include:

1. **Interdisciplinary Paradigm:** the concept of educational leadership has evolved at the confluence of the Education and Management domains, generating numerous practical and theoretical ramifications. An interdisciplinary paradigm has emerged, with publications in respected journals addressing topics such as effective education variables, educational management, teacher development, and the impact of leadership styles on schools and students.

2. **Theoretical Foundations:** the concept of leadership has been extensively studied, with the development of various theories and models, such as Transformational Leadership and Situational Leadership. There is a growing emphasis on the importance of leadership in education, with a focus on transformative leadership that inspires and motivates others to achieve educational goals.

3. **Organizational Culture and Values:** there is a trend towards decentralization of education systems and a focus on the unique culture and values of individual school organizations. School leaders are expected to support the cultural values and beliefs of the organization, both internally and within the community, in order to build an attractive school image and achieve educational goals.

4. **Shift from Management to Leadership:** there is a recognition that management and leadership are distinct dimensions, and that effective leaders must go beyond just managing tasks and processes. Increasing attention is being paid to developing leadership skills in managers, with a focus on obtaining better leadership results.

In summary, the evolution of educational leadership over the past three decades has been characterized by an interdisciplinary approach, a stronger theoretical foundation, a focus on organizational culture and values, and a shift from a purely managerial perspective to a more transformative leadership approach.

Future Research Efforts.

Future research efforts can enhance the applicability of the results by encompassing a broader range of publications and an extended set of keywords. These may include, but are not limited to, terms such as educational efficiency, educational management, teacher training, and other relevant subjects.

Prospective Research Directions.

Regarding prospective research directions, there is the potential to conduct more comprehensive co-citation analyses, as well as to expand the research domain to include models of educational leadership and the impact of leadership on educational outcomes. Such efforts would facilitate the identification and pragmatic analysis of significant variations in student outcomes attributed to the adoption of specific leadership styles by individual teachers. They would also contribute to the cultivation and evaluation of crucial competencies for effective educational leadership.

Implications for Educational Institutions.

Furthermore, this could pave the way for new research efforts by delving into the managerial implications of educational institutions on the educational landscape, thereby refining educational strategies with the teacher-leader at the center. The most cited articles have revealed the effect of the training program in improving the ethical awareness of leaders, structuring their judgment, and their overall professional conduct³⁵.

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³⁵ Ahmed, E. I., (2023). *A systematic review of ethical leadership studies in educational research from 1990 to 2022*. Educational Management Administration & Leadership, 0(0). <https://04115gw5i-y-https-doi-org.z.e-nformation.ro/10.1177/17411432231193251>

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LEADERSHIP SKILLS FOR THE 21ST

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***Abstract:** Leaders play a crucial role in an organization where they guide through a rapidly evolving environment. Additionally, leaders today must possess knowledge of 'leadership' due to the crucial role it plays in the era of technological advancement. Technological advancement has resulted in significant changes in both personal lifestyles and work environments. Every organization must adapt to changes to stay current. Having this skill will empower you to lead organizations effectively and propel them toward success. Leadership in the 21st century must have the knowledge and ability to focus on managing personnel changes in every aspect of the organization. Inspire all staff members to work together to drive organizational change during competitive and crisis conditions in the 21st century. As mentioned above, leaders will be able to drive the organization toward achieving its future goals successfully.*

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Introduction

A leader is a person who plays an important role in creating, understanding, and being able to use power to motivate others to achieve organizational success. Although a leader is not a person who directly sets out to perform a task, a leader is a person who provides support, assistance, and guidance to followers or practitioners. Therefore, leaders must have a range of skills, including technical, communication, critical thinking, and decision-making abilities to achieve benefits: organizational the most. Therefore, excellent leaders should study the concept of leadership, which involves being wise, compassionate, knowledgeable, and capable of guiding organizations or individuals to reach their goals¹.

Modern organizations encounter highly competitive economic, social, political, and technological landscapes that constantly evolve and pose challenges. Organizations that strive for excellence must adapt to changes by developing human resources across various management levels and fostering strong leadership skills². It is evident that leaders, beyond their authoritative roles, must demonstrate dedication and empathy towards their followers. Trusted individuals naturally boost morale, fostering a belief in their potential and creating a positive, enthusiastic work environment. All of these have led to leadership skills that can make changes and establish a participatory team. Establishing consistent connections in a unified manner results in a strong, stable, and sustainable organization³.

knowledge of Leadership

Leadership is the ability to guide and is essential for a leader's success. This is a key reason why the concept of leadership has been extensively studied. It aims to understand the essential elements that contribute to

¹ N. Ninpeng, Change agent in the 21st century, *Nursing and Health Care*, Vol. 35, No. 1, 2017, pp. 16-19.

² A. Auareesuksakun, and T. Chuntuk, Transformational leadership: Changing challenges to achieve organization sustainability, *Veridian E-Journal*, Silpakorn University, Vol. 9, No. 1, 2016, pp. 845-860.

³ C. Thawinpipatkul, *Creating transformational leaders based on human values*, 2020, Available at: <https://www.posttoday.com/life/work-life-balance/636446>

effective leadership. In addition, leadership includes motivating and guiding groups toward specific goals through actions like giving directions and providing support⁴ (Phonchai, 2020). This refers to an individual's behavior when interacting with a group, reflecting a personal trait. In terms of skill, they are developed through collaboration and shared experiences, where individuals working together contribute to the group's progress and success. Personal experience and training play a role in how effective leadership is, affecting areas like decision-making, communication, and problem-solving skills. A leader must have the ability to inspire subordinates to reach their full potential, especially during organizational changes, by motivating them to excel in their roles.

Leadership is intricate due to its multifaceted nature, encompassing various interconnected elements. However, through dedicated efforts and rigorous training, leaders can develop vital skills such as adaptability, emotional intelligence, and strategic thinking to navigate this complexity effectively. Hence, leadership is crucial in adapting work procedures and processes for successful organizational management. It is also important to prioritize personnel at all levels, with a particular emphasis on transformational leadership. This leadership style involves inspiring, nurturing, and empowering colleagues to surpass expectations, fostering a culture of continuous improvement and innovation within the organization. Effective and transparent communication within an organization is vital for establishing trust, encouraging acceptance, and fostering collaboration among team members. Communication serves as the cornerstone for ensuring alignment, cooperation, and the realization of the organization's common vision.

In summary, leadership is a process of motivation that leaders use to direct, convince, or direct followers to follow to achieve the set objectives. The effectiveness of leadership varies based on the individual's experience and training. The level of leadership exhibited is directly influenced by the depth of experience and the quality of training received by each person. This motivation encourages subordinates to work to their full potential and is a key factor in modifying work procedures efficiently for effective management.

⁴ R. Phonchai, Leadership and administration in the digital age, *Journal of Humanities and Social Sciences, Mahamakut Buddhist University Isan Campus*, Vol. 1, No. 3, 2020, pp. 53-62.

Leadership and crisis management

At times of crisis, whether in the organization or the country, the leader of the organization is regarded as a very important person because, during this period, the employees have only fear, anxiety, and uncertainty about their future, etc. The leader of this organization will be the one who builds confidence in the employees of the organization. So, when a crisis occurs in the organization, the management that has been done under normal circumstances will not be immediately applicable. We need to rethink and plan all the administrative changes. The goal is to get the organization through the crisis eventually. The role of a leader is important⁵.

- In normal circumstances, leaders may have orders. The progress of work can be checked in order, but in a crisis, leaders can no longer live in order because it's too slow, and more than being presented, each issue, whether assignments are assigned to each level, must not be on top of the crisis. So, in the most important case, they have to run straight to the leader of the organization at all times. To get all the details from the work page, it really should not be filtered, and then filtered again. In the case of the leader, everything becomes good. There is nothing to worry about. This will not solve a crisis.

- In-depth in the relevant information, leaders usually don't go into the information. Each manager manages and looks at the outcome according to the objective. The sub-manager has to follow the instructions, but if it's in a crisis situation, leaders will have to draw important information into detail to make decisions as firmly and accurately as possible. Multi-layer filtered information will cause a lot of distortion and may not really make a decision.

- Have a clear goal during a crisis. The goal is to get through the crisis first. So the leader should have a clear target, what to do during this period when to do it, and how long after the first step we can move on to the next step. So, normally, the goal of our business is to generate profits and build sales, but during a crisis, we will not be able to use that goal, and we will have to change the goal again. How do we survive this period? What is the most important thing about keeping the organization out of crisis? Other things, even if there are consequences, must be

⁵ Y. Jakkhom, and V. Chamruspanth, Roles of Leadership on the Crisis Management in the Situations of the Corona Virus 2019 (COVID-19) Pandemic in Thailand, *Journal of Politics and Governance*, Vol. 13, No. 2, 2023, pp. 1-19.

overcome. Just don't forget to plan for improvement or remedy after the crisis is over.

- Communicate clearly and communicate frequently in crises. Employees are confused. People have a lot of opinions about themselves. To avoid confusion, leaders need to communicate regularly about what they're going to focus on during this period, ahead of time, etc., confidently, reasonably, and with the right information. And, most importantly, clear goals are well planned in a crisis where only urgent situations have to be resolved and decided, leaders should skip some of the rules, such as when an event occurs and a meeting has to be called immediately. Do not wait for work time; just sit down or fix something if it occurs on a holiday. Instead, do it immediately, but say, this is a holiday; don't work; let it work before it gets fixed, etc. This way, it will be fixed and decided immediately.

- Encourage the staff, show sympathy, understand the feelings of every employee, stand next to the staff and go to work in the street, and help the staff do some necessary work, not just sitting in their own office, never lulling down and looking at the staff who do the work in front of them.

Good leadership skills and abilities

Having strong leadership skills is crucial for individuals in the working class, particularly in today's fiercely competitive environment. Strong leadership skills increase your likelihood of being selected. Additionally, demonstrating the mentioned skills can make a positive impression on your employer, starting from the interview and aiding in your swift advancement in your chosen career. Leadership is not only necessary at work, it's essential to remember that humans are inherently social beings who often live in large communities. In group settings, the presence of a leader with the ability to manage human resources, solve problems, and allocate resources is crucial for achieving common goals. The term "leadership" or "leadership skills" encompasses a range of abilities beyond executive roles, including insight, emotional maturity, creativity, effective communication, and more. Regardless of your background—whether in terms of gender, age, position, or role—leadership is a skill that is essential for everyone, with limitless applications.

1. A good leader must know how to solve problems. Effective leadership involves addressing challenges by prioritizing rationality over

emotions, analyzing situations objectively, and methodically resolving obstacles to ensure timely completion of tasks, recognizing that some issues may require letting go.

2. Active listening is a fundamental trait of a good leader. Listening is a fundamental skill that is often underestimated, despite the constant influx of information and stories in our daily lives. It has been proven that listening is not limited to the speaker alone. Listening is a very simple skill, and you only need to use your heart to understand the intentions of the speaker. Only in this way can the speaker feel your sincerity without having to comment on these stories. However, by actively listening to questions, you can receive valuable suggestions. Of course, one can provide suggestions on how to solve problems, regularly pass on positive energy, or encourage team members. As an individual's listening ability improves, their leadership skills will strengthen with increased listening.

3. A good leader must be decisive. To be a good leader, "decision-making" is one of the top must-have skills because effective leaders need to be able to make decisions and solve problems in a short period under the conditions of time, resources, and various limitations. The more experience you have in management, means more advantageous, especially if you already have expertise in the field despite any limitations. Therefore, it is not surprising that good leadership skills are paired with decisiveness, because that is what helps to solve the problem successfully under many limitations.

4. A good leader must be honest. Honesty is the foundation of many excellent skills. I believe some people understand that honesty is only a question of honesty. Honesty is also a question of faith. Adhere to ideals and fairness, including adhering to the correct ideological principles. Don't forget that many times in leadership itself, one may have to decide to choose a side or punish those who repeatedly make mistakes on the original problem. Every time such a decision is made, a good leader must solve the problem based on honesty, even if the decision may not be loyal to the opinions of the majority.

5. A good leader often performs good management. Sometimes, using strict methods to solve problems with certain people may not be effective. One of the skills of good leadership must be combined with good management. Understand which methods to use for managing different individuals or situations. Some people like hardwood, and some people prefer softwood. Of course, it's a good idea to manage anything, it's necessary to have the art of communication, put your ego aside, and listen

to your teammates' opinions. Then put it to use. To reach the goals that were set smoothly over time, having good human relations is the foundation of excellent management. Developing the skills for good leadership can vary in difficulty, sometimes being easy and other times challenging. Therefore, practicing and applying it in your daily life by developing these skills allows us to cultivate unique and intriguing strengths.

10 outstanding characteristics of successful people

Being a successful leader is a challenging journey that depends on personal experience and the dedicated pursuit of set goals. This will make the work successful and help achieve the goals that have been set. In addition, you must accept the changes that occur all the time. By adapting to changes, maintaining self-confidence, and valuing the opinions of others, you accept diverse perspectives from those around you. Having a positive outlook and working diligently can lead to success. The 10 outstanding characteristics of successful people are:

1. Dare to change yourself all the time. It may seem obvious that change is a positive act, but few people are willing to change on their own. Fear of various things, such as failure, rejection, damage, etc., makes us choose to stay in a familiar area (comfort zone), which is equal to stagnating in a place with no progress at all in our work. Therefore, you must dare to change yourself and do increasingly difficult things. You will gain experience in life that will make you more courageous to do it.

2. Have a clear goal in life. To be successful, you must dare to set a goal, and it should be clear. Without a goal, life can drift aimlessly, leading to an unsuccessful life. Once you've reached your aims, you'll be able to set even more goals, and you will become more and more successful. Many people rarely set goals for what they will do. At each specific time, such as this year, this month, this week, or today, think that you already have a lot of work. If sometimes it doesn't work, try setting it again, and it will succeed. Most people who have had a lot of success will explain the goal clearly until you can see the picture.

3. Face failures and start over. This notable trait is present in every successful individual, as they persist and work diligently even in the face of failure because every job has an unexpected outcome. Even if you are so well prepared, you may encounter obstacles to failure. Therefore, if you always tell yourself that failing is not a shameful thing, but if it is shameful not to stand up and learn to face the obstacle, then the

determination to succeed is not difficult. Just like every successful athlete, they will encounter countless failures and just don't give up, which they will eventually succeed.

4. Commit to your idea and work until it is achieved. Having faith in oneself nurtures confidence in one's ideas, highlighting personal perspective over stubbornness. Regardless of others' opinions, I will endeavor to prove my capabilities and persist with my ideas until I achieve success. Many leaders cause their subordinates to lose confidence without realizing it. They will keep saying that it's not good and shouldn't be done because the boss sees the limitations, but actually, it's equal to blocking the subordinates from thinking for themselves. Finally, that subordinate will have no thought at all and eventually will be a person who lacks self-confidence, like many people who are leaders. You should be careful about this; you have to encourage them to carry out their ideas until they are successful.

5. Live less when you feel bad than when you feel good. Our lives have ups and downs; no one will have a good life forever, and no one will have a bad life forever. The key is to manage both negative and positive emotions effectively by reflecting on the events themselves. If you can control bad feelings for a short period and try to maintain good feelings for a long time, it will make your life more enjoyable or happy, lead to a smooth working life, and be successful in the end. Each person's work-life experience can help in this regard. For example, people who have been through many crisis events will understand. And don't dwell on nonsense such as depression, boredom, and laziness because you know it's useless, so you'll let the bad feelings stay for just a moment. Then you can stimulate yourself, and you can move on. For those with little experience, you must gradually continue to train yourself to become a better version.

6. Listen to criticism from others well. Knowledge is everywhere we pass; therefore, listening to others is especially important. Reviews from others: if anyone can listen a lot, they will be very successful because criticism can be translated into something that can be improved. Don't listen to what he has to say. Therefore, if you are an open person, there will be more things coming your way and more opportunities to choose good things. As for bad things, you won't have to accept them, but listening to criticism will give others the courage to talk more, including bosses, co-workers, and subordinates, making working through people better. In the end, you will be a successful person.

7. Have a positive attitude towards things, rather than having a negative attitude. "What I mean here is to have confidence in what I have done, be willing to accept the consequences of failure, and encourage myself to do it again until I succeed. Instead of imagining bad things before they happen, I always think positively about what I have done so that I can work hard and hope to succeed." Imagination can lead people to react positively or negatively to situations based on their emotions. However, if we control a positive attitude towards things, we will do many different things, and the result or work will become better, and then, like most successful people, etc.

8. High leadership ability. A leader refers to someone who is willing to do what they want to do. Therefore, a leader is very different from a manager. Managers enforce obedience to orders, while leaders inspire compliance through incentives. In work and life, there are both managers and leadership skills, but if any manager has high leadership skills, the chances of success are greater. It can be said that successful people have a high level of internal leadership.

9. Pay attention to others. Every successful person doesn't manage alone; there must always be other people involved in the work. If anyone says that they can succeed alone, it shows that the person must have misunderstood something for sure, because no great person can complete a task on his own. Thus, genuinely valuing others is a crucial distinguishing trait for achieving success. It can be seen that whoever has a great team and works as a team will be highly successful. Giving importance to others means Engaging others in your vision, values, and plans motivating them to achieve their maximum capabilities. By recognizing their worth and treating others respectfully, you pave the way for your success.

10. Act recklessly. Successful individuals fearlessly embrace failures and promptly act on any idea. But don't underestimate it, because there must be information before taking action. Begin by creating a clear plan; otherwise, the task will remain incomplete. In other words, there are certain life steps, and you will never stand a chance. Instead, view failure as a stepping stone towards eventual success, as it provides valuable lessons.

