

DO YOU HAVE AN ORIGINAL RESEARCH PAPER USING AI?

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Abstract: *AI technology is proving to be increasingly invasive in the life of the average person, in school, in public systems, and therefore, in the university environment, where its advantages can be discovered but where it is also necessary to identify the shortcomings, one of the most significant risks found so far being related to the loss of independence in conducting scientific research.*

The help offered by artificial intelligence systems is obvious, determined by the assistance provided in identifying sources and necessary materials, summarizing the text, extracting ideas, translating, generating images text, and correcting it.

To meet the requirements of the higher education law regarding the originality of the research work, which is prepared with the help of AI, the use of these systems must be carried out with discernment, without substantial reliance on these systems, on the contrary, the input and contribution of the user is required.

Keywords: *Higher education; research activity; artificial intelligence systems; originality.*

Introduction

The significant challenges brought by modern technology, which is developing at an unimaginable pace in recent times, also target one of the essential activities that members of the academic community, teachers,

researchers, or students must carry out under Law no. 199/2020, namely research.

One of the missions of universities, scientific research, along with development, innovation, and technological transfer, must be carried out through individual or collective creation and must be relevant to the progress of knowledge and the socioeconomic environment (art.3 paragraph 1 letter b) of Law no. 199/2023). In fact, the traditional definition of research also refers to a creative activity (original investigation) to acquire new scientific or technological knowledge (DEX).

The creative, respectively original character of the work is a distinct one but closely related to that of the relevance of the activity carried out to be able to meet the requirements imposed by the higher education law to recognize the specific effects (for teachers, the fulfillment of the professional obligation to carry out research activity and for students, the obligation necessary for graduation).

On other occasions (Tabacu, 2023, 2024) we have addressed the issue of the originality of works prepared in the university environment by teaching staff and students, mainly from the perspective of deviations from the rules of academic ethics, noting on that occasion, among other things, that it is necessary to adapt the so-called anti-plagiarism programs for the correct detection of deviations and that in all cases human intervention should not be eliminated.

Currently, the situation has become much more complicated in the context in which artificial intelligence makes its presence felt in university activity frequently, the curiosity of participants in the act of education determining the use of these systems or technological tools on a large scale, including for the preparation of papers that the education law requires.

This time, the issue is no longer simply identifying sources or using them in an uncontrolled, sometimes abusive manner but rather the actual preparation of a work, which in all cases must be the fruit of the work of the legal subject bound by the obligation to carry out the respective research activity.

Is it ethical to use AI? How, to what extent, and how much can I rely on the technology? What negative consequences do I risk?

We attempt to answer these questions based on regulation and its purpose, good practices, and psychosocial arguments.

Research and AI

The development of AI systems has led to the expression in the specialized literature(Al-Busaidi et al., 2024; Obreja et al., 2025) of a series of concerns regarding the risk that people performing certain activities will lose their jobs, as they may be replaced by such artificial intelligence systems that can reach the desired result much faster and which could also involve lower costs for the beneficiary or the one who implements it.

Almost all sectors of social, economic, and educational life are affected by this massive development of AI systems, which are slowly penetrating the lives of everyone under the pretext of being useful. However, if attention is not paid to regulation policies to address this invasion of human life, there is a risk that they will completely lose their independence. After all, they will rely so much on technology that, over time, they will no longer be able to make decisions, organize their lives, or carry out a particular activity coordinated through their forces because...they have become lazy.

However, in the academic environment, young people have embraced with great joy the emergence of such a tool that facilitates their work and thus indirectly gives them more free time (Forman et al., 2023; Stöhr et al., 2024). Studies have shown that the use of these systems by students is frequent, even if some have raised problems related to compliance with ethical rules and equality in evaluation in the context in which not everyone has equal access to such resources (Cotton et al., 2024) or even the risk of affecting the rights of others through such use (Moise & Nicoară, 2024).

The specialized literature recognizes the usefulness of this tool - artificial intelligence - in the specific activity of education (Bai et al.,

2024), whether we are talking about its use by teachers or students. Any of the participants in the act of education can find real benefits in this tool that can make work easier, facilitating the identification of resources access to them, which can generate text, correct grammatically, translate, construct text, images, graphics, provide solutions, to answer questions, etc.