Characteristics of transformational leadership in the 21st century

In the 21st century, many scholars define the attribute of transformational leadership as multidimensional, as follows:

⁶Kama (2020) mentioned that the characteristics of change leaders in the 21st century consist of four skills: 1) Communication skills; 2) Creativity skills; 3) Vision skills; 4) Cooperation skills; and 6 characteristics: 1) Must be a visionary; 2) Must have confidence; 3) Must value and focus on people; 4) Must have good communication and listening skills; 5) Must show proactive behavior; 6) Must have the courage to take risks.

⁷Khalid et al. (2022) discussed seven key aspects that leaders should focus on for skill development: 1) Establishing and developing teams; 2) Thinking about strategic planning with foresight; 3) Leader's personalized consciousness; 4) Communication and interaction with human resources and stakeholders; 5) Analyzing and solving problems; 6) Maintaining resilience in risk and adventure situations; and 7) Making timely decisions in crises.

⁸Malik (2021) summarized research from Gartner, a research and advisory company for leading global corporate leaders, and discussed the eight key factors of effective change leadership, including: 1) having a clear vision; 2) creating operational strategic plans; 3) building in-depth relationships with personnel and stakeholders; 4) driving change with technology; 5) effective and transparent communication; 6) confronting risks and resisting change; 7) teamwork throughout the organization; and 8) engaging employees in taking responsibility. This improves the performance of the team, creates a sense of belonging, and drives organizational growth along the way.

⁹Sandmann & Vandenberg (1995) defined seven key characteristics of transformational leadership: 1) Setting a shared vision; 2) Participating in teamwork; 3) Learning from strategic planning and carrying out practice and reflecting on learning results together; 4) Building relationships among personnel; 5) Developing competency or potential of personnel; 6) Working as a team; 7) Communication.

⁶ M. Kama, The Characteristics and Roles of Transformational Leaders for School Administration in the 21st Century, *Buabandit Journal of Educational Administration*, Vol. 20, No. 1, 2020, pp. 92-106.

⁷ B. Khalid et al., *Venture Leadership under Uncertainty: An Emerging Country Perspective*, 2022, Available at: <https://www.intechopen.com/chapters/80803>

⁸ P. Malik, *Change Leadership: How to Lead Change Effectively* (2022), 2021, Available At: www.whatfix.com/blog/change-leadership/

⁹ L.R. Sandmann, and L. Vandenberg, *A Framework for 21st Century Leadership*, 1995, Available at: <https://archives.joe.org/joe/1995december/a1.php>

Leadership in the 21st century

Leadership is crucial in modern management due to the understanding of key management principles and theories. As the working environment is constantly changing, there is a competition for excellence. To be successful, a manager must constantly adapt and evolve as a leader. A manager must always learn new things and develop themselves to be successful. This approach motivates and satisfies employees through effective leadership in modern management practices. Scholars have introduced various 21st-century leadership models in contemporary administration.

1. Knowing means that a good leader in an organization needs to be careful about the issues he or she manages for the administration to be successful. Developing leadership traits in the 21st century involves:

- Scientists in various fields of science are those who make an effort to continuously learn. Leaders need to apply knowledge effectively to their management responsibilities.
- The art of knowing how to manage an organization. The technique of working to make organizational management successful. Achieving organizational goals.
- Skill in managing the responsibilities of the entire organization. Leaders always have to train their managerial skills and lead people for the survival of the next organization.

2. Ideology means that an effective leader should possess a diverse range of attributes, including faith. The primary thought, which influences as a guide and direction of the thought of the individual, in particular, uses members of the same unitary organization, holding the same ideals all the time. All members of the organization need to uphold good management ideals.

- Adhere to ethics within the framework of national culture.
- Self-confidence, courage based on a certain hold, but a sense of responsibility.
- Being responsible to yourself and society.
- Be honest with yourself or others and avoid any dishonest behaviors.

3. Timely awareness is crucial for 21st-century leaders to possess qualities such as adaptability and risk management skills. As suddenly as

the state of affairs changes, the situation consists of the following motioned factors.

- Being attentive to Thai society and the ever-changing world requires the organization to adjust itself.
- Responding to the current situation requires self-training similar to the utilization of information technology in today's institutions.
- A good leader must know how to manage risks to manage effectively and meet the challenges of the current situation.

4. Discussion Courage means that the leader will lead the organization to success. A leader must swiftly grasp the concept of precision.

- The courage to carefully consider any risk-based action based on accurate information, not a prediction or chance risk.
- The courage to invest in innovations that will lead the administration. The courage to introduce new techniques to the organization.
- Dare to admit guilt if the administration fails.
- The courage that you and your staff have given to accomplish objective work, including the courage to decide to punish unintentionally or potentially causing corporate damage caused intentionally, but this must be based on the principles of fairness and always secrecy.

5. The strategy of vision means that modern leadership has to look far. Relying solely on innovative ideas supported by credible data. Do not recognize the old concepts; look ahead and introduce the key ideas, techniques, and modern methods, as well as find new techniques to be implemented in the organization by the leader, which should have the following characteristics:

- Look far and try to accomplish what you intend with patience.
- A wide view of the world. A multidimensional view.
- Convince others to follow.
- Strategy to cover all aspects.

6. Create a team. (Teamwork) A good leader with advanced ideas needs to know how to build a team and a partnership. Well, those teams or networks will be the driving force for management to succeed quickly, because teams are considered to be the heart of modern management.

Leaders cannot work without teams. Nowadays, societies are so complex that organizations cannot live alone. So, for organizations to work successfully, goals must be achieved effectively. Team-building and networking are very important. Team building can be separated into five points.

- Build a trusted team for all tasks.
- Trust in the team. It means to believe in the abilities of every team.
- Commit the team to the individual's abilities.
- Shine. Take care of the team with pride and enthusiasm.
- Responsible for what happened, both the good and the bad parts of the team's mistake.

7. The concept of the service mind pertains to the management approach in modern organizations. A living organization. Everyone in the organization has to work together. Work collaboratively. Leaders should not solely depend on issuing commands for effective leadership. Leaders must lead based on friendship, dignity, and a good spirit. Work as a model for the staff of the organization. In the work, the executive should check the work at every step so that the problem can be resolved on time. Addressing work issues promptly incentivizes organizational personnel to perform effectively. The service of the leader may be divided as follows:

- A good leader must learn to sacrifice to be a donor rather than a recipient.
- A good leader has to be patient, wait for the right time before taking any action, be careful, and complete.
- A good leader must have mercy and be merciful to everyone.
- Learn to look on the bright side.

Conclusion

The importance of leadership in corporate management in the 21st century for operational success needs to develop their leadership skills, and attributes and enhance their potential in all areas, both strategically, communicatively, personnel developmentally, and systematically. To prepare for new changes to take place in a changing environment, they must seek opportunities from both internal and external environments and leverage their corporate resources to maximize efficiency. To operate an organization that responds properly to changing situations, as well as being able to solve problems promptly with effective methods. Therefore,

the significance of successful leadership depends on the expression in which leadership focuses on the involvement of staff in driving the process of change at every stage. By driving the strategy, training requires skills to enhance the capacity of people to work effectively. Encouraging active participation in organizational development and leadership facilitates further change within the organization.

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HISTORICAL ROLES OF WOMEN IN EDUCATION: A COMPARATIVE ANALYSIS OF JAPAN AND ROMANIA

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Abstract: *The development and evolution of a country's education systems reflects the gender roles at a specific time, as well as various ethnic or class dynamics. The roles of women in education have evolved significantly across cultures and historical periods. The present paper traces the evolution of the Romanian and Japanese education systems and compares the roles and contributions of women in education in Japan and Romania, examining the socio-cultural, economic, and political factors that shaped women's education in these two countries. It also addresses the influence of leadership role models in education on empowering future generations of educated women.*

Keywords: *women in education, Japan, Romania, gender discrepancies, role models.*

1. Introduction

The present study has two main reasons. Firstly, the authors have personal connections with both countries, being born and raised in Romania and having extensive experience with Japanese culture and society. Secondly, despite the distinct historical evolution of Japanese and Romanian women's roles in education and society, the two countries have numerous commonalities. The present paper aims to highlight the trajectories of women educators in the two countries throughout history, and examine how gender roles have evolved in distinct political systems, cultural, and socio-economic conditions.

This comparative study is significant for several reasons. Firstly, both countries have a history of traditional gender roles, but they have taken different paths due to unique socio-political changes and societal shifts.

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Secondly, both countries have implemented reforms to promote gender equality in education. Thirdly, understanding the factors that have contributed to or hindered women's educational opportunities in different contexts is necessary to empower women and promote social change. Highlighting role models and successful initiatives can inspire similar efforts in other regions. Lastly, while there is a substantial body of research on gender equality and education, comparative studies are less common. This study aims to contribute to the academic literature by providing a nuanced understanding of how different historical, cultural, and political contexts have influenced women's roles in education.

2. Women's education in Japan and Romania: Meeting points

2.1. Traditional gender roles

The evolution of women's education in the two countries has certain common traits. Religion played a significant role in maintaining traditional gender roles. In Japan, for example, Confucian ideology historically placed women in subservient roles, prioritizing domestic responsibilities over education¹. In Japan, the traditional ideology of "good wife, wise mother" (*ryosai kenbo*) defined a woman's place in the household and emphasized her responsibility to protect the household, support her husband and raise good, reliable citizens². Women's role in society is succinctly explained in 18th century *Onna daigaku* (Greater Learning for women), attributed to Kaibara Ekiken, a famous Edo moralist: "...it is a girl's destiny, on reaching womanhood, to go to a new home, and live in submission to her father-in-law, it is even more incumbent upon her that it is on a boy to receive with all reverence her parent's instructions. Should her parents... allow her to grow up self-willed, she will infallibly show herself capricious in her husband's house, and thus alienate his affection"³. Women were expected to display "gentle obedience, chastity, mercy and quietness", and were responsible for children's education, housework, managing the household and serving the husband's parents⁴.

¹ Yoshio Sugimoto, *An Introduction to Japanese Society*, Cambridge University Press, 2014.

² *Ibidem*, p. 86.

³ Kaibara Ekiken and Takaishi Shingoro. *Women and wisdom of Japan*. London: The Orient Press, 1905, p. 33.

⁴ *Ibidem*, pp. 34 and 40.

Similarly, in Romanian society, the evolution of education reflected the gender roles at a specific time, as well as the ethnic, class or economic conditions. Influenced by Christian traditions, considers a woman's household duties as paramount. Romanian women were also expected to raise good patriots and Christians, as it was believed that in order to have good Christian citizens, there needed to be good Christian mothers who would instill religious and patriotic principles into their sons⁵. Sofia Nadejde (1856-1946), a Romanian novelist, journalist and feminist activist, complained in an 1883 article from the progressive weekly magazine *Contemporanul*, entitled "Male Chicaneries" that: "Many are the hurdles encountered by women who want to enrich themselves with the sweet benefits of knowledge."⁶

2.2. Early times and the beginnings of equal education

In both countries, the push for equal education was influenced by Western ideals of modernization and equality. In Japan, women's education began to develop during the Meiji Restoration (1868-1889), influenced by Western philosophies that promoted gender equality, such as the writings of John Stuart Mill and Herbert Spencer. Prior to this, during the Tokugawa shogunate (1603-1868), there were significant gender disparities in education, with limited opportunities for women based on social status and occupation, as well as a focus on Confucian ideology that prioritized men's education⁷.

The Education Act of 1872 in Japan mandated public elementary education for both boys and girls, laying the foundation for wider acceptance of women's education⁸. The Act was initially met with resistance, with only about 6% of elementary school-age girls enrolled in public educational institutions in 1873. Nevertheless, the movement

⁵ Ion Heliade Radulescu, *Curier de ambe sexe*, 1837.

⁶ Sofia Nădejde, „Șicane bărbătești” (“Male Chicaneries”), in *Contemporanul* (*The Contemporary*), Year III, No. 8 (1883), pp. 312-315, apud Ștefania Mihăilescu, *Emanciparea femeii române. Antologie de texte: Vol. I, 1815-1918* (*The Emancipation of Romanian Women. Anthology of Texts: Vol. I, 1815-1918*), Bucharest: The Ecumenic Publishing House, 2001, 218-220.

⁷ Riza Afita Surya, and Teresa Angelina Kaluge. "The State of Women and Women's Education at the Beginning of Tokugawa Shogunate (1603-1651)." *IZUMI* 10, no. 1, 2021, pp. 119-130.

⁸ Marina Teresinha De Melo Do Nascimento, "Women's Liberation in Meiji Japan: Ruptures in Cultural Conceptions of Female Education, Social Roles, and Political Rights." *Intercultural Relations* 4, no. 2 (8), 2020, pp. 151-175.

gained momentum, and by the end of the Meiji era (1912), approximately 97% of girls were enrolled in state-owned schools⁹. However, most pre-war policies for women's education were still aimed at preparing them for future roles as mothers and wives¹⁰. The first institution of higher education for women, Tokyo Women's Normal School (later known as Tokyo Women's Higher Normal School, currently Ochanomizu University) was established in 1875. The Higher Girl's School Order, enacted in 1899, established secondary education as a tripartite system consisting of middle schools, practical vocational schools, and girls' high schools¹¹. Middle schools for girls became "higher schools", while boys' middle schools continued to be referred to as "middle schools"¹². The intention behind this was that middle school education was considered the highest level of education girls should receive before marriage at that time. After the reorganization, the government issued the Professional College Order in 1903 in response to the demand for human resources with specialized education. This order allowed middle school or girls' high school graduates to receive specialized training in various subjects, including medicine, pharmacy, law, engineering and commerce¹³. At the beginning of the 20th century, six private higher education institutions were established, including Japan's Women's University, Tsuda Women's English College, Women's Specialized English College of Aoyama, Kobe Women's Special College, Doshisha Women's College, Tokyo Women's Medical College, Sacred Heart Specialized Higher School, and Tokyo Woman's Christian College¹⁴. These women's colleges taught selected elite pupils in fields such as humanities, home economics, social welfare, pharmaceuticals and science¹⁵. However, it was not until the end of World War II that girls were finally allowed access to the exclusively male Imperial Universities, which prepared the top elite for employment in government service¹⁶.

⁹ Benjamin C. Duke, *The history of modern japanese education: constructing the national school system, 1872-1890*. Rutgers University Press, 2009.

¹⁰ M. Amano, *Joshi kouto kyouiku no zahyou* [Issues of women's higher education]. Tokyo: Kakiuchi Shuppan, 1986.

¹¹ https://www.jica.go.jp/Resource/jica-ri/IFIC_and_JBICI-Studies/english/publications/reports/study/topical/educational/pdf/educational_02.pdf

¹² Usui, Rose, and Kageyama, *op. cit.*, p. 101.

¹³ JICA, *ibid.*

¹⁴ Usui, Rose, and Kageyama, *op. cit.*, p. 101.

¹⁵ *Ibidem.*

¹⁶ JICA, *ibid.*

The historical and multiethnic particularities of Romania give a multifaceted aspect to its education history. The first records of a school in the territories inhabited now by Romanians mention a German primary school in 1380 in Sibiu, which was one of the Siebenbürgen, or seven Saxon fortresses of Transylvania¹⁷. German schools soon multiplied, in 1522 being recorded the existence of the Uphill School of Sighisoara (where teaching was probably done in Latin) and in 1541 the Higher Evangelical Saxon School of Brasov (where teaching was done in German) is founded. In 1722 compulsory education was introduced for the Saxon nation. Meanwhile, the Calvinist wife of the Transylvanian Prince Gheorghe Rákóczi I, Zsuzsanna Lorántffy, founded the first Romanian middle school, in the city of Fagaras, in 1657.

In the other parts of Romania, that is the Principalities of Wallachia and Moldavia, schooling was practically inexistent. The sons of the princes had private tutors and learned to write in the Slavonic alphabet, or in Greek, and official court documents were prepared by scribes such as *Athanasie*, or *Mircea the Calligrapher*, attested at the middle of the 15-th century in Moldavia¹⁸. The church language was also Slavonic.

In 1634, an Academy was founded in the Moldavian capital, Iasi by the ruler Vasile Lupu, with teaching being done in Slavonic and Latin, organised on the model of the Academy in Kiev, from where teachers were sent. In Wallachia, the ruler founded the Princely Academy of Bucharest, in 1694. It was the first higher school, where instruction was offered only in Greek. In 1774 French and Italian were added to the curriculum.

During the Austrian rule in Transylvania (late 17-th to mid-19-th centuries) instruction was done either in Latin or in German, but some schools in Romanian language were organized by the Greek-Catholic Church in the 1750-ies to 1780-ies (up to 300 schools). As Hungary took over the Principality of Transylvania in the newly formed Austro-Hungarian Empire in 1867, Hungarian became the main language in administration and education, and the situation of both German and

¹⁷ German colonists were given land by King Géza II of Hungary, in mid 12th century, in order to defend the eastern frontiers of the Kingdom of Hungary (which at the time comprised Transylvania as well), according to the *Golden Bull* issued by King Andras II, in 1224 (cf. [The German colonists. The Universitas Saxorum \(alanier.at\)](http://alanier.at), accessed at June 22, 2024)

¹⁸ N. Iorga, *Istoria învățământului românesc (A History of Romanian Education)*, Didactic and pedagogical Publishinh House, Bucharest, 1971, pp. 3-5

Romanian children worsened. Private schools teaching in Romanian had to be organized in the 1870-1880-ies by Romanian cultural associations.

Romanian society of the 19th century was westernized, following the French cultural model. The first university in what was to become modern Romania was founded in Iasi in 1860, and in 1864 was founded the University of Bucharest. The Law of Education adopted in the same year (1864) made primary education compulsory. This law guaranteed four years of free elementary education for boys and girls aged between 8 and 12, and laid the foundation for secondary education for girls¹⁹. The Romanian reform was rather pioneering for its time, considering that in Prussia elementary education became compulsory in 1763, in Sweden in 1842, in Norway in 1848, in France in 1882, and in Spain only in 1931²⁰.

However, there were disparities in the educational content and duration of secondary education between boys and girls. Girls received less instruction and had two fewer years of schooling than boys²¹. Education reforms led by Spiru Haret between 1898-1899, enabled women's access to universities. They were based on his belief that "no reforming measure can be truly efficient in the Romanian modern society unless all social classes can enjoy its benefits and unless all social categories contribute to its practical accomplishment"²². Two important laws were enacted between 1898-1899: the Law regarding the Secondary and Higher Education and the Law Regarding Vocational Education. The former divided secondary schools into first-degree schools, with a duration of five years, and second-degree schools, with a duration of six years, at the end of which a graduation certificate was issued that allowed girls to enroll in universities. The Law Regarding Vocational Education was aimed at providing vocational instruction for women who opted for non-academic occupations²³.

The access of women to higher education was slow to come about, but increased steadily after 1900. Some data place the possibility of women to

¹⁹ F. Diac, *O istorie a învățământului românesc modern (A History of Modern Romanian Education)*. Vol. I. Oscar Print Publishing House, Bucharest, 2004.

²⁰ Pavla Miller, „Gender and Education Before and After Mass Schooling” in Teresa A. Meade and M. E. Wiesner-Hanks (ed.), *A Companion to Gender History*, Malden & Oxford: Blackwell Publishing, 2004, p. 131

²¹ Magda-Elena Samoilă, "Romanian Women's Education and Social Activism at the End of 19th Century." *European Proceedings of Social and Behavioural Sciences*, 2018.

²² Samoilă, *ibidem*, p. 860.

²³ Samoilă, *ibid.*

study without any restrictions in universities in the year 1895²⁴. For example, at the University of Bucharest, women represented 7,4% of enrolled students between 1901-1905, 15% between 1911-1915, and in the year 1929-1930 there were approximately 10.000 women students enrolled in all Romanian universities, which represents a growth of another 13%.²⁵ What is interesting to note is that between 1921-1930, the number of girls enrolled in universities tripled, while the number of boys enrolled grew only with 40%²⁶.

2.3. Gender disparities in education after World War II

After World War II, educational reforms were implemented with the aim of providing equal access to education for both genders. In Japan, these reforms were imposed by the American occupation forces²⁷. In October 1945, the Occupation Forces announced four orders for education, which established an educational structure similar to that of the US and promoted coeducation at all levels. Pre-war higher education institutions for men were encouraged to admit female students, thus increasing women's access to education²⁸. A milestone in ensuring equal education opportunities for all citizens was the 1947 Basic Act on Education²⁹. In 1948, five former private women's higher special schools were transformed into four-year institutions: Japan Women's University, Tsuda College, Tokyo Woman's Christian College, University of the Sacred Heart, and Kobe College. However, after the war, a two-track higher education system emerged, with two-year junior colleges for women and four-year universities for men. Despite efforts to provide equal opportunities in education, the belief that two years of instruction in a

²⁴ Alin Ciupală, *Femeia în societatea românească a secolului al XIX-lea (Women in 19-th Century Romanian Society)*, Meridiane Publishing House, Bucharest, 2003, p. 59

²⁵ Roman Cresin, „Anchetă sociologică asupra vieții studentești (Sociological Survey of Student Life)”, in *Arhiva pentru știința și reforma socială (The Archive for Science and Social reform)*, Year XIV, (1936): 645.

²⁶ Ibidem.

²⁷ Andrew Gordon, *A modern history of Japan from Tokugawa times to the present*. Oxford University Press, 2021.

²⁸ Yasumi Moroishi, "Women in Higher Education in Post WWII Occupied Japan: The Effect of Democratic Reforms." Paper presented at the Annual Conference of the Comparative and International Education Society (45th, Washington, DC, March 14-17, 2001).

²⁹ Ikuo Amano, *Education and examination in modern Japan*. University of Tokyo Press, 1990.

junior college were sufficient for women persisted. In addition to the five private women's universities, many other specialized schools were recognized as higher education institutions for women, offering programs at the junior college level³⁰.

The educational reforms implemented under the American occupation aimed to ensure a smooth transition to a democratic educational system. However, women's education was considered less important than that of men, resulting in low enrollment of women in higher education³¹. This can be attributed to the expectation that women, although allowed to pursue higher education, would not participate in society to the same extent as men³². Social and family pressures also played a significant role, as parents and educators were concerned that higher education would affect their daughters' marriage prospects. As a result, women who entered junior colleges tended to focus on disciplines such as humanities, home economics, the arts, and music³³. Employers anticipated that female employees would resign upon marriage and therefore avoided hiring women for long-term positions. The percentage of women enrolled in junior colleges increased from 67.5% in 1960 to 91.5% in 1990. However, the proportion of women in four-year universities did not exceed 25% in the 1980s³⁴.

It was not until after 1980s that women's higher education goals shifted from mainly preparing for marriage and family to pursuing careers³⁵. This change was prompted by the enactment of the Law on Securing Equal Opportunity and Treatment between Men and Women in Employment in 1985, which prohibited employment discrimination and guaranteed better working conditions for women. Subsequently, in 1999, provisions for child-care leave and family-care leave were established. As a result, the number of female students attending universities has been increasing³⁶. In fiscal year 2023, 46% of undergraduate university students were female. Additionally, although more female students are majoring in science and engineering compared to the past, female representation in

³⁰ Usui, Rose, and Kageyama, *op. cit.*, p. 102.

³¹ Kumiko Fujimura-Fanselow, "Women's participation in higher education in Japan." *Comparative Education Review* 29, no. 4 (1985), p. 471.

³² *Ibidem*, p. 472.

³³ Usui, Rose, and Kageyama, *op. cit.*, p. 103.

³⁴ <https://www.nier.go.jp/English/educationjapan/pdf/201403GEE.pdf>

³⁵ Usui Rose, and Kageyama, *op. cit.*, p. 88.

³⁶ <https://www.nier.go.jp/English/educationjapan/pdf/201403GEE.pdf>

STEM fields is still considerably lower, with 28% in the sciences and 16% in engineering³⁷. Traditional gender norms continue to influence educational and occupational choices, often limiting women to specific fields such as literature and education³⁸. Nevertheless, the influence of higher education on women's roles in society and the workforce has been profound, contributing to greater gender equality and increased leadership opportunities for women³⁹. The role of Japanese women in education has transitioned from limited access and traditional roles to significant participation and leadership in modern times. Despite persistent gender norms, educational reforms and societal changes have continually enhanced opportunities for Japanese women.

3. Prominent figures and role models in Japanese and Romanian women's education

Sutematsu Oyama (1860-1919) was one of the first Japanese women to study abroad and the first to receive a college degree. Born Yamakawa Sakiko to a samurai family, she was among the five girls chosen to travel to the United States in 1871 as part of a project to modernize and westernize Japan and strengthen ties with the United States. These girls were expected to obtain a Western-style education and then return to pass on their knowledge to other Japanese women. Oyama attended Vassar Women's College, where she earned a bachelor's degree in 1882, becoming the first Japanese woman to do so. After spending 11 years in America, she returned to Japan and continued to dedicate herself to the cause of women's education⁴⁰. In 1900, she co-founded Joshi Eigaku Juku (later known as Tsuda University) with Umeko Tsuda, and served as the patron of the school⁴¹.

Umeko Tsuda (1864-1929), another prominent figure in women's education, was also one of the five girls sent to the US in 1871 as part of

³⁷<https://www.asahi.com/ajw/articles/15108066#:~:text=Women%20represent%2046%20percent%20of,and%2016%20percent%20in%20engineering>

³⁸ Reiko Yamada, "Higher education and gender roles in Japanese society: An assessment of disparity." *Prospects* 25, no. 4, 1995, p. 791.

³⁹ Diane Rodriguez-Kiino, "The role of higher education in strengthening women's participation in the workforce: The lived experiences of females in Japan." *Asian Journal of Women's Studies* 24, no. 3, 2018, p. 341.

⁴⁰ <https://www.historyofjapaneseinny.org/blog/artifacts/sutematsu-oyama-the-first-japanese-woman-to-study-abroad/>

⁴¹ Janice P. Nimura, *Daughters of the Samurai: A Journey from East to West and Back*. First ed. W.W. Norton & Company, New York, 2015.

the Iwakura Mission. She was only seven years old when she departed for America. She became fluent in English, embraced Christianity, and graduated from the Archer Institute, an elite private institute for girls. Tsuda returned to Japan in 1882 and was appointed as an English teacher at Kazoku Jogakko, a school for the daughters of Japanese nobility. She returned to the United States in 1889 to continue her studies and enrolled at Bryn Mawr College, where she excelled in biology and chemistry. After returning to Japan once again, she founded Joshi Eigakujuku (Tsuda University) in 1900⁴². The school aimed to prepare women for English language certification exams and supply teachers for girls' public schools⁴³. Alongside her American friend Alice Mabel Bacon, Tsuda encouraged her students to study and think independently while maintaining ladylike conduct⁴⁴.

Chika Kuroda (1884-1968), Ume Tange (1873-1955), and Raku Makita (1873-1918) were the first female university students in Japan. They were the pioneers who broke the gender barrier by enrolling in Tohoku Imperial University in 1913. Kuroda and Tange studied chemistry, while Makita majored in mathematics. Although the decision to admit women faced fierce opposition from male students and the Ministry of Education, these three women successfully graduated and continued their academic pursuits both in Japan and abroad. Kuroda pursued further studies at Oxford University, earning a doctorate and becoming the second female to be awarded a doctorate in science⁴⁵.

Many youths from the territories inhabited by Romanians went to Western Europe for higher education in the 19-th century, mainly to Germany, Austria or France. Among them were few girls, but as access to higher education was not allowed for women in Romania until the end of the 19-th century, this was their only option. A few remarkable examples are Sarmisa Bilcescu (1867-1935), the first woman in the world who graduated in 1888, the Faculty of Law at the Sorbonne in Paris and obtained a PhD. in Law in 1890, at the same university. Elena Ghica (1828-1888), known under the pen name of Dora D'Istria, studied in Switzerland

⁴² https://dh.japanese-history.org/2020-spring-women-in-japanese-history/female-education-in-early-meiji-japan/#_ftnref5

⁴³ Linda L. Johnson. "Evangelists for Women's Education: The 'Civilizing Mission' of Tsuda Umeko and Alice M. Bacon." *国際基督教大学学報3-A, アジア文化研究* 38, 2012, p. 9.

⁴⁴ Johnson, *ibidem*, p. 11.

⁴⁵ https://www.tohoku.ac.jp/tohokuuni_women/110th/en/history.html#:~:text=B ut%20the%20university%20held%20firm,while%20Tange%20followed%20in%201918.

and Germany at the middle of the 19-th century and published abroad many studies on international politics, economics, feminism, as well as novels and poetry.

Constanța Dunca-Schiau (1843-1923), a remarkable educator and writer, studied at Collège de France and specialized in pedagogy. She wrote a project for the organization of girls' education system, which was taken into consideration at moment of the elaboration of the 1864 Education Law. She organized the Central School for girls in Bucharest, where she was a teacher from 1863-1872⁴⁶.

Another important member of the feminist movement and a founder of various vocational schools for girls was Alexandrina Pallady (1876-1944), married to Grigore Cantacuzino, one of the leaders of the Conservative Party and a very rich land owner. As a founding member of the National Society of Orthodox Romanian Women, she was involved in obtaining financing for the creation of many private schools for girls in the whole country⁴⁷ and was the first Romanian feminist well-known abroad.

Among the women who distinguished themselves in science and education we could mention a few as follows.

Hermína Walch-Kaminski (1864-1946), was the first woman to study at two colleges at the same time. She entered in 1883 both the Physics-Chemistry faculty and the School of Medicine at the University of Bucharest, which she graduated in 1886 and 1887 respectively. She was the first woman to obtain a PhD in Romania, in medicine, in 1887. She was an inspector for hygiene in Romanian schools and specialized in this field of study, participating in international hygiene conferences, in the profilaxy of tuberculosis, and writing many textbooks in the field.

Ștefania Mărăcineanu (1882-1944), graduated from the faculty of Physics and Chemistry in 1910, and was a professor at the Central School for girls. In 1922 she participated in the radioactivity courses taught by Marie Curie in Paris. In 1924 she obtained her PhD with the title *Recherches sur la constante du polonium et sur la pénétration des substances radioactives dans les métaux* at the Sorbonne.

Elisa Leonida Zamfirescu (1887-1973) wanted to study at the Polytechnic Institute of Bucharest, but her file was rejected for being a

⁴⁶ Ștefania Mihăilescu, *Emanciparea femeii române. Studiu și antologie de texte. Vol. II* (1919-1948) (*The Emancipation of Romanian Women. Study and Anthology of Texts. Vol. II* (1918-1948), The Ecumenic Publishing House, Bucharest, 2004, pp. 65-77 and 547

⁴⁷ Alexandrina Cantacuzino și mișcarea feministă română (Alexandrina Cantacuzino and the Romanian feminist movement), historia.ro

woman. In 1909 she managed to register at the Royal Technical Academy of Berlin, becoming the first woman student at this university. She worked as an engineer in Romania and had several innovations.

Silvia Creangă (1894-1952) studied mathematics and is the first woman in Romania with a PhD. in mathematics. She taught mathematics in a high school in Iasi (1920-1944), inspiring other girls who became famous mathematicians.

Florica Bagdasar (1901-1978), was a neurologist and became the first woman to be Health Minister in 1946.

Virginia Andreescu Haret (1894-1962), the first woman architect in Romania and the fourth in the world, obtained her degree in architecture in 1919, and designed many of the first concrete apartment buildings in Bucharest.

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HAPPINESS - A POSITIVE PSYCHOLOGY APPROACH

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Abstract: Positive psychology emerges as a branch of psychology around the year 2000 and promises, as the authors say, that the "new science" will help improve the quality of life and prevent the pathology that sets in when life is perceived as meaningless. At the individual level, it shifts the emphasis to identifying and optimising positive traits such as the capacity to love, vocation, aesthetic sense, capacity to forgive, spirituality, contentment and satisfaction with the past, hope and optimism for the future, happiness for the present. At the group level, the focus is on civic spirit, responsibility, altruism, moderation, tolerance, optimal experience, etc. This suggests a bold approach, but to begin with, in this article, we will only clarify a few concepts concerning some positive traits, considered essential from the point of view of Positive Psychology, namely the mental state of well-being, optimism, happiness and self-determination.

Keywords: positive psychology, psychological well-being, optimism, happiness, material well-being, religious faith.

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1. Introduction

A theoretical model of reference that has been a source of inspiration and has contributed to the foundation of longitudinal, integrative and in-depth psychological knowledge of personality is that of Positive Psychology. Since the 1990, studies have emerged in America that have pushed traditional psychology towards a new scientific challenge, opening up new dimensions of psychological practice and methodological conceptualisation. These address novel themes such as: hope, well-being, optimism, happiness, self-determination, optimal experience, courage, wisdom, state of excellence etc.¹.

The authors of the studies - of which we only mention the names of two prominent personalities, Seligman & Csikszentmihalyi² claim that this is the framework of a "new science" called Positive Psychology. It promises, through its contributions, to help improve the quality of life and prevent pathology, which sets in when life is perceived as meaningless.

Although a number of findings have appeared since 1990, positive psychology is presented and appears as a branch of psychology by the year 2000. The need for its crystallisation is explained by the excessive focus, after the Second World War, on pathology and the neglect, in the explanatory model of the psyche, of the positive characteristics or traits that make life valuable. Positive psychology aims to shift the focus at the individual level to the identification and optimisation of positive traits such as: capacity for love, vocation, courage, interpersonal skills, aesthetic sense, perseverance, capacity for forgiveness, originality, spirituality, talent, wisdom, contentment and satisfaction with the past, hope and optimism for the future, happiness for the present. At group level, the emphasis is on: civic spirit, responsibility, altruism, moderation, tolerance, morality³.

This suggests a bold approach, but Seligman et.al⁴ begins by saying: "The following are considered essential positive traits from the point of

¹ A. Prisăcaru, *Integrative knowledge of personality - a theoretical-methodological model*, Bucharest, Military Publishing, 2013, p.62.

² M.E.P. Seligman & M. Csikszentmihalyi, *Positive psychology: An introduction*, American Psychologist, 2000.

³ M. Zlate, *Organizational-managerial psychology treatise*, Iasi, Polirom Publishing House, 2007, p.263.

⁴ M.E.P. Seligman & M. Csikszentmihalyi, *Positive psychology: An introduction*, American Psychologist, 2000.

view of positive psychology: mental well-being, optimism, happiness and self-determination".

We appreciate that the new orientation of Positive Psychology, although apparently mainly a theoretical approach, opens a perspective of great interest for the field of psychological knowledge and assistance to personnel, because it responds to an immediate interest, that of helping people, to encourage them towards self-discovery, self-development and organizational efficiency. Also, in the methodological construction, the "positivist" approach completes a part of the whole, which was just missing, thus giving meaning to the longitudinal psychological knowledge, carried out in order to know integratively and thoroughly the "total personality" ⁵.

The approach is also supported by Romanian works that address the theme of positivism. For example, in a recent work, Irina Holdevici presents positive thinking as "an attitude that allows us to discover more easily the solutions, the positive aspects of the situations we are confronted with"⁶. It is also stated that attitude "implies a certain cognitive, emotional and behavioural structure of the person in the face of the world, a certain way of seeing oneself and others". Operationalising these concepts, the literature brings to the fore a number of constructive elements for therapeutic models that restore positive thinking and implicitly positive personality.

2. Specific psychological constructs of Positive Psychology

2.1. Mental well-being

In attempting to define quality of life by the phrase "psychological well-being", some researchers have formulated the question: "What is a good life"? And they came up with a number of criteria such as altruism, pleasure and self-awareness.