The advantages of such a tool are obvious since a long time spent on documentation, searching for resources and materials, systematizing them, summarizing, and even extracting essential ideas can be saved.

However, how such a system can be used must be taken into account, primarily since the regulations at the level of universities in Romania do not specifically provide for this aspect, and it is certain that negative consequences may occur on the rights of individuals, as we will show.

But what is provided for in the norms that are beginning to be developed in AI use?

In the law, fundamental research is defined as experimental or theoretical activity carried out mainly to acquire new knowledge regarding the foundations of observable phenomena and facts without particularly aiming at immediate practical application or use (point 1 of the Annex to Government Decree no. 57/2002 on scientific research and technological development – Official Gazette no. 643/30.08.2002 with subsequent amendments).

The Higher Education Law refers to university scientific research. It indicates that this “includes scientific research proper, artistic creation and activities specific to sports performance in higher education institutions” (point 16 of the Annex to the law) without further details.

From these two notions, it follows that the research activity is carried out to obtain new knowledge in a specific field based on a theoretical or experimental activity that confers a certain degree of originality to the obtained result.

According to O.G. no. 57/2002, the result of the research can be represented by documentation, studies, works, plans, patents, certificates of registration of industrial designs and models, technologies, processes,

IT products, recipes, formulas, methods, physical objects and products made within the framework of a contract, collections and databases containing analog or digital recordings, historical sources, samples, specimens, photographs, observations, rocks, fossils and the like (art.74 para.1).

Among these, concerning the specifics of the university environment, as far as the student is concerned, the result of the research activity must materialize in a final paper that is publicly defended to obtain the intended legal consequences, namely the acquisition of graduate status. In contrast, for teaching and research staff, any of the results mentioned above can be capitalized on and reported for the fulfillment of their professional obligation.

A large part of these results can also be obtained using artificial intelligence systems, so, given that the law says nothing, it becomes necessary to determine whether and to what extent such a system can be used so that the result generated with the help of AI can be used to produce legal effects?

At the European level, regulation accepts the use of AI systems. However, in all cases, humans must be the core of attention (AI Act), i.e., an anthropocentric treatment is necessary not to give AI systems a power that can no longer be limited later. They must somehow remain a tool that helps humans in their activities, not to replace them. As for higher education, European law excludes high-risk systems if they are intended for activities indicated in point 3 of Annex III of the Regulation. These include AI systems designed to guide the learning process of individuals in educational and vocational training institutions at all levels. Only the learning process is considered, without reference to research activity, the regulation of which is thus left to the discretion of universities, including from the perspective of the use of AI.

Therefore, as follows from Regulation No. 2024/1689 (paragraph 1 of the Preamble – “adopting trustworthy and human-centered artificial intelligence (AI)”), the European legislator was concerned with protecting human beings, thus showing that the use of AI can be controlled depending on the degree of risk that the systems proposed to

be introduced on the market pose about the fundamental values of the individual (paragraph 96 of the Preamble, art. 27 of the Regulation).

However, not all authors believe that regulation for the control of AI systems is welcome, given that it could hinder technological development (Mueller, 2025).

The ethical and deontological norms enshrined in the law on higher education do not refer to artificial intelligence or other systems or models that may or may not be used but only impose certain conditions for the activity of research, communication, publication, dissemination, and scientific popularization, carried out in the academic environment (art.168 para.1 and 2). From this, no prohibition of the use of AI can be inferred; on the contrary, being a significant technological innovation, the academic environment must be interested in its use under the conditions in which it can ensure scientific progress.

The use of AI systems in academia cannot be denied; being a reality, this situation determines the need to approach it most seriously, first at the regulatory level and then by establishing good practices for their use, given that they not only present advantages but also raise some problems, mainly due to the lack of transparency regarding how they work (Basic, 2023)

In scientific research, the law of higher education requires the work to be original, not plagiarized, and, at the doctoral and habilitation levels, relevant to the scientific world in the respective field.

Thus, in addition to originality, the law of higher education also refers to the relevance of the research in direct connection with the progress of knowledge and the socioeconomic environment (the doctoral thesis must reveal original scientific understanding, which must be internationally relevant, and for the habilitation thesis, it must present the relevance of academic, scientific and professional contributions).