Psychological well-being, referred to in common parlance by the umbrella term 'happiness', is expressed in affective and cognitive appraisals in relation to one's own life. Mental well-being is not considered sufficient for a happy life and ways are sought to achieve it as

⁵ I. Holdevici, *Short-term psychotherapy*, Bucharest, Dual Tech. Publishing House, 2004, p. 261.

⁶ I. Holdevici, *Cognitive Behavioural Psychotherapy; Stress Management for an Optimal Lifestyle*, Bucharest, Medical Sciences Publishing House, 2005, p. 77.

a higher quality. Thus, Diener et. al.⁷ summarising a series of assessments and studies by various authors, argumentatively presents well-being as a fundamental psychological characteristic, between satisfaction and happiness. It is argued that when material needs are satisfied, individuals move into a post-factual stage in which they are concerned with what is generically called self-actualization.

The need for measurement, i.e. quantification of the mental state, and possibly standardisation of an instrument, has presented researchers with dilemmas. In the early days of psychological well-being research, psychologists studied the facets of happiness using a single item for each construct. For example, they would ask people, "How do you feel about your life as a whole?" using a seven-point scale, with 7 representing "delighted" and 1 representing "disappointed," as response options.

Recent assessments are made with scales containing multiple items. For example, the "Positive and Negative Emotions Scale" (PANAS) developed by Watson, Clark and Tellegen assesses both aspects of emotions with 10 items each; the "Life Satisfaction Scale" developed by Diener et. al. (1999) assesses satisfaction with items such as: "In most aspects, my real life is similar to my ideal life" or "So far I have achieved important things I wanted in life".

Despite the encouraging results, a number of studies have shown that overall ratings can be influenced by: the momentary mood of the subjects under investigation, i.e. situational factors, as well as whether respondents exhibit a certain social desirability⁸.

Although psychological well-being is by definition subjective, some authors argue that, at a physiological level, there may be indicators that express it objectively. Also, because different assessment methods can lead to different scores, it is argued that a broader battery of assessments can be extremely useful. Although each assessment method has its limitations, the use of such a battery, with different types of measurements, will at least meet the criterion of complementarity.

For example, it has been shown that requiring people to recall as many positive and negative events in their lives as possible in a short period of time and as quickly as possible can reveal not only individual differences in the

⁷ Ed. Diener, M. Suh. Euncook, E.I. Richard & I. Simith Heidi, *Subjective Well-Bing: Three Decades of Progress*, Psychological Bulletin, Vol. 125, No. 2, 1999, p. 276-302.

⁸ Ed. Diener, M. Suh. Euncook, E.I. Richard & I. Simith Heidi, *Subjective Well-Bing: Three Decades of Progress*, Psychological Bulletin, Vol. 125, No. 2, 1999, p.276-302.

accessibility of memory, but also the values that people attach to their lives in the way they remember them. Other studies lead to the conclusion that, in defining happiness, frequency and intensity of pleasurable emotions are usually combined: people who declare themselves happy are those who experience this state intensely most of the time. However, the duration of experiencing pleasant emotions is a better predictor of psychological well-being than the intensity of positive emotions (Diener et.al., 1999).

Although most people report being in a normal mood most of the time, intense positive moments are rare even for the happiest individuals (Diener et.al, 1999). In contrast, happy people report experiencing positive emotions at a moderate level most of the time.

As a conclusion from this research it can be said that if people are looking for intense, exhilarating moments in their personal lives, relationships or careers, they may be disappointed. Intense experiences are not a sufficient basis for a happy life. Moreover, according to one theory of coping, pleasurable and very intense experiences may have the disadvantage of contrasting sharply with other positive experiences, thereby being experienced as less pleasurable ⁹.

Also, in a more holistic view, it turns out that psychological well-being is determined by adaptation, goals, temperament.

Other studies (Diener et.al., 1999) have shown that people adapt to most events or conditions; for example, in less than three months, the effect of major events, such as dismissal or promotion, lose their impact on psychological well-being. The duration of such 'readjustments' is determined by the person's value orientation.

While laboratory studies have shown that happy and unhappy people react differently to similar stimuli, it has been shown that extroverted people, those who react very strongly to rewards, respond more strongly to positive images than to negative ones, while highly neurotic people react more strongly to negative images.

Another fact about adapting to new circumstances is that expectations and goals change over time. Certain resources or advantages, such as money, physical attractiveness, social skills, etc., are predictors of happiness, insofar as they are related to goals.

On the other hand, people with high sensation-seeking needs are more satisfied when they experience a high emotional level, compared to those

⁹ A. Prisăcaru, *Integrative knowledge of personality - a theoretical-methodological model*, Bucharest, Military Publishing, 2013, p. 63.

with a low sensation-seeking need who consider themselves satisfied in everyday life. Although some goals, such as sensation seeking, can be influenced by temperament, other goals are much more flexible. Flexibility of goals may be a key to psychological well-being when circumstances are not favourable.

2.2. Optimism

According to anthropologist Lionel Tiger¹⁰, when we refer to optimism, most of us have in mind and think of a certain attitude, characterised as follows: "Optimism is a state or attitude associated with a relative expectation of the attainment of social or material advantages which the subject regards as desirable and which he finds pleasing".

Traditionally, researchers considered optimism as a human quality, but with negative implications, as it causes suffering. For example, Freud saw optimism as an exercise in delusion. More recent approaches attribute a cognitive dimension to optimism, being found in a goal, an expectation or a causal attribution; but it also involves affective processes, from emotional elements to moods and feelings, which means a motivational background (Tiger, 1979, p. 134).

Research from the 1960 and 1970 revealed that people are unrealistic in the way they think about perspective; cognitivists emphasise that language, memory and thought are selectively positive; in everyday language, the positive aspects are preferentially exposed, sometimes ignoring the negative. There is therefore a natural tendency for most people to evaluate themselves positively when reference is made to them, so in a better light than others see them, and that part of their contribution to the group's task was more significant than others.

Other studies, such as Taylor's et. al.¹¹, show that people are positively oriented when they refer to themselves or the future and that this tendency to see themselves in the best light is a sign of psychological well-being, comfort, health.

While optimism has been approached in positive/negative terms by theorists such as Lazarus & Folkman¹², other authors interested in studying individual differences, have begun to approach optimism as a

¹⁰ T. Lionel, *Optimism: The biology of hope*, New York, Simon Schuster, 1979, p.17.

¹¹ S.E. Taylor, M.E. Kemeny, G.M. Reed, J.E. Bower & T.L. Gruenwald, *Psychological resources, positive illusions, and health*, American Psychologist, Vol. 55, 2000.

¹² R.S. Lazarus & S. Folkman, *The concept of coping in stress and coping anthology*, New York, Columbia University Press, 1991.

potential that people hold to some extent. Thus, we can appreciate that human nature is endowed with a level of optimism, and life experiences influence the degree of optimism/pessimism of each of us.

Seligman¹³ consider optimism to be an individual characteristic, which refers to a person's "explanatory style" of dealing with the causality of events. Those who explain personal life events in external and unstable terms, having a specific cause, are described as optimistic. Those who attribute internal, stable, and global causes for explaining events are pessimists. The notion of "explanatory style" comes from the learned helper model developed by Seligman, who states, "In the case of an aversive, uncontrollable experience, humans and animals become helpless because they have learned that there is no contingency between actions and outcomes."

But in terms of how it is measured, optimism is embodied in certain desirable characteristics, such as perseverance, success and health. Seligman (2000) proposes a questionnaire for measuring optimism, called the Attributional Style Questionnaire - A.S.Q., in which people are asked to answer questions concerning hypothetical events, indicating what each would cause if they actually happened to them. The instrument consists of 48 statements-situations, each with two response options, of which only one is chosen. The interpretation of the results of the instrument highlights the explanatory style taking into account three dimensions: permanence, personalization and the power of spread or generalization, revealing the orientation of the person towards optimism or pessimism.

2.3. Happiness and development factors

A number of studies presented by Buss¹⁴ lead to the conclusion that happiness is a common goal for everyone. People try to achieve it, but for some it remains an intangible ideal. It is said that by concentrating on overcoming some of life's difficulties, the quality of life can be improved. The set of relevant aspects of life includes: the discrepancy between the modern and ancestral social environment; evolved human mechanisms that produce subjective stress under certain conditions; competitive mechanisms determined by natural selection.

¹³ M.E.P. Seligman, *Optimism is learned*, Bucharest, Publishing House Humanitas, 2000.

¹⁴ D.M. Buss, *The Evolution of Happiness*, American Psychologist, Vol. 55, 2000, p. 5-23.

Modern technology is often seen as bringing many benefits, but at the same time it also produces great inconveniences, new diseases and dysfunctions, some of which are still unknown in terms of mechanism and effects. A negative aspect of modernity, in the view of some authors (Buss, 2000), concerns the way people live nowadays and the relationships between them. For example, whereas in the past people lived in groups of 50-200 individuals, today's large metropolises are home to millions of people. This leads to unrealistic expectations about the quantity and quality of possible relationships, which produce dissatisfaction in the partnership, reducing self-esteem.

It also points out that in the past, people lived surrounded by parents and friends, relying on them to deal with conflict and seek justice, but especially to benefit from the social and moral support of the extended family. Nowadays people live in isolation, in the immediate family, with the legal system through which they have to defend their rights a real maze. These discrepancies create psychological problems that are difficult to anticipate and affect the quality of life (Buss, 2000).

Another example, which supports the discrepancy, concerns the ever-increasing rate of depression. The incidence of depression is thought to be higher in economically developed countries (Buss, 2000). The explanation is put down to competition between people and the misleading comparisons presented by the media with reference to the lives of people in different social positions, to which everyone relates. Another impediment to happiness is that people have developed psychological defence mechanisms, but these also cause a high level of stress in certain circumstances. Although evolved psychological mechanisms are designed to solve certain adaptive problems, sometimes these still include: grief, anxiety, depression, specific phobias, jealousy, anger, etc. (e.g. infidelity of spouse causes jealousy).

Referring to natural selection by competition, which is inherent in evolution, the authors consider that it operates on inter-human differences. Therefore, if one person wins, another loses. It is argued that humans today are much better equipped to adapt quickly to many circumstances. Nowadays, people have more cars, colour TVs, computers, designer clothes, etc., than they did a few decades ago; yet they are no happier than they were then. As a sign of flexibility, those who have won a large amount of money in the lottery get used to it and will soon be as happy as they were before they won (Buss, 2000).

Given these characteristics, studies by authors concerned with "happiness" offer some methods that can lead to improving the quality of life and the human condition, as follows (Buss, 2000):

- maintaining a close emotional bond with parents, through modern means of communication, if physical proximity is not possible; this reduces the risk of depression; it is known, for example, that opportunities for grandparent-grandchild interaction offer the possibility of strengthening the relationship between them while providing emotional support;
- developing and maintaining close friendships, especially in difficult moments in one's life, to cultivate sensitivity towards others;
- choosing a long-term partner who shares and relates to the same values, interests and attitudes, as there is empirical evidence that cognitive or emotional discrepancies between partners increase the risk of infidelity and instability in a relationship;
- educating people about gender differences; psychological coping mechanisms differ only in areas where there were different problems to which the two genders had to adapt differently;
- management of competition and promotion of cooperation; inequality in one's status produces negative consequences, such as deteriorating health;
- exploiting knowledge of more evolved desires, such as those relating to the need for health, professional success, altruism, privacy, personal security, aesthetic and spiritual preference.

2.4. Income, friends and belief system as factors of happiness

Recent research aims to identify predictors of psychological well-being, often broadly understood as happiness or life satisfaction. Studies are focused on possible correlations between happiness and a number of variables: personal income growth, interpersonal relationships, religious belief.

To the question, "Which of the following people do you think is the happiest?" the following responses were received: 23% for Oprah Winfrey, 7% for Bill Gates, 12% for the Pope, 3% for Chelsea Clinton, 49% for "Me", and 6% answered "I don't know"¹⁵.

To another question, "How happy are people?", answers from people around the world give a positive picture of their own lives. It can thus be

¹⁵ D.G. Myers, *The Funds and Faith of Happy People*, American Psychologist, 2000, p. 55-67.

seen that, by definition, psychological well-being refers to how everyone feels "in their own skin". Jonathan Freedman said in 1978 that "if you feel happy, you are happy"¹⁶.

Aurora Liiceanu¹⁷ believes that happiness is actually in our minds. It is a state of mind that depends little on external realities. In a very plastic way she summarises: "Rich is not the one who has money, but the one who has enough of what he has".

Returning to the correlations between happiness and the three variables listed above, addressing them can start by asking specially constructed questions:

- a) Even if money cannot guarantee happiness, is there an association between material well-being and psychological well-being?
- b) How important and supportive are friendships for psychological well-being?
- c) Is there an association between religious faith and psychological well-being?

2.5. Material well-being

Although many individuals deny that happiness cannot be bought, when asked "What would make you happier?", the most common answer was "More money". Ed. Diener (2000) argues that there is a tendency among wealthier nations for people to be happier and more satisfied in life. For example, the Swiss are judged to be happier and richer. To see if there is a link between the amount of money and psychological well-being, the researchers conclude: in poor countries like India, being rich is a predictor of psychological well-being, but in rich countries, where most people can afford the necessities of life, prosperity matters little. In the U.S., Canada and Europe, the correlation between income and personal happiness is small, if not negligible (Myers, 2000). It is also argued that life events temporarily influence mood, but over time the positive or negative impact of the event fades. Due to adaptability, yesterday's luxuries become a necessity today and obsolete tomorrow. As income increases, satisfaction does not. It has been shown that those whose income has

¹⁶ J. Freedman, *Wall of Fame*, AVID Academic Press in collaboration with San Diego State University Press, 2000.

¹⁷ A. Liiceanu, *Money does not bring happiness and neither does its number*, <http://www.tvr.ro/articol.php>, 2007.

increased compared to the previous period are no happier than those whose income has not.

2.6. Human relations

Research results confirm the correlation between social support and psychological well-being. For example, people who have friends cope better with various stressors such as bereavement, rape, job loss or illness. For many people, marriage is a typical example of an interpersonal relationship. Research shows that most people are happier when they are attached to someone. Compared to those who have never been married and especially those who are separated or divorced, married people find they are happier and more satisfied.

Marriage offers partners the availability for new roles and even if it is sometimes a source of stress, it offers in return, however, a series of rewards that increase self-esteem and prevent alienation (Prisăcaru, 2013, p.70).

2.7. Religious belief

Studies show that there is a correlation between religious belief and coping mechanisms, especially in times of crisis. People of faith tend to 'rediscover' happiness after a divorce, for example, or in times of bereavement or serious illness. Two predictors of life satisfaction are thought to exist for older people: health and religious faith.

In a study conducted by Inglehart¹⁸, which included people from several countries, it is estimated that people who are religious and active consider themselves happier than those who are religious but do not participate in the religious life of the community. Searching for explanations for this association between religious faith and psychological well-being, the researchers came to a fabulous conclusion: religious faith provides social support in that religious practices are carried out in community, involving friendship, forgiveness and love of neighbour. Another explanation offered by Seligman¹⁹ is that the meaning of existence derives from faith, and the loss of faith leads to depression. Positive psychology is expected to truly rediscover the concrete, real human being with adaptive capacities and reserves and endowed with positive traits.

¹⁸ R. Inglehart, *Culture shift in advanced industrial society*, Princeton, NJ: Princeton University Press, 2000.

¹⁹ M.E.P. Seligman, *Authentic Happiness. Practical Guide to Positive Psychology*, Bucharest, Humanitas Publishing House, 2007.

At the same time, in addition to diagnosing positive traits and recognising or confirming them in the relationship between the specialist and the person being assessed, it is important to focus on the formative side, especially where these traits appear in a lesser potential.

3. Conclusions

The orientations of positive psychology call for a new challenge, opening up new dimensions of psychological practice and methodological conceptualisation. Positive psychology and its guidelines should not remain just a theoretical model.

Complementary to the other models that contribute to the shaping of integrative and in-depth knowledge of the personality, taken together they will give the necessary consistency to the investigative or intervention approach, so that each person feels useful, uses the capacities they have to be effective and, why not, has a state of optimal comfort for relating, participating and winning.

We hope that this orientation, will help us to give meaning to the knowledge of personality and a new form of consistency of the finality of the psychological act.

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COMBATING PLAGIARISM AND MISCONDUCT FOR ACADEMIC INTEGRITY

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Abstract: *A special attention is paid in our society to the respect of ethics in research, and its violation must be sanctioned. In the academic world, citing sources is mandatory and authors' ideas must be protected in order to avoid plagiarism. Ethics is a system of rules, methods, procedures or perspectives that help in making decisions about actions and in analyzing complex problems. Ethical standards promote values that are essential in collaborative work by emphasizing trust, responsibility, respect and fairness.*

In recent years, plagiarism and the production of commissioned works have captured the educational networks. Until now, no mechanisms have been developed to prevent and combat this phenomenon, but many institutions have taken some measures to reduce it. This paper attempts at highlighting correct attitudes that may help reduce it, also possible measure that can be taken by institutions and individuals to combat plagiarism and any other forms of misconduct in academia.

Keywords: *copyright, plagiarism, intellectual property, ethics, academic integrity*

1. Introduction

Plagiarism is the taking over by an author of some elements from the work of intellectual creation of another author and presenting them in the public space as components of one's own work. Plagiarism is its result and refers to the work generated by illegitimate taking ideas or sentences/paragraphs, intentionally or not. Plagiarism is primarily a fraud from a deontological point of view, a deviation from good research conduct; hence the sense of responsibility depends on the moral attitude. Through field-specific procedures, situations as simple as a lack of correct citation markers that lead to intellectual fraud should be avoided. Reducing the phenomenon of plagiarism of scientific works is a major interest in academia. There are various ways to avoid plagiarism in scientific papers in an ethical way by respecting someone else's work. Among the methods currently used, the following are: writing competence and digital culture training concerning copyright and licenses,

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institutional regulations for the writing of scientific papers with an emphasis on copyright compliance, the establishment of ethics commissions. In other cases, authors' own responsibility can be required, by checking for plagiarism with the help of anti-plagiarism programs. However, public and institutional tolerance for plagiarism has decreased as awareness of the risks has been raised. However, there is still prevention work to be done:

We conclude that academic plagiarism is a pressing unsolved problem, also among graduate and post-graduate researchers, although plagiarism research has focused mainly on undergraduate students. Applying automatic detection systems to student assignments is already common practice at many institutions.¹

Students and young researchers from various fields must be shown the harmful effects of plagiarism and its bad consequences, and they must be taught how to use their efforts and intellectual powers to produce original papers. Such an attitude is required to complete the range of procedures aimed at limiting the failures of written work, not falling into the traps of material benefits, titles or positions they may benefit from, originating from misconduct.

2. Attitudes to plagiarism

One must firmly and objectively condemn acts of plagiarism, but, at the same time, not allow the presumption of innocence to be violated in the case of common knowledge. Therefore, in their desire to remain competitive, universities face both opportunities and challenges by the creation of a healthy research environment, where students learn the power of debates and arguments as well as the benefits of freedom of expression. Their theoretical knowledge, but also competences and skills will be later reflected in their public life as part of the society. In this context, the main objective is to support students and young researchers to contribute to a type of university culture in which academic ethics has a special place, considering the important role that a university has in their intellectual, professional formation and young people's morale.

In this context, all professionals involved in the education process continuously interact with the ideas, models, theories of others, so that

¹ Gipp, Bela, *Citation-based Plagiarism Detection*. Magdeburg, Germany: Springer Vieweg, 2014, pp. 16. k

preventing and rejecting plagiarism becomes a constant endeavour. This can be achieved by training students to use the methods of correct citation, and to avoid the multitude of wrong ways of handling information from sources. Authors should be informed that plagiarism is sanctioned and what those sanctions are. In the academic environment, all participants are required to develop or present original works, built on the principles of the ethical code.

In order to find solutions and contribute to the improvement of the academic act, it is necessary to understand that what acts are considered plagiarism. Some of them include the following:

- taking over the ideas or theories of another person without references;
- compilation of fragments from several sources without clear references;
- interpenetration between fragments of other authors and own work;
- taking over a text, by using some expressions/ words/ paragraphs;
- omission of clear in-text citation marks;
- publishing the same paper in journals (or self-plagiarism);
- providing incorrect information regarding citation sources or bibliographic references;
- the absence of quotation marks from quoted passages etc.

To avoid plagiarism and respect the rules of copyright and university ethics, the main rule is to observe the norms of scientific writing of papers. Scientific writing requires the correct indication of documentation sources, extracted from the bibliography consulted during the research. By citing original sources, the author recognizes the ideas, theories and procedures developed by other authors and demonstrates that the respective research has been conducted properly. Scientific writing requires respect for copyright and intellectual property.

The few cases of plagiarism and violations of scientific ethics that come to light (cases reported by the mass media) do not really manage to fully change the attitude towards this phenomenon and mobilize the academic society in the process of defending academic integrity. In fact, the violation of scientific ethics can take very different forms and is aimed at scientific activity, project proposals, and any other types of research work. The plagiarism phenomenon is manifesting on an alarming scale, constituting the scientific fraud often encountered in the examination of scientific papers.

3. Possible measures

Plagiarism should result in the rejection of the respective work and moral consequences. The detection of any type of plagiarism must have these consequences. It is sometimes difficult to establish plagiarism, especially in the less exact sciences, which operate with phenomena that are difficult to quantify.

By introducing the Declaration regarding the assumption of responsibility in the body of the thesis, the aim is to discourage plagiarism attempts. Despite all the efforts made, it is hard to believe that the phenomenon can be eliminated from current practices without radical changes in society. At most it can be mitigated by the actions taken. The situation contributes to the elimination of moral barriers in committing fraud in research, the preference to plagiarize.

The Internet is one of the main sources for plagiarists, but it can also be a very good tool in the fight against counterfeiting and appropriation of results through the specialized programs of plagiarism detection.

It is no accident that public debates about plagiarism have coincided with efforts to limit access to copyrighted material. On the one hand, we face the exponential increase in readily available information from the Web, and, on the other, threats of property-rights litigation and increasingly limited access to this material².

Open access to articles and others scientific publications, as well as other possibilities of public information has proved to be very effective in revealing frauds of this nature. In order to reduce its extent, more involvement of the scientific community is necessary. For good practice, the governing forums, in their decisions, recommend all organizations in the field of science and technical innovation to approve ethics commissions and develop their own codes of ethics, which are aligned the specifics of their activity. Their adoption must be a set of measures for the prevention of plagiarism, as it is generally admitted that prevention is better than sanctioning. The list of measures should include references to regulations concerning the development of methodological works of scientific research, writing articles and other scientific publications.

² Caroline Eisner and Martha Vicinus (eds.), (2008). *Originality, Imitation, and Plagiarism*, USA: University of Michigan, pp. 1.

Constructive alignment is a particularly useful model for shaping practices for teaching source use in that it requires that learning objectives be explicitly articulated. Objectives related to source use, or indeed any other aspect of academic writing or professional discourse, are only infrequently expressed as planned learning outcomes (although an exception exists for the language subjects, in which the ability to communicate in various forms is a primary focus of instruction and assessment). In most fields, though, assessment writing is a means to an end, the tool which exposes students' knowledge of the course content so that it can be assessed, rather than an objective in its own right.³

There are certain effective methods for avoiding plagiarism, among which:

- To cite properly from lectures, from meetings with year tutors or from discussions with course holders.
- Use plagiarism detection software before submitting the paper
- It is important to make complete indexes and records of the sources from which information is taken.
- Use of reference insertion software that allows sources to be cited in accordance with different citation styles is recommended.
- Note-taking is essential to the writing process and proper organization of the resources used will enhance the quality of the citation process.
- If not knowing whether a particular piece of information can be considered plagiarism, whether something can be considered common knowledge or not, it is safer to cite the source.
- Papers published in scientific journals or books from publishers with a high profile could be models of good practice in terms of proper citation.

Such methods are particularly useful in the introduction of courses, either in the instruction program, or in special sessions of training for young researchers, who will learn about the rules and regulations applicable to their program and how to check the authenticity of the information found in the sources. These actions require consistent efforts in order to ensure plagiarism will not occur.

³ Pecorari, Diane, *Teaching to Avoid Plagiarism*. USA: Open University Press, 2013, pp. 78.

Conclusions

Plagiarism is considered a serious violation as scientific research results presupposes an original contribution to world of knowledge. Acceptance or tolerance for plagiarism and misconduct would lead to the distortion of values, in the society, hampering honest competition for moral and material reward. Ensuring the review and publication process, in accordance with the existing standards, it would ultimately increase the quality of papers, dissertations and theses and would prevent any attempts to plagiarism.

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PERSPECTIVES ON THE DEVELOPMENT AND ENHANCEMENT OF SCIENTIFIC THINKING AMONG PEDAGOGUES

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Abstract: *This paper explores the concepts of development, enhancement, and modelling of scientific thinking among pedagogues. The theoretical framework explores the complex nature of scientific thinking, considering its cognitive, social, and teaching aspects. After conducting an in-depth review of literature, it became evident that promoting scientific thinking requires a comprehensive perspective, incorporating insights from diverse theories and educational methodologies. The study highlights the importance of scientific thinking skills development in pedagogues to address contemporary education challenges, including integrating technology and promotion of lifelong learning. The focus is on highlighting how modelling plays an important role in facilitating cognitive development and promoting learning through inquiry-based methods. Through the author's point of view by aligning modelling activities with developmental milestones, educators can optimize their effectiveness in nurturing scientific thinking among students. The author emphasizes the importance of taking a structured approach to modelling in education, highlighting its impact on shaping students' cognitive processes, particularly in fostering scientific thinking, that encourages curiosity and exploration. It is also argued that teachers who prioritize scientific thinking development are better equipped to meet the evolving needs of students and contribute to their intellectual growth.*

Keywords *scientific thinking, development, enhancement, modelling, pedagogues*

Introduction

The literature (Cuzneţov (2020)¹; Klahr & Zimmerman (2011)²; Koslowski (2008)³ represents scientific thinking as a higher-order

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¹ L. Cuzneţov, Scientific thinking in education and training: Psychopedagogical foundations for optimizing learning through the development of scientific thinking. *Acta et Commentationes. Science of Education*, 2023, 4(22), 110-121.

² D. Klahr, C. Zimmerman, et al., Educational Interventions to Advance Children's Scientific Thinking. *Science*, 2011, 333(6045), 971-975.

psychological process, which is a form of scientific knowledge based on deep systematic knowledge. In this context, the subject of knowledge-possessing scientific thinking explores the implications of ideas, analysing and comparing different perspectives, argues his position, and outlines his attitude towards the reality around him, elaborating clear-cut judgements and reasoning.

In our theoretical exploration, we initiate by defining and clarifying the conceptual categories that will serve as the foundation for our research. This approach, we believe, will help mitigate certain uncertainties in the subsequent epistemological examinations. The fundamental concept of scientific thinking will be addressed in depth after the clarifications are made. In this frame of reference, we mention that the theoretical instrumentation has focused, in particular, on the explanation of the categories carried out in the context of a preliminary definition of the essential characteristics of scientific thinking, of the possibilities of its development in the professionalization of teachers (initial and continuous training).

The imperative of increasing the quality of education in the current conditions of the development of neurosciences, the rise of technological progress, communications, and digital technologies, forces a reconsideration and restructuring of the educational approach on the part of teachers so that the pedagogical strategies developed are centered on the student, on shaping his thinking. Another priority is the development of an optimal framework for the coherent implementation of learning activities from the perspective of online instruction and self-directed learning, including lifelong learning. From the analysis of the main ideas and theories on shaping the student's scientific thinking in the school environment, including the online one, we found that it is necessary to train the cognitive mechanisms in a unified, systematic way, stimulate creativity, learn by solving real-life problems and situations⁴.

Similarly, we have established that not only integrative approaches to the phenomenon of the development of scientific thinking actively promoted today require a complex analysis of each aspect, but also neurobiological and psychological mechanisms, the impact of the theory

³ B. Koslowski, *Theory and evidence: The development of scientific reasoning*. Cambridge, MA: MIT Press, 2008.

⁴ A. P. Panfilova, *Igrovoe modelirovanie v deyatel'nosti pedagoga: uchebnik dlya studentov prof. ucheb. zavedeniy* [Game Modeling in the Educator's Activities: Textbook for Students of Professional Educational Institutions]. Publishing Center "Academy" 2008

of multiple intelligences, the means of optimization and qualitative modelling of student thinking in the educational environment require attention. A special role is played by science training and education, which is a strategic priority at the international level and contributes substantially to the development of scientific thinking⁵.

Of course, the development of scientific thinking starts from cognitive education which has an inter-, pluri- and transdisciplinary foundation, drawing on the contributions of philosophy, neurobiology and neuropsychology, computer science, epistemology, anthropology, semantics, artificial intelligence, but especially cognitive psychology, as Joița notes⁶. In this context, Cerghit (2006)⁷ mentions that the student in school learning requires the use of a complex perspective, based on rethinking, reconstructing, and reconsidering the problems and resources of instruction. Great importance is given to the processing of information and especially to the shifting of attention from the acquisition of knowledge products to the development of processes of its construction, to the ways of elaboration and application of the tools necessary for this construction, to the development of metacognitive capacities of valorization of situations focused on the development of scientific thinking⁸.

The epistemological approach to the concept of cognitive education and the concept of the development of thinking requires clarification of some aspects related to the psychological conception, which concerns the development of scientific thinking in general as a higher-order cognitive psychological process and the formation of scientific thinking as a teaching objective, which would support the optimal achievement of the goals of the instructional-educational process, etc⁹.

Therefore, the study and theoretical analyses of the development of scientific thinking in pedagogues lead us, in the foreground, to the idea of

⁵ D. Layton, The schooling of science in England, 1854–1939. In R. M. MacLeod & P. D. B. Collins (Eds.), *The parliament of science*. Northwood, England: Science Reviews. 1981, pp. 188–210.

⁶ E. Joița, *Educația cognitivă: Fundamente. Metodologie*. [Cognitive Education: Foundations. Methodology]. Iași: Polirom, 2002.

⁷ I. Cerghit, *Metode de învățământ* [Teaching methods]. (4th ed.). Iași: Polirom, 2002.

⁸ E. Joița, *op. cit.*, p. 12.

⁹ M. Ionescu, *Instrucție și educație* [Instruction and education]. (3rd ed.). Arad: "Vasile Goldiș" University Press, 2007. p. 249.

clarifying the concept of development concerning the concept of formation, enhancement, and modelling.

Literature Review

The simplest explanation of the concept of development is the following: the passage through various progressive stages towards a higher stage, either of matter or the phenomena of nature and society. If we refer to man/person, then development implies a gradual evolution, an expansion that acquires significant proportions, demonstrating the force to grow, increase, deepen, and widen¹⁰.

More specifically, the concept of development refers to the sequential changes that occur in the organism as it goes through the pathway of growth and interaction of specific human characteristics. According to researcher Cosmovici, the observed changes are the result of two types of processes: some are biologically programmed, being hereditary, while others are caused by interaction with the environment and educational factors¹¹ and of course are acquired/formed.

In the literature review, we will frequently refer to the psychological development of the subject from a psychological and pedagogical perspective, including social, approached through the prism of educational factors. In the given context, the development of scientific thinking in pedagogues is approached from a psycho-socio-pedagogical perspective. From a psychological standpoint, the development of scientific thinking signifies a significant cognitive progression, encompassing various alterations in cognitive functions such as perception, memory, mental representations, cognitive operations, thought processes, language usage, imagination, and more. These modifications collectively contribute to the intellectual growth and development of the individual. From a social perspective, development involves changes in the social integration and adaptation of the personality. From a pedagogical point of view, we note the influence of educating factors, especially those of an external nature, which involve

¹⁰ I. Coteanu, et al. *Dicționarul explicativ al limbii române [Explanatory Dictionary of the Romanian Language]*, 2nd edition. Romanian Academy, Institute of Linguistics. București: Univers Enciclopedic, 1998, p. 298

¹¹ F. R. Mogonea, *Dezvoltarea personalității umane în context curricular și extracurricular [Human personality development in curricular and extracurricular context]*. Presa Universitară Clujeană, 2014, pp. 26-27

changes in cognition, attitudes, and behaviour. The pedagogical component, in particular, involves consistent training actions.

The strategies aimed at fostering/enhancing scientific thinking among educators necessitate a comprehensive approach that acknowledges the influence of various theories and pedagogical frameworks. This multifaceted perspective transcends a singular pedagogical approach and encompasses the amalgamation of several theories and methodologies, including didactics, instructional theory, school pedagogy, adult education (andragogy), pedagogy of communication, and motivation. This viewpoint is endorsed by numerous theorists and practitioners in the realm of postmodern pedagogy, underscoring the interconnectedness and synergistic effects of these diverse pedagogical perspectives¹²¹³¹⁴¹⁵.

The main goal in the formation of scientific thinking in pedagogues is to make them more effective in the activity of scientific research and problem-solving of a theoretical, educational, and social nature. The complexity of the process of forming scientific thinking derives from the fact that it can not only be influenced by pedagogical conditions but also involves psychological and social components. At the same time, the scientific way of thinking is of decisive importance here, which also depends on specific personality traits such as intellectual curiosity, objectivity, logic, continuity, flexibility, depth, the ability to emphasize inter-, pluri- and transdisciplinary approaches, etc. The concept of training from a pedagogical perspective, denotes actions of preparation, training and education; including creation¹⁶.

Vocational training is a form of education that complements formal training (school, university, master's degree, etc.). In this context, initial vocational training provides the necessary preparation for the acquisition of minimum skills in vocational studies, while continuing training involves honing, supplementing, and developing vocational skills already

¹² I. Cerghit, *op. cit.*

¹³ E. Joița, *op. cit.*

¹⁴ I. Neacșu, *Neurodidactica învățării și psihologia cognitivă. Ipoteze. Conexiuni. Mecanisme [Neurodidactics of learning and cognitive psychology. Hypotheses. Connections. Mechanisms]*. Iași: Polirom, 2019

¹⁵ I. Papuc, & M. Bocoș, *Psihopedagogie. Suporturi pentru formarea inițială și continuă [Psychopedagogy. Supports for initial and continuous training]*. Bucharest, Cartea Românească Educațională, 2017

¹⁶ A. Birch, & S. H. Hayward, *Diferențe interindividuale [Interindividual differences]*. Bucharest, Tehnică, 1999.

acquired¹⁷. Another concept, the streamlining, in our case, of scientific thinking is characteristic of people with a certain developed potential. Thus, in teachers, scientific researchers, and other high-performing professionals, streamlining is aimed at increasing the depth of processes and observations on the functioning of interconnections: thinking - scientific thinking - professional thinking - everyday thinking - lateral thinking - creativity - efficiency - professional and existential performance.

Another operational concept, modelling scientific thinking approached as an intervention method is one of the means of knowing reality, which can be used to develop mental skills. Starting from the construction and use of real models (graphic, object, motor, etc.), the individual gradually moves on to their construction and subsequent use in representations, which materialize in the form of mental models, also called ideational models. Thus, the name of the model type reflects how models are constructed. An ideational model is a mentally constructed means of knowledge containing an idea or set of ideas. In essence, any theoretical concept, formed as a result of observations and experiments, exists and can act first as an ideational model provided that such a concept is not isolated from the process of scientific knowledge and still serves as a means of knowledge. Consistent with this, the theoretical representation acts as a model in comparison with the original object, therefore, the mental/ideatic model can serve as a pillar, a foundation in the creation of material models¹⁸.