It cannot be concluded from this that other works (dissertation, bachelor's degree, articles, etc.) must not be relevant. On the contrary, any research activity in the academic environment must pursue the progress of knowledge (Tabacu 2024, deviations).

In this context, it turns out that academic community members are concerned with writing original and relevant research papers. Still, sometimes, the idea for a particular topic is not easily discovered, and a tool like AI could help. Then, collecting data, information, and materials, a complex and even expensive activity, can be made easier using the same AI system. Systematization, summarization, extraction of main ideas, translation, etc., can be achieved using AI in a much shorter time than the classical method. After identifying and reviewing the sources, the paper is written.

Can AI do it? YES, but...

The fact that an AI system has the ability to solve, write text, correct, translate, write code, develop photos, images, film, etc., in a much shorter time than the classical method reveals its advantages, but the disadvantages must always be seen.

Two issues concern the work created with AI:

Is it original in the sense of the law? Who is the author, or to whom does it belong?

The specialized literature has analyzed this situation starting from the idea that only a human person can be an author (COPE, 2023; Visoiu, 2025) and that a minimum human contribution must consistently be recognized, without which AI cannot generate new content (Fenwick & Jurcys, 2023) and reaching the possible recognition of the authorship of AI as the holder of personal non-patrimonial copyrights (Gorraiz, 2025; Hwang et al., 2025), given that it is even recognized as a subject of distinct law (Kurki, 2019).

Therefore, an important aspect is the authorship of creations generated by AI, which is closely linked to copyright infringement by AI.

The questions concerned the link between the result obtained by using an AI system and the system's owner, its user, the manufacturer of the AI system, or the one who develops or modifies it and trains it (Fenwick & Jurcys, 2023).

In the specialized literature, researchers have analyzed a multitude of variants, proposing solutions, noting that it is difficult to establish with certainty that AI could have the authorship of the work in the context in

which the human factor is at the basis of the creations used for learning and the concrete use of the system a human is also needed (Fenwick 2023). It has been proposed, for example, to introduce a license for using pre-existing data. It works for machine learning purposes by AI systems in order not to discourage innovation and AI development and, at the same time, not to marginalize the role played by humans in the act of creation using AI (Geiger & Iaia, 2024).

The AI system itself cannot be liable since, to discuss the quality of authorship, it must have a legal personality, which will be challenging to recognize in the conditions in which the AI system is not sensitive, does not realize the process, and the result, but this personality could be identified only formally, to regulate issues related to responsibility, to cover possible damages caused to other people (Kurki 2019).

Therefore, we must consider that the author is human even when his contribution to the AI system used to create a particular work is minimal.

It is also essential to determine how a generative AI system uses pre-existing data through content generation, as first there is the issue of acquiring it, then processing and training on this data, which may be protected by copyright or represent personal data.

Data acquisition is carried out from the public system, from the internet, being extracted by AI content generator providers through web scraping tools, which involves digital reproduction of web content, extraction of raw data, transformation into a format suitable for AI training and storage of the data thus structured for preprocessing (Huang & Chen, 2025). After data extraction, they are transformed into symbols or tokens (tokenization) in the sense that the collected works receive a word or part of a word, being prepared for training. The specialized literature shows that in this phase, the AI model reproduces works in a completely distinct format (tokens), which are incomprehensible to humans and are essentially different from the original work used (Bridgelall, 2024) extracted from the internet. The training aims to ensure that the result is as close as possible to the desired one. In this phase, the model encodes the training data into a mathematical representation and

then decodes the mathematical representation and generates new data that is analyzed, the difference from the desired result being communicated to the model, which is exposed to a new round of training (Oh & Zhang, 2022). In the content generation phase, the user gives specific instructions to the content-generating AI model. It encodes the message and through various techniques (it is mapped to a specific vector representation within the latent space and subsequently, based on the input vectors and the optimized parameters learned during the training phase, the model infers the output vectors, decodes them by transforming them into a meaningful sequence of tokens) finally delivers the output text (Huang 2025).

In this process, it is claimed that sometimes the result provided by the AI model resembles the original work used as input data before training (Huang 2025), which means that similarity is possible without it being revealed to the user by the respective model. This aspect affects copyright (reproduction, distribution).