Transitioning from the discussion of psychological and pedagogical perspectives on the development of scientific thinking, we now turn our focus towards the modelling process. In anticipation of our general conclusion, it's important to note that scientific knowledge plays a pivotal role in mediating the acquisition of investigative skills throughout the development, formation, and modelling of scientific thinking.

Modeling, as a method of research or learning, involves the utilization of a constructed model that encapsulates the essential properties of the original object or phenomenon. This approach allows for the indirect examination of concepts, actions, events, and instructional-educational phenomena with formative implications. As highlighted in previous

¹⁷ A. Birch, & S. H. Hayward, *op. cit.*

¹⁸ S. F. Gorbov, & E. V. Chudinova, *Vidy i funktsii modeli v uchebnoy deyatel'nosti shkol'nikov* [Types and functions of models in students' educational activities]. *Psikhologicheskaya nauka i obrazovanie* [Psychological Science and Education], 2, 2000, pp. 96-110

research¹⁹, modeling can serve as a valuable teaching method in the training of educators, facilitating the nuanced study of various pedagogical concepts and phenomena.

Thus, modelling is one of the key activities applied in education at different educational levels, but also in research activities (at all stages: ascertainment, training and verification). In this context, it becomes important to identify and analyse the functions of modelling. Thus, *the first function of modelling* is to fix the non-sensory relationships highlighted between real objects of the world and actions with these objects. At this stage, the model is indistinguishable from the general scheme of action and object structure. Both the structure of the object and the general mode of interaction with the object are represented in the schema as fixed relations, which are determined by analysing the actions with the object.

The second function of modelling in the learning process emerges when modelling is systematically employed to establish and accomplish fresh learning goals. Through this approach, practical educational tasks undergo a transformation, evolving into formative and research-oriented endeavors. This transition signifies that learners have familiarized themselves with model development and the constructed concept, perceiving its framework as amenable to optimization for the attainment of new objectives. As modelling becomes integrated into the educational journey, learners' transition from passive recipients of information to active participants in the construction of knowledge. They engage in iterative cycles of modelling and refinement, continually enhancing their understanding and skills. This iterative process fosters a dynamic learning environment where learners are empowered to explore, experiment, and innovate. Moreover, by embracing modelling as a systematic approach to learning, students cultivate scientific thinking through problem-solving and creativity process. They develop the capacity to articulate and refine their ideas, effectively bridging theory and practice. Ultimately, the systematic use of modelling engenders a culture of inquiry and discovery, where learners are equipped not only to achieve existing objectives but also to envision and pursue new horizons of knowledge and understanding.

¹⁹ V. Fluierar, *Facilitarea învățării prin modelarea didactică în învățământul primar* [Facilitating learning through didactic modeling in primary education]. In *Materialele Conferinței Republicane a Cadrelor Didactice: Învățământul preșcolar. Învățământul primar* [Proceedings of the Republican Conference of Teaching Staff: Preschool Education. Primary Education], 2002.

The third function of modelling represents a pivotal shift wherein modelling transitions from merely representing reality to actively influencing it. This transition occurs as learners engage in a process whereby the surrogate object, created through modelling, serves as a medium for acquiring new insights and understanding about the original object. Through this dynamic interplay, modelling assumes a critical control and verification function in the learning process. As learners interact with the surrogate object, they not only gain a deeper understanding of the original concept or phenomenon but also refine their ability to critically evaluate and analyze it. The surrogate object serves as a testing ground, allowing learners to experiment, manipulate variables, and observe outcomes in a controlled environment. In doing so, learners are able to validate their hypotheses, confirm their understanding, and identify areas for further exploration or refinement. Furthermore, the control and verification function of modelling fosters a culture of rigorous inquiry and evidence-based reasoning. Learners are encouraged to challenge assumptions, test hypotheses, and engage in systematic observation and analysis. By grounding their inquiries in empirical evidence derived from modelling, learners develop a more nuanced and sophisticated understanding of the underlying principles and dynamics at play. In this case, the third function of modelling not only enhances learners' conceptual understanding but also cultivates their capacity for scientific thinking and scientific inquiry²⁰.

The fourth function of modelling emerges when students systematically utilize models as instruments for conducting investigative research. At this stage, students actively engage in the creation, refinement, and application of modelling tools to demonstrate their comprehension and interpretation of reality. Through this process, they gain the ability to analyze, compare, and engage in constructive debates with peers, fostering a collaborative environment of inquiry and exploration. As students delve into investigative action using modelling, they embark on a journey of discovery where they invent and adapt modelling tools to address complex questions and phenomena. By applying these tools in a systematic manner, students refine their understanding of underlying concepts and mechanisms, honing their analytical skills and scientific

²⁰ Y.I. Kunitskaya, & T.A. Babkina, *Osnovy pedagogicheskogo professionalizma: ucheb.-metod. posobie [Fundamentals of pedagogical professionalism: educational-methodical guide]*. Grodno: GrGU, 2007, pp. 116-118

faculties. As can be seen, by performing the functions of modelling, especially the fourth function, the trajectory of one's own cognitive movement and development materialized in the form of scientific thinking²¹ is set, both in learning and in the process of professional self-improvement.

Therefore, the intervention modality, starting from the development of thinking in ontogenesis with a continuation of training in systemic education, can incorporate the perspective of making scientific thinking more effective also through modelling. If we refer to students as subjects of the development of scientific thinking, it is clear that we will pay particular attention to the process of formation of scientific thinking in student-pedagogues, then in teachers who will always refer to its effectiveness. The teacher, being interested in its permanent development, will resort to strategies to make it more efficient/more effective.

Given the significance of modelling in educational contexts, it is pertinent to delineate its functions across various age groups of students. Employing modelling as an instructional approach for preschool children addresses several important objectives, including:

- Facilitating the acquisition of new knowledge and skills through hands-on activities.
- Fostering the development of fine motor skills through tactile engagement with materials.
- Encouraging the application of previously acquired knowledge to solve practical problems, promoting cognitive development.
- Cultivating children's productive creativity by providing opportunities for imaginative expression and exploration.
- Promoting a deeper understanding of activity rules and structure, enhancing cognitive comprehension.

The use of modelling with preschoolers necessitates that they have reached a developmental stage where they possess rudimentary skills in analysis, comparison, concretization, and generalization of assimilated knowledge. This ensures that they can effectively engage with the

²¹ N.S. Mikhailova, *Osnovy samoobrazovatel'noy deyatel'nosti. Posobie po kursu "Tekhnologii i tekhniki samoobrazovatel'noy deyatel'nosti" dlya slushateley perepodgotovki spetsial'nosti 1-08 01 71 – Pedagogicheskaya deyatel'nost' spetsialistov* [Fundamentals of self-educational activity. Manual for the course "Technologies and techniques of self-educational activity" for listeners of retraining in the specialty 1-08 01 71 – Pedagogical activity of specialists]. Grodno: GrGU, 2011.

modelling process and derive meaningful learning experiences from it. By recognizing the suitability of modelling for preschool education and aligning it with developmental milestones, educators can optimize its effectiveness as a pedagogical tool for young learners²².

Therefore, modelling in the development of students' scientific thinking in educational activities falls within the system of educational technology as a concrete strategy or method of guidance, facilitation, coordination and educational mentoring, oriented towards the development of scientific/cross-curricular competences in students through the acquisition of age-specific intellectual actions, and science education provides space for students to learn about themselves and others, the world and the environment; to study the laws of the development of society, human thought and to apply research, knowledge and meta-knowledge skills acquired in education and in everyday life. At the same time, modelling scientific thinking in students provides them with a valuable experience that ensures the development of investigative skills, so that they explore and understand their nature to develop their personal effectiveness. Based on the above, we believe that only an educator who consistently possesses and values scientific thinking is able to deal with the education, scientific training of students, the formation and shaping of their scientific thinking.

Discussion

The aim of the study was to investigate and explore the process of development of scientific thinking among pedagogues to contribute to enhancing teachers' capacity to think scientifically and to inform pedagogical practice with evidence-based insights into the role of modelling in promoting cognitive development and scientific inquiry among learners. Compared to previous studies, the current study examines developmental facets as an inherently natural process, formative facets as meticulously organized external interventions, and modelling mechanisms as a process of re-engineering the learning subject's analytical abilities, which can also be applied to teachers, with subsequent implementation among students. The study contributes by providing a comprehensive understanding of the development of scientific thinking

²² A. P. Panfilova, *Igrovoe modelirovanie v deyatel'nosti pedagoga: uchebnik dlya studentov prof. ucheb. zavedeniy* [Game Modeling in the Educator's Activities: Textbook for Students of Professional Educational Institutions]. Publishing Center "Academy", 2008

among pedagogues. It explores into the multifaceted nature of scientific thinking, investigating its psychological, social, and pedagogical dimensions. The study emphasizes the role of modelling as a transformative tool in enhancing scientific thinking skills among educators. Through systematic utilization of modelling, learners are empowered to engage in constructive discourse, propelling their cognitive development and scientific inquiry. The study aligns with previous research in emphasizing the importance of scientific thinking in pedagogical practice and the need for continuous professional development. However, it adds to existing knowledge by specifically focusing on the role of modelling in fostering scientific thinking among educators. While previous studies have highlighted the interdisciplinary foundation of cognitive education, the research delves deeper into the practical implications of modelling as a pedagogical approach.

Conclusions

In conclusion, the development of scientific thinking among pedagogues is a complex process involving psychological, social, and pedagogical components. Through a comprehensive approach integrating various theories and methodologies, teachers can enhance their scientific thinking skills. This formation is very important for pedagogues to effectively engage in scientific research and address theoretical, educational, and social challenges. By cultivating traits such as intellectual curiosity, objectivity, and logical reasoning, pedagogues can refine their scientific thinking, contributing to both professional and existential excellence. This holistic perspective underscores the importance of continuous learning and development in education.

Moreover, the current theoretical analysis has clarified the research problem, emphasizing the multifaceted nature of scientific thinking development among pedagogues and the need for an integrated approach. However, there are still gaps in knowledge that warrant further investigation. These include exploring the impact of educational factors and the social environment on scientific thinking development, investigating external intervention methods and modelling mechanisms, and exploring ways to implement learning models and pedagogical interventions to enhance students' scientific thinking and academic performance.

Additionally, by delineating theoretical perspectives on modelling within pedagogical contexts, we have identified its multifaceted functions and implications. Modelling emerges as a pivotal tool across educational

levels and research activities, serving various purposes from establishing non-sensory relationships to facilitating investigative actions. Through systematic utilization, modelling transcends mere representation to become a transformative force in learning and research endeavors. It transitions educational tasks into formative and research-oriented pursuits, fostering the attainment of new learning objectives and the acquisition of fresh insights about the original objects under scrutiny. Moreover, modelling empowers learners to engage in constructive discourse and analysis, propelling their cognitive development and scientific thinking.

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THE RELEVANCE OF NŌ PERFORMANCES IN THE MODERN WORLD - AND WHAT THEY CAN TELL US ABOUT HUMANITIES RESEARCH

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Abstract: *Considered by most scholars to be the oldest continually performed theatre form, the Japanese Noh theatre was a synthesis of various elements and it had a profound spiritual basis in the two religions that formed the Japanese world-view: Buddhism and the original Shamanism of Japanese archipelago. However, the Noh theatre would have remained classically refined yet frozen, had it not opened up to collaboration with foreign cultures, and incorporated new themes and become a fully internationalized type of performance during the 20th century. Our essay is an attempt to illustrate the transformation of this theatre in the twentieth century and examine its relevance for the modern world.*

Keywords: *Shinsaku nō, gigaku mask, emic and etic approach, intercultural theatre performance*

As for the concrete elements that formed Noh – dances, pantomime, acrobatic elements – we know from various written sources that there were many kinds of performances in Japan between the 8-th and 13-th centuries (prior to the official birth of *nō*). To these native performances which were rooted in ritual and agrarian practices, were added dances and music imported from the continent – from China and the Silk Road, via Korea. For example, in 612 **the gigaku performance (masked dramatic dance)** was brought from the Korean kingdom of Paechke and was used to promote Buddhism which had been recently introduced to Japan.

Gigaku Masks – carved of camphor wood and painted - are preserved in the Japanese Buddhist temples of Hōryūji and Tōdaiji and they give an idea of the cultural influences and communication that existed along the silk road in Central and East Asia (223 masks from the 7th and 8th centuries are preserved in Japan).

Called *kiak* in Korea, where in turn they had been imported from the Southern Chinese court of Wu-hou, the mask dances present a succession

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of scenes enacted by archetypal characters that pass by in procession. Some of the archetypal characters of Gigaku, through their non-chinese facial features are indicative of their **Silk-road** (possibly Persian) **origins**. Here are some of the characters.

Chidō (the way opener) leads the procession:



followed by the lion and the boy who leads the lion (*shishiko*):



Then comes *Konron* the malevolent demon-like, lecherous man:



who makes advances to the young beauty of Wu (Chinese kingdom),
Gojo:



and is punished the strong man *Rikishi* (who derives from the guardian kings of Buddhism):



Finally, the procession is ended by the drunken Persian king (*Suikōo*) and his followers, or by an old man and his sons, who mimes prayers to Buddha.



The official birth of Noh theatre can be placed in the performances done before the shogun around the year 1375, when the young shogun was so impressed by the actors' (especially Zeami's) skill, that he took this troupe under his patronage. Developed under the patronage of the shogun and samurais, the Noh theatre incorporated the Buddhist beliefs of karmic retribution, transmigration of the souls through the six realms of being (*Rokudō*), but also salvation through prayer.

The connection of *Noh* and Buddhism is deeply rooted in the origins of this theatre. It is recorded that **in 752, at the consecration ceremony** of the monumental Buddha statue at Nara, a *gigaku* **procession** was performed. In 869, again, a *gigaku* play was performed at the Kōfukuji temple in Nara, during the Buddhist *shūni'e* ceremony of prayer for national prosperity. *Shūni'e* (held in the 2nd month) is a ceremony of repentance for the sins that we accumulate, and implies purification by water and fire. Originally it was a ritual performed on behalf of the state, because natural disasters, epidemics and rebellions were seen as illnesses of the state, and the ritual was performed to cure such illnesses, to gain a fruitful harvest of the Five Crops, and to achieve peace under heaven.

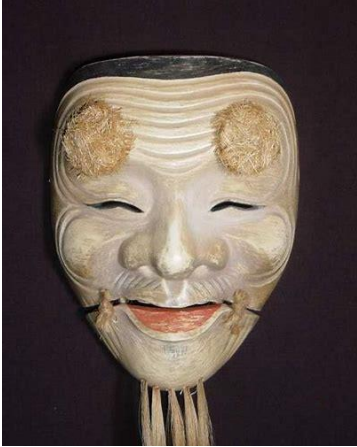
The shamanic elements – which appear in this theatre performance were equally important to the samurai class. The Noh performance itself was such a type of shamanic ritual with a function of soul pacification (called in Japanese *tamashizume*). It was like an invocation and it contained spells that had the power to revitalize or pacify the spirits.

The structure of the typical play – the *mugen* or dream-like *nō* is actually staging the **return of a deceased person's spirit**, attracted by the presence of a Buddhist priest. We see a reenactment of the spirit's tragic story and the reason for his return is to seek salvation. Many of the ghost characters who return in the present of the performance to tell their story are warriors who died in the medieval battles. But there are also plays with female characters who lost a child, or a husband, and these female characters, through their desires, their attachment to strong emotions and their vulnerability may be seen to symbolize the weakness of human nature.

There is a category of *nō* plays which have a purely shamanic, ritual character – the *kami nō*, or “god plays”.

The most important such play, the *Okina* (crudely translated as “Old Man”) is full of shamanic ritual even before it starts as the actor must purify himself for some time before playing *Okina*. On the day of the performance, sometimes *shimenawa* (a sacred rope used to delineate the

sacred space at the entrance of a Shinto shrine) is placed above across the stage to purify the place. The actor dons the white Okina mask on the stage, which turns him into a god. Okina steps forward and dances, and after the dance, he takes off his mask (much like a shaman), and retires.



Old Okina Mask



Hiroshi Sugimoto "Noh Climax - Okina" - YouTube

The performance of *Okina* at New Year, reassures audiences that the powerful, primal energy that *nō* theatre possessed since its beginning, is renewed each year, according to Kanze Hisao¹, a master of an important Noh school, the Kanze.

There are five types of serious *noh* plays (we might call them tragedies) that occurred in a traditional day's program, interspersed with comical interludes called *kyogen*. The plays were relatively short, of about 20-30 minutes each. The first type is the ritual god play, followed by warrior plays and then plays featuring women, which put on stage the ghosts who reenact their past sufferings and seek salvation. The fourth category includes miscellaneous plays about contemporary subjects,

¹ Masuda Shozō (ed.). *Nō nyūmon – kanshō he no izanai*, Tokyo, Tankōsha, 1995, p. 6

madness, vengeful ghosts, and other topics. The fifth category features demons, monsters, goblins, dressed in bright colors who give a fast-paced, tense finale to the show. These five categories correspond quite closely to the six realms, or categories of beings through which a soul transmigrated in Buddhism (gods, warrior heroes, men, animals, hungry ghost and hellish demons). Thus, together the *noh* and *kyogen* plays give a comprehensive view of the world.

So, what can we learn today from this beautiful yet closed world of Japanese theatre? Japan is sometimes described as a “Cultural Galápagos” – a country that has developed specific customs, and forms of art and behavior – like manga and cosplay – to the beat of its own taiko drum. The so-called “Galapagos syndrome” phrase was first coined to characterize the nation's highly evolved but globally incompatible cell phones, but is lately being applied to its culture which preserves very old forms of entertainment – *sumo*, *kabuki*, *noh* – which are said to proceed from the very age of the gods.

A performance which touched on contemporary problems in the Middle Ages when it was created, the *Noh* theatre would have remained classically refined yet frozen, had it not opened up to collaboration with foreign cultures, and incorporated new themes and become a fully internationalized type of performance during the 20th century. At the beginning of the 20th century Japanese actors, scholars, or poets started to write new plays in the classical *nō* style, on contemporary subjects, such as the Sino-Japanese or Russo-Japanese war, or inspired by European plays such as Maeterlinck's *The Death of Tintagiles* (1894), which inspired the new *nō* play “The Iron Gate”, produced in 1915, written by the haiku poet Takahama Kiyoshi (1874-1959). Takahama continued to write new *nō* centered on historical characters, samurai warriors of the Middle Ages, like *Sanetomo* (1920), *Jishū* (1940) or *Yoshitsune* (1942)².

If Japanese history and legends continued to inspire new *nō* during the 1930-ies, the 40-ies or postwar period, the most fruitful collaboration was with European sources.

The first Europeans – the Portuguese catholic missionaries arrived in Japan in 1543. In this period, it seems that Japanese believers and foreign missionaries used the medium of the *Nō* theatre (which was very popular at the time) to create Christian *noh* plays with subjects inspired from the

² Nishino, Haruo (2004), “Shinsakunō no hyakunen – 1904-2004”, in *Hosei University Repository*, (112-142), pp. 112-114/215-242

Christian doctrine, somewhat like the medieval European mystery plays. There seem to have existed quite a few of these plays, but, due to the interdiction and then severe persecution of Christianity from 1614 onward, all records about them disappeared.

An example of fertile cross-cultural collaboration are W.B. Yeats' plays based on Irish legends – *At the Hawk's Well* (1917) – which are stylized, symbolic, ritualistic, with the bare stage and the patterned screen of Nō as background. Yeats' friendship with Ezra Pound and Ernest Fenollosa, who translated and promoted the Nō theatre in the West, introduced him to this form of art, from which he incorporated many elements into his plays. However, in a fascinating intercultural collaboration, *At the Hawk's Well* became part of Japan's modern Nō repertoire in the post-war period. Nō scholar Yokomichi Mario adapted the Japanese translation of the play into a *shinsaku nō* in 1949: *Taka no izumi* ("The Hawk's Well"), and then reworked and modernized it in 1969, as *Takahime*, "The Hawk Maiden". *Takahime* was played by some of the great masters of Nō, and was very debated in Japan. It's a beautiful round trip of influence from Japan to the West and then back to Japan.

To put the *noh* in figures – we have 200 classical plays in the current program dating from the medieval period, when it was created as an art form; 3000 plays written in the Edo period that are no longer in the repertoire³ and many lost; 300 newly written plays (*shinsaku nō*) beginning with the Meiji Era (end of 19th century) until the present.

The original plays were written by the heads of the *nō* troupes – the *noh* master. The authorship of the new plays is very significant and different - I have identified several categories of authors, as follows:

- **scholars of classical literature and specialists of Nō**
- **Japanese Noh actors**
- **Japanese "amateurs"** like immunologist Tada Tomio
- **foreigners:** just one example, namely Jadwiga Maria Rodowicz, Polish orientalist, who was also ambassador to Japan, wrote in 2011 *The Piano Tuner*, putting on stage Chopin and Delacroix in a debate on art – the play being produced by Tessenkai theatre company in Warsaw

³ Watson, Michael, *Electronic databases for antiquarians? Extra-repertory noh play texts in the digital performing arts world*,

http://glopac.org/Jparc/Sing_workshop/Watson_abstr.htm, accessed in 20.04.2013



-The mask used for Chopin in *The Piano Tuner*

The themes of the plays – which are closely connected to the circumstances which occasioned their writing – fall into several categories and, implicitly, of purposes behind these plays:

- **Requiem plays** for distant events like World War II and the atomic bomb, or for recent and shocking events like the Tohoku Earthquake of 11 March 2011, or commemorating other catastrophes like the ecological disaster at Minamata in 1956. The terms used for describing the purpose/the intended effect of these plays is “pacification of souls”, *chinkon*, or “regeneration”, *saisei*. The bulk of plays devoted to pacifying the souls of those killed in Hiroshima or Nagasaki by the atom bomb is heavy, both numerically and emotionally. Tada Tomio wrote 3 plays on the atomic bombing (*Genbakuki*, *Nagasaki no Seibo* and *Bokonka*) in an attempt to stop the use of the nuclear, while Udaka Michishige who produced *The Atomic Cloud* in 2010 in Hiroshima described his experience of “*meeting with the spirits of the casualties of 6th bombs who, victims of a sudden and unreasonable death, cannot be released from this existential plane and be reborn.*” One of the most beautiful requiem plays is *Sei Paulo no kaishin*, “The Conversion of Saint Paul”, produced in 2012 one year after the Tohoku Earthquake.

- **“Ecological” (and requiem) plays**, for pacifying even the souls of animals killed by Minamata disaster, for example (*Shiranui*, “Light in the Water”, produced in 2004 in the very Minamata bay), or, like *Mizu no rin*, “The Circle of Water” a play produced in 2009, casting children, where the theme of the *purification of water*, and the

workshops preparing the performance are actually part of the ecological/moral education for children⁴.

- **Other types of commemorative plays**, like *Dōkan* (2001), a play about a medieval warrior produced at the 30-th anniversary of Isehara city (Kanagawa Prefecture) by the municipality⁵; *Double Nora* produced in 2005 in Tokyo and invited to the Ibsen Festival in Oslo 2006, was composed for the anniversary of 100 years of diplomatic relations between Norway and Japan – 1905/2005⁶; *Jeanne d'Arc* (2012) performed in France, Orleans and Paris, on the 600-th anniversary of her birth.

- **Religious plays**, inspired by Christianity, hold a small position, but are sometime used politically, as *Iesu no senrei* ("The baptism of Jesus", 2012), produced at the Vatican, or *Luther*, produced by a Lutheran University in Japan in January 2012, for the 500 years anniversary of the religious Reform⁷.

- Plays inspired by both Japanese and foreign **literary works** – many written in the interwar period Manga/anime constitute a source of inspiration, like *Garasu no kamen* for the noh *Kurenai Tennnyo* (2006), or the famous anime *Evangelion* transposed as noh dance. The ballet *Giselle* also became a *shinsaku noh*, and finally, in 2000 the best Japanese novel of all times, *Genji Monogatari*, became the source for *Yume no ukihashi*.

- **War, or warrior plays**, forming a large group, are an important part of Noh, which developed as an art for the samurai class. There is a large number of new Noh plays inspired by the Sino-Japanese war of 1894-5, as well as by the Russo-Japanese war of 1904-5. In the postwar period, the "war" plays deal with the atomic shock which Japan witnessed.

As an example of intercultural performance I want to share a few images from *Jeanne d'Arc* noh play in 2012, where I was present and

⁴ cf. Kikanshi *Gonzui*, no. 79, 6.11.2003, at www.soshisha.org/gonzui/79gou/gonzui_79.htm, accessed on 29.04.2013

⁵ cf. <http://sansou-nagisa.net/qual/qualnet.cgi?cmd=dp&num=92&Tfile=User&dp=event.html>

⁶ Ueda, Kuniyoshi (2006), "Ibsen Living in the 21st Century – Noh Adaptation of A Doll's House, or Nora", in *Yūgō Bunka Kenkyū*, No. 7 (2-119), p. 3

⁷ cf. http://www.kyoto-minpo.net/event/archives/2012/02/17/post_34.php- and also Nishino, Haruo (2004), "Shinsakunō no hyakunen – 2", in *Hosei University Repository*, (215-242)

could notice directly the vivid interest of the French audience. A French actor presents the story line in Japanese (unlike in the traditional plays where the chorus echoes the story).

Battle scenes are introduced, using western props – swords. Jeanne's costume is modified introducing western elements like a crown with the cross symbol. Jeanne's old mother appears as a character, mourning her daughter's death, with a mask which is, also, unlike the usual *nō*.





Having read the media reviews about these *shinsaku nō*, I have noticed several phrases recurring in them: if one is “intangible cultural asset”, another is “the pacification of souls”. These two phrases come into a strange opposition: the *cultural asset* points to something which is no longer of use for the contemporary person, while soul pacification points to a very actual and contemporary activity, since everybody needs their peace of mind, especially after major events like the Tohoku earthquake and tsunami.

As a conclusion, I think that the importance of these new *nō* performances for the communities cannot be understated. The success they had abroad, with a public that does not understand the language of performance but feels the energy created by the actors and musicians, proves their efficiency. It proves the fact that the shamanic and religious roots of this performance give it its value for modern audiences as well. It is interesting to note that plays with a celebratory character, or exorcising role were successful abroad.

Conclusion

So, what can we learn by- studying Japan and its theatre?

(1) That Japanese have always been creative in a very syncretic way – they have a long history of taking religious and cultural forms from outside and adapting them to their needs. This can be seen in the fusion of Buddhism and shamanism they operated in their traditional theatre and in the way they immediately adopted European modernist ideas and used them to revive and modernize *noh* into new *noh*, *shinsakunoh* in the 20-th century.

(2) That there exist bodies of common knowledge specific to certain epochs and geographic areas – Song and Yuan Dynasties China and Tokugawa Japan (cca. 1300-1700) shared unspoken assumptions, or epistemes, that enabled them to conceive ideas from such varied fields as Buddhism, Confucianism, Taoism, poetic conventions, etc. For the people of that age knowledge and understanding of various texts and cultural differences across areas translated as power.

As modern researchers, by exploring such bodies of knowledge we understand better another type of culture. The Islamic world, the Turkik peoples also share their own underlying common assumptions. The importance of family/clan/group belonging, for example, the authority of the aged (and therefore wise) persons in these traditions are often overlooked and misinterpreted by Western scholars who try to superimpose their own methodological terminology, such as subaltern mentality, otherness, oppression of female and other minorities, the construction of national identity (which is assumed to be false and bad). If there is to be a debate between emic and etic approaches to the cultures of the east, most japanologists would give more importance to the emic one. This does not exclude a transdisciplinary research, and all the critical activity that is done under the label of cultural studies should be done with due respect to real science, to history and the dignity of each people or ethnic group.

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SOCIAL ANXIETY AND THE PERCEPTION OF CONTROL OVER ANXIOGENIC EVENTS WITH STUDENTS OF EDUCATION SCIENCES - GENDER DIFFERENCES AND FIELD OF ACTIVITY

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Abstract: *The current study analyzes the results of some research on social anxiety and the perception of control over anxiogenic events (PCEA) among students from the Faculty of Education Sciences - substitute teaching staff and students preparing for the teaching profession, aiming to identify the differences in these variables according to gender, field, stage of professionalization. The following were assumed: differences in the dimensions of social anxiety (distress and avoidance) and the perception of control over anxiogenic events depending on: the field of activity, gender, the level of perception of control over anxiogenic events (PCEA). The study included 168 adult students at the Faculty of Education Sciences from "Dimitrie Cantemir" Christian University of Bucharest, out of which 92 work in the education field (substitute teaching staff), and 76 in other fields of activity. The members of the research group are between 20 and 55 years old ($M=37.66$, $DS=8.59$), and in terms of gender - 12 participants are male, 156 are female.*

Keywords: *social anxiety, distress, social avoidance, perceived control over anxiogenic events*

Stress and anxiety with the teaching staff

A number of studies (Stavroula, Labros, Georgios and Ioannis, 2014)¹ revealed a multitude of stress factors to which teachers are exposed in their work environment: large number of students in the classroom, pressure from students, parents and superiors, relationships with their colleagues, high workload or lack of resources, as well as a series of moderating factors such as personality, copying strategies or social support. Certain school or individual characteristics are associated with a

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¹ S. Stavroula, S. Labros, A. Georgios & P. Ioannis, *The Effect of the School Internal Environment of Secondary Education on Daily Work of Teaching Staff: A Systemic Approach*. Mediterranean Journal of Social Sciences, 5(13), 2014, 244 – 251.

higher risk of depression (education cycle, temperament, exams for teaching positions, etc.). Also, the teaching experience or support network may contribute to the harmful effect of contextual factors.

Teachers have the possibility of a higher personal control over some of these factors, whereas over others they cannot have too much personal control (e.g. government initiatives, job security, promotion) (Ferguson, Frost and Hall, 2012).²

The ongoing stress factors are associated with various anxious and depressive manifestations that can affect the efficiency of teachers' work. Stress, anxiety and depression among teachers have been addressed in several studies (Jurado, Gurpegui, Moreno and de Dios Luna)³, compared to social anxiety.

Social anxiety disorder (SAD), also known as social phobia (Herbert, Crittenden and Dalrymple, 2004)⁴, is characterized by a marked and persistent fear of social situations. The defining characteristic of social anxiety is that it arises in the context of real or imagined social situations, due to the fear of evaluation. Therefore, it appears when people are too concerned with how they are perceived and evaluated by those around them. People with a high level of social anxiety become anxious not only when they are assessed by others, but also when they just think about the possibility of being criticized in a future social situation. Anxiety can also be accompanied by certain emotions and feelings, such as: anger, depression, uselessness, lack of hope (the affective component of anxiety). Leitenberg (1990)⁵ broadened the concept of social anxiety, including other dimensions: performance anxiety, social withdrawal and isolation, separation anxiety, social inhibition, shyness, fear of public speaking, fear of strangers, fear of interpersonal rejection. Paul Gilbert (2000)⁶ demonstrated that anxious people, in situations of social interaction, have a greater fear of possible negative evaluations from others

² K. Ferguson, L. Frost & D. Hall, *Predicting teacher anxiety, depression, and job satisfaction*. Journal of teaching and learning, 8(1), 2012.

³ D. Jurado, M. Gurpegui, O. Moreno, J.D. Luna, *School setting and teaching experience as risk factors for depressive symptoms in teachers*. Eur Psychiatry 1998;13:78–82.CrossRefGoogle ScholarPubMed

⁴ J.D. Herbert, J.D.K. Crittenden & K. L. Dalrymple, *Knowledge of social anxiety disorder relative to attention deficit hyperactivity disorder among educational professionals*. Journal of Clinical Child and Adolescent Psychology, 33(2), 2004, 366-372.

⁵ H. (Ed). Leitenberg, *Handbook of social and evaluation anxiety*. Springer Science & Business Media, 1990.

⁶ P. Gilbert, *The relationship of shame, social anxiety and depression: The role of the evaluation of social rank*. Clinical Psychology & Psychotherapy, 7(3), 2000, 174-189.

(Fear of Negative Evaluation - FNE) ($r = .62$) and a higher level of depression ($r = .60$).

Although many studies have considered only the fear of negative evaluation from others in explaining social anxiety, Justin W. Weeks, Tejal A. Jakatdar and Richard G. Heimberg (2010)⁷ assumed that the fear of positive evaluation has an important role in triggering social anxiety. Leary (1983)⁸ highlights two dimensions of social anxiety: a) fear of negative evaluation (FNE) and b) social avoidance and distress (SAD).

The distinction between "subjective experiences of anxiety and its behavioral consequences, that is social avoidance and inhibition (...) is important, given that some people with subjective social anxiety may act satisfactorily/positively in some social contexts, while others suffer from a high level of anxiety and social avoidance" (Otomega, 2014).⁹

As far as gender differences in terms of social anxiety is concerned, Leary (1986)¹⁰ argues that women have a higher level of social anxiety due to the fact that expectations regarding socially desirable behaviors are more demanding for women than for men. For example, women are harsher criticized when they adopt certain behaviors, such as: trivial language, excessive alcohol consumption in public, etc. (Miller, 1992, cited in Leary, 1986).¹¹

Other authors (Peng, Lam and Jin, 2011)¹² have demonstrated that there are no gender differences in terms of social anxiety.

One of the social contexts that can interfere with the biological and cultural influences on social anxiety, especially among teachers, is the context created by their need for training and professional development.

⁷ J.W. Weeks, T. A. Jakatdar & R. G. Heimberg, *Comparing and contrasting fears of positive and negative evaluation as facets of social anxiety*. Journal of Social and Clinical Psychology, 29(1), 2010.

⁸ M.R. Leary, *Social anxiousness: the construct and its measurement*. Journal of Personality Assessment, 47, 1983, 66-75.

⁹ I. Otomega, *The effect of the phenomenon of social anxiety on school success in adolescents*. Psychology, scientific-practical journal, 2014, 24(2), 3-9

¹⁰ M.R. Leary & S.C. Atherton, *Self-efficacy, social anxiety, and inhibition in interpersonal encounters*. Journal of Social and Clinical Psychology, 1986, 4(3), 256-267.

¹¹ Ibidem

¹² Z.W. Peng, L.T. Lam, J. Jin, *Factors associated with social interaction anxiety among Chinese adolescents*. East Asian Archives of Psychiatry, 2011, 21(4), 135-141.

The perception of control over anxiogenic events (PCEA)

Burger (1989)¹³ states that, over the past decades, the concept of perceived personal control has played an important role in the research and theory of a large number of constructs in psychology. The results have shown that the perception of personal control results in positive reactions (including the fact that maintaining a sense of personal control contributes to the ability to cope with stressors, while the perception of a loss of control results in negative effects).

As to the perceived control over anxiogenic events, Gregor and Zvolensky (2008)¹⁴ define it as the extent to which the individual believes he can control the onset, compensation or duration of an aversive event.

The problem of the current research work arises from the question whether there are differences in terms of social anxiety (distress and avoidance) and the perception of control over anxiogenic events depending on gender and field of activity.