Another problem comes from the fact that the model does use not only the data received as training data but also data provided by the user himself, who aims to receive a specific result and who is not careful about what he uploads to the system so that the data in question can still be used by the AI, without the person who uploaded it being able to recover it.

Regarding the result obtained using an AI system, the issue of respecting the copyright of those who developed the materials used as training data or provided by the user was raised (Quintais, 2025).

The insufficient regulation of copyright rules was observed (Watiktinnakorn et al., 2023; Yang & Zhang, 2024), the possible violation of copyright (the right to authorize the reproduction of the work) by "using, for machine learning, without authorization, the data that subsists in copyrighted works" (Buta, 2025), but also by the outputs that such a system provides, in the context in which it uses protected works, without authorization in this regard (Al-Busaidi et al., 2024).

Also, the risk of violating the obligation to protect personal data has been observed (Gimpel, 2023; Novelli et al., 2024) when, on the one

hand, the system is provided with such data for learning and, on the other hand, by users who upload such data erroneously or knowingly.

At the university level, one of the problems that may immediately arise is related to the author's contribution to the preparation of the respective work since it must belong to the person who declares or presents it as a research activity and not to an artificial intelligence system, which cannot be the holder of rights (Dutu, 2025) and, consequently, of copyright (Novelli 2024, p. 12), even if only of non-patrimonial ones.

It is certain that a work prepared exclusively by the AI system, not reviewed, revised, or censored by the human person who presents it as the result of his activity, does not meet the requirement that the respective work be his own to produce specific legal effects. Similarly, ghost authors (writing done by a person other than the one using it – (Popescu, 2018) or various borrowings from other unreported works (plagiarism – (Rughiniş, 2018) are equally reprehensible situations in specialized literature when we discuss title and originality.

When the contribution of the AI system is not exclusive, the human uses his work using only materials systematized, summarized, extracted, or identified by such a modern technology tool. The final work can be considered as belonging to the human subject since the respective system served only as an assistant in research activity, the data being compiled, interpreted, and put together by the author.

It is not the percentage of contribution that should be considered essential since, as in the case of plagiarism, a regulation that provides for a specific size of the loan is neither feasible nor viable since the effective contribution of the author is determined differently depending on the total volume of the resulting work (Popescu et al., 2018).

Significant will be the operations that can be considered to belong to or are performed by a human using artificial intelligence technology. Exploiting the respective work must be excluded when the individual does not make a concrete contribution to the result. Here, we consider that how the question was asked, or the problem was formulated is not enough to feel the paper as a result of human work if only one such

procedure takes place. But when a first result is reanalyzed, reintroduced into the AI system, and the new result is again censored, modified, and adapted according to the need justified by the human author, the result can be considered to be a labored one, even the original since the consecutive censorship applied to the material determined the emergence of a unique work (Fenwick, 2023), which is the result of human intervention.

In this context, it must be considered that the result of the use of AI may affect copyright if there is no authorization regarding the use of the data in question. The European legislator indicates that “any use of copyrighted content requires authorization from the right-holder in question, unless relevant exceptions and limitations to copyright apply” – para 105 of R (EU) 1689/2024. Here, Directive (EU) 2019/790 provides for exceptions that allow reproductions and extractions of works or other protected subject matter for text and data extraction, and even if rightsholders can choose to reserve their rights over their works, they cannot do so if the use is for scientific research.

However, failure to fall within these exceptions concerning the data used as training compared to the result obtained may make the latter not original since it overwhelmingly resembles the source.

Conclusions

The usefulness of AI tools cannot be denied in scientific research, given that it is certain that they facilitate the certain activity of identifying sources, summarizing, extracting ideas, generating text, images, even sound, translation, text correction etc.

However, their use may result in the violation of the rights of other persons concerning the creations over which they justify copyright or about personal data, which must be protected, especially in the online environment.

In the context when an AI system cannot be considered an author, the research work carried out with its help can be considered as original only if the AI contribution is not substantial and, then, if the "owner"

human polishes the result given by the AI, in the sense of verifying the sources, citing them correctly, removing similarities with other works or works that inspired the AI system in its "creative" activity.

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