Considering the level of current knowledge on social anxiety among teaching staff members, the current study aims to identify the differences regarding the social anxiety (distress and avoidance) of the students of Education Sciences according to gender, age, the level of perception of control over anxiogenic events (PCEA).

According to this objective, the following **general and operational hypotheses** were formulated:

I.1) It is assumed that there are differences at the level of social anxiety (distress and avoidance) of Education Sciences students depending on a) field of activity, b) gender, c) level of perception of control over anxiogenic events (PCEA). Subsumed to this hypothesis were formulated as **operational hypotheses**:

It is assumed that the dimensions of social anxiety (distress and avoidance) and the perception of control over anxiogenic events (PCEA) will be greater for:

I.1a) students who work in the field of education than for those who work in other fields;

I.1b) women than for men;

¹³ J. M. Burger, J. M. *Negative reactions to increases in perceived personal control*. Journal of personality and social psychology, 1989, 56(2), 246.

¹⁴ K.L. Gregor, M. J. Zvolensky, *Anxiety sensitivity and perceived control over anxiety-related events: Evaluating the singular and interactive effects in the prediction of anxious and fearful responding to bodily sensations*. Behaviour Research and Therapy, 2008, 46(9), 1017-1025.

I.2) It is assumed that the dimensions of social anxiety (distress and avoidance) will differ depending on the perception of control over anxiogenic events, in the sense that they will be higher for people with a sense of control over anxiogenic events at a low level, compared to people with a sense of control over high-level anxiogenic events.

Method

Participants

The researchwork involved a number of 168 participants - adult students in the 2nd and 3rd year of undergraduate studies at the Faculty of Education Sciences, Christian University "Dimitrie Cantemir" Bucharest, out of whom 92 work in education (substitute teaching staff), and 76 in other fields of activity. Most of the participants (86) are between 31 and 40 years old, followed by those between 41 and 55 years old (54), respectively the age range 20-30 (28).

Instruments

A professional-demographic questionnaire was used to collect data regarding the professional-demographic variables of the participants: gender, age, field of activity.

Social anxiety (distress and avoidance) was measured by means of the *Social Avoidance and Distress Scale (SAD)* (Leary, 1991).¹⁵ The items of the scale refer to both subjective and behavioral aspects of social difficulties. The original scale contains 28 items, 14 assessing distress and 14 assessing social avoidance.

The initial form requires true/false answers. Answers are given on a 5-point Likert scale from 1 = "This is true for me to a very small extent", to 5 = "This is true for me to a very large extent", so high scores reflect high social avoidance and distress.

The perception of control over anxiogenic events (PCEA) was measured with a single item formulated in the terms "In difficult situations that can cause me anxiety, I control the situations", with the answer options: very easy, b) suitable; c) very hard. The model underlying

¹⁵ M.L. Leary, *Social anxiety, shyness, and related constructs*. In J.P. Robinson, P.R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes*, 1991, New York: Academic Press, (pp. 161-194).

the item formulation was provided by the existing items in the specialized literature (Step toe, Tsuda, & Tanaka, 2007).¹⁶

Table 1
Pearson correlation coefficients between dimensions of social anxiety and perception of control over anxiogenic events

		1	2	3	4
1.Age	Pearson	1			
2. Social anxiety - distress	Pearson	-.02	1		
3. Social avoidance	Pearson	-.06	.95**	1	
4. PCEA	Pearson	-.14**	.73**	.77**	1

Note: The correlations marked with ** are statistically significant for p < .01 (bilateral test)

Procedure
The rule for recruiting the participants in this study was convenience sampling, so that their selection was based on the students’ agreement to be involved in the research.

The tools were applied between November and December 2022, to the entire group of students in the seminar rooms of the Faculty of Educational Sciences, "Dimitrie Cantemir" Christian University, Bucharest.

Before the administration of the instruments, the participants were informed about the purpose of the research, ensuring the confidentiality of the answers, as well as the possibility to withdraw from participation at any time. This information was also included in the informed consent that the participants completed before giving the answers.

Statistical procedures
After being collected, the data were processed in the statistical data analysis program SPSS 13. The preliminary analysis of the data involved checking the normality of the distribution of scores (according to Kline, 2011)¹⁷, calculating the descriptive indices of the start of the series of

¹⁶ A. Steptoe, A. Tsuda, & Y. Tanaka, *Depressive symptoms, socio-economic background, sense of control, and cultural factors in university students from 23 countries*. International journal of behavioral medicine, 2007, 14(2), 97-107.
¹⁷ R.B. Kline, *Principles and Practice of Structural Equation Modeling*, 2011, New York: The Guilford Press, (5th ed., pp. 3-427).

scores obtained, including the calculation of internal consistency (Cronbach Alpha) of the subscales.

After establishing the internal consistency (Cronbach Alpha) of the subscales and calculating the central tendency of the scores, the procedures for inferential statistics were applied: the student *t-test* for independent samples, *One-way Anova* variance analysis, *Two-way Anova* variance analysis, correlation analysis by the Pearson test of the bivariate correlation.

Results
Descriptive

At the level of the whole batch (N=168), the scores included in table 2 were obtained. They indicate a level below average (below the value of 3), which means "to an appropriate extent", on the dimensions of social anxiety and a level close to 2 of the perception of control over anxiogenic events, which also means an average level.

Table 2
Central tendency of representative scores for social anxiety (distress and avoidance) and for perception of control over anxious events (PCEA)
(N=168)

	Min N	Max	Avera ge	Standard Deviation	Obliquity	Flattening	
			n				
Social anxiety- distress	1	5	2.77	.835	.335	.118	.653 .235
168							
Social avoidance	1	5	2.88	.845	.105	.118	.372 .235
168							
PCEA	1	3	1.96	.816	.082	.118	-1.493 .235
168							

At the level of the group of students active in education (N=92), the scores in table 3 were obtained. And they indicate a level below average (below the value of 3), which means "to an appropriate extent", in the dimensions of social anxiety and a level slightly above 2 of the perception of control over anxiogenic events, which also means an average level.

Tabel 3
Central tendency of representative scores for social anxiety (distress and avoidance) and perception of control over anxiogenic events (PCEA) at the level of the participants working in education (N92)

	Min N	Max	Average n	Standard Deviation	Obliquity	Flattening		
Social anxiety distress	92	1	5	2.85	.940.235	.78	.653	.135
Social avoidance	92	1	5	2.93	.955.98	.78	.372	.135
PCEA	92	1	3	2.03	.836.062	.78	-.903	.135

Inferentials
 The analysis highlighted statistically significant differences regarding all three measured variables, as shown by the *t* coefficients presented in table 4.

In order to test the first operational hypothesis of the study (I1a) - the assumption that the dimensions of social anxiety - distress and avoidance - and the perception of control over anxiogenic events will be higher for students who work in the field of education than for those who work in other fields; the *t-Student test* was used for independent samples according to occupation (education) and occupations other than education.

From table 4 it can be noticed that participants who work in education report significantly statistically higher scores compared to participants who do not work in education, both in terms of distress and social avoidance, and in terms of the perception of control over anxiogenic events.

Table 4
The central tendency of representative scores for social anxiety (distress and avoidance) and perceived control over anxiogenic events (PCEA) (N=168) according to occupation:

	Occupation	N	Average	Standard deviation	Standard error of the average
Social anxiety -distress	Education	92	2.85	.94	.05
	Other fields of activity	76	2.62	.55	.04

Social avoidance	Education	92	2.93	.95	.05
	Other fields of activity	76	2.76	.56	.04
PCEA	Education	92	2.03	.83	.05
	Other fields of activity	76	1.82	.75	.06

In order to test the second operational hypothesis of the study (I.1b) - the assumptions that the dimensions of social anxiety (distress and avoidance) and the perception of control over anxiety axiogenic events will be higher for women than for men, the *t-Student test* was used for samples independently and to analyze the variance in one way. (*One Way Anova*).

Table 5
The central tendency of the representative scores for social anxiety (distress and avoidance) and perceived control over anxious axiogenic events (PCEA) (N=168) according to the gener.

	Gender	N	Average	Standard deviation	Standard error of the average
Social anxietate -distress	M	12	2.70	.741	.080
	F	156	2.79	.857	.046
Social avoidance	M	12	2.82	.713	.077
	F	156	2.89	.876	.047
PCEA	M	12	1.93	.779	.084
	F	156	1.96	.826	.045

No statistically significant differences were obtained, so this sub-hypothesis was disproved. The scores show slight differences in the sense assumed by this sub-hypothesis, but they are not statistically significant either at the level of the whole batch or at the level of the participants working in education (tables 5, 6).

Table 6
The central tendency of the representative scores for social anxiety (distress and avoidance) and perceived control over anxious axiogenic events (N=92) according to the gener.

	Gender	N	Average	Standard deviation	Standard error of the average
Social anxiety - distress	M	33	2.86	.466	.137
	F	59	2.85	.654	.061
Social avoidance	M	33	2.90	.530	.131
	F	59	2.94	.676	.063
PCEA	M	33	2.10	.471	.138
	F	59	2.02	.431	.054

a. Occupation = education

In order to test the second hypothesis of the study (I2) - the assumption that the dimensions of social anxiety (distress and avoidance) will be greater for people with a sense of control over low-level axiogenic events than for people with a sense of control over high-level axiogenic events, one way analysis of variance (*One Way Anova*) was used depending on the level of perceived control over axiogenic events (low, medium and high).

The analysis highlighted statistically significant differences regarding the two dimensions of social anxiety (distress and avoidance), measured as shows the F coefficients presented in table 7.

From table 8 it can be seen that the highest average scores are reported by participants with a low level of perception of control over anxiety axiogenic events and the lowest by participants with a high level of perception of control over anxiety axiogenic events.

Table 7
The central tendency of the representative scores for social anxiety (distress and avoidance) (N=168) according to the perceived control over axiogenic events (PCEA)

95% Average confidence interval							
				Inf.	Sup		
N	AveragDS	SE	limit	limit	Min	Max	
e							

Social low level	69	3.42	.760	.062	3.30	3.55	2	5
Anxiety-distress high level	56	2.68	.484	.040	2.60	2.76	2	5
high level	43	2.12	.639	.055	2.01	2.23	1	3
Total	168	2.77	.835	.040	2.69	2.85	1	5
Social low level	69	3.63	.663	.054	3.53	3.74	2	5
avoidance average level	56	2.77	.370	.031	2.71	2.83	2	4
High level	43	2.12	.649	.056	2.01	2.23	1	4
Total	168	2.88	.845	.041	2.79	2.96	1	5

Table 8
Unifactorial variance analysis (One Way ANOVA) of social anxiety scores (distress and avoidance) according to perception of control over axiogenic events (PCEA)(N=168)

		Sum of squares	Degree of freedoms	Sum of squares	F	P
Social anxiety -distress	Inter-groups	122.967	2	61.483	149.755	.000
	Intra-groups	174.488	425	.411		
	Total	297.454	427			
Social avoidance	Inter-groups	163.718	2	81.859	245.813	.000
	Intra-groups	141.530	425	.333		
	Total	305.249	427			

The situation reported at the level of the whole group is similar at the level of participants working in education (tables 8, 9), the highest average scores are reported by participants with a low level of perception of control over axiogenic events and the lowest by the participants with a high level of the perception of control over axiogenic events.

Table 9
The central tendency of the representative scores for social anxiety (distress and avoidance) at the level of the participants working in education (N=92) according to the perceived control over axiogenic events (PCEA)

		95% Average confidence interval							
			NAverag DS	SE	Inf. limit	Sup. limit	Min	Max	
		e							
Social anxiety-distress	Low level	21	3.73	.758	.078	3.57	3.88	2	5
	Average level	28	2.79	.440	.048	2.70	2.89	2	5
	High level	41	2.08	.666	.066	1.95	2.21	1	3
	Total	92	2.85	.940	.056	2.74	2.96	1	5
Social avoidance	Low level	23	3.91	.636	.066	3.78	4.04	2	5
	Aerage level	28	2.86	.319	.035	2.79	2.93	2	4
a.occupation=education	High level	41	2.10	.694	.069	1.96	2.24	1	4
	Total	92	2.93	.955	.057	2.82	3.05	1	5

Tabel 10
Unifactorial variance analysis (One Way ANOVA) of social anxiety scores (distress and avoidance) according to perception of control over axiogenic events (PCEA) at the level of the participants who work in education (N=92)

		Sum of squares	Degree of freedom	Average of squares	F	P
Social anxiety-distress	Inter-groups	133.05	2	66.52	161.63	.000
	Intra-groups	114.42	278	.41		
	Total	247.47	280			
Social avoidance	Inter-groups	160.57	2	80.28	235.26	.000
	Intra-groups	94.87	278	.34		
	Total	255.44	280			

a.Occupation = education

Discussions

The results presented above confirmed most of the study's hypotheses. Both at the level of the whole batch (N=168), and at the level of the group made up of students working in education (N=92), the two dimensions of social anxiety were revealed to be of below average level (below the value of 3), which means an average level and close to level 2 of the perception of control over anxiogenic events, which also means an average level. This is normal, considering that the investigated population is non-clinical.

Also, the results support the first operational hypothesis of the study (I1a), the dimensions of social anxiety (distress and avoidance) and the perception of control over anxiogenic events being higher for students who have an occupation in the field of education, than for those who work in other fields.

The operational hypothesis I1b regarding gender differences in social anxiety and in the perception of control over anxiogenic events was not confirmed. Instead, the second hypothesis of the study (I2) - the assumption that the dimensions of social anxiety (distress and avoidance) will be higher for people with a sense of control over low-level anxiogenic events, compared to people with a sense of control over high-level anxiogenic events - was confirmed.

The presented results are congruent with those reported in the studies that comparatively analyzed the level of anxiety in different socio-professional categories: Gregor și Zvolensky, 2010¹⁸, Zaharias, 2008¹⁹; Cowden, 2009²⁰; DePhill, Brillot și Nettle, 2011²¹; Peng, Lam și Jin, 2011²²;

¹⁸ K.L. Gregor M. J. & Zvolensky, *Anxiety sensitivity and perceived control over anxiety-related events: Evaluating the singular and interactive effects in the prediction of anxious and fearful responding to bodily sensations*. Behaviour Research and Therapy, 2008, 46 (9), 1017-1025.

¹⁹ P. Zaharias, Cross-cultural differences in perceptions of e-learning usability: An empirical investigation. International Journal of Technology and Human Interaction (IJTHI), 4(3), 2008, 1-26. 1530 -1549.

²⁰ P.A. Cowden, P.A. *Communication and conflict: Social anxiety and learning*. The Proceedings of Academy of Organizational Culture: Communications and Conflict, 2009, 14(2), 16-19.

²¹ M.B. DePhill, B. Brillot & D. Nettle, *Anxiety: An evolutionary approach*. Canadian Journal of Psychiatry, 2011, 56, 707-715

²² Z.W. Peng, L. T. Lam & J. Jin, *Factors associated with social interaction anxiety among Chinese adolescents*. East Asian Archives of Psychiatry, 2011, 21(4), 135-141.

Farooqi, Ghani and Spielberger, 2012²³; Henderson, Gilbert and Zimbardo, 2014²⁴; Nikolaos și Georgios, 2014²⁵; Bleidorn, Arslan, Denissen, Rentfrow, Gebauer, Potter and Gosling, 2016²⁶.

Although they prove to be interesting, the results should be viewed with caution due to some limitations of the study. One of these may come from the instruments used, which assess social anxiety retrospectively, with participants reporting past episodes of anxiety, which involves the risk of not accurately recalling them.

Another limitation may come from the type of data used (quantitative), which does not provide a thorough explanation of the observed patterns or causality issues.

These limits draw as future research directions the investigation of more homogeneous groups of teachers in terms of professionalization level and challenges encountered at work, as well as the investigation of the extent to which the impact of culture is specifically on social anxiety or on the general emotional state.

Future studies could include a longitudinal design and research in the real work environment of teachers.

Conclusions

In conclusion, the results positively answer the main question of the study, demonstrating that there are differences at the level of social anxiety (distress and avoidance) and at the level of perception of control over anxiogenic events among students from Education Sciences depending on the field of activity. The results do not provide a conclusive answer to the question of whether there are gender differences at the level of social anxiety (distress and avoidance) and at the level of perception of control over anxiogenic events.

²³ Y.N. Farooqi, R. Ghani & C.D. Spielberger, *Gender differences in test anxiety and academic performance of medical students*. International Journal of Psychology and Behavioral Sciences, 2012, 2(2), 38- 43.

²⁴ L. Henderson, P. Gilbert & P. Zimbardo, *Shyness, social anxiety, and social phobia*. In S. Hofmann, & P. DiBartolo (eds.). Social Anxiety. Cambridge, Massachusetts: Academic Press, 2014, pp. 95-115.

²⁵ K. Nikolaos & A. Georgios, A., *The effect of external environment of high schools in the workplace of secondary education faculty: A systemic approach*. In IV International Conference on Critical Education: Critical Education in the Era of Crisis, 2014, June, p. 689.

²⁶ W. Bleidorn, R.C. Arslan, J.J. Denissen, P.J. Rentfrow, J. E. Gebauer, J. Potter & S. D. Gosling, *Age and gender differences in self-esteem – A cross-cultural window*. Journal of personality and social psychology, 2016, 111(3), 396.

We can assert that the results contribute to a more nuanced knowledge of the contextual factors that can affect the social anxiety of students from the Education Sciences, emphasizing especially its relationship with the perception of control over anxiogenic events, a construct that can be the object of some instructional-formative interventions, in the sense of strengthening the control over anxiogenic events in parameters that limit possible maladaptive effects of social anxiety. These results can offer suggestions regarding the development of training and professional development programs for future teachers.

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