European Journal of Sustainable Development (2024), **13**, 2, 173-181 ISSN: 2239-5938
Doi: 10.14207/ejsd.2024.v13n2p173

Threats and Benefits of AI in the context of targeting SDGs: A Youth Perception Approach

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ABSTRACT:
This paper surveys the opinions of the young people on the potential of AI, namely in the context of targeting Sustainable Development Goals. The goal is to research how young people understand the threats and benefits of AI and what can be done to eliminate risks related to it. Survey results show that young people are concerned about the negative impacts AI can have on democracy, quality of education, spread of misinformation, etc. On the other hand, participants mention numerous positive opportunities coming from AI. Need for regulations for sustainable AI development is also discussed. Most of the respondents say that AI should be regulated by the government to ensure safe and ethical usage of it. Connections between the AI and Sustainable Development Goals from the perspective of the youth are drawn to tackle challenges and highlight opportunities.

Keywords: artificial intelligence, youth perspective, sustainable development goals, technologies development

1. Introduction

On November 7th, European Youth Hearing took place at the European Parliament. One of our co-authors took part in the event, namely in the discussion of the idea "Support for Innovative Projects in the field of Artificial Intelligence". In preparation for the event, the survey of opinions of the young people on the issue was conducted by the authors of the current paper.

Needless to say that Artificial Intelligence (AI) is changing various spheres. The purpose of this paper is to highlight the role of the youth in shaping the impact that AI will have on society and bring their perspective. This topic is important for the global development of science and society.

Sustainable Development Goals (SGDs) adopted by all the United Nations members are key guidelines that can accelerate the evolution of global society. AI can be a catalyser for achieving SGDs, but can also cause additional risks for it.

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The survey shows that young people are concerned with the negative impact that AI can have on society. Regarding the challenges that the young people are concerned about, they mention that AI can increase the gap between social groups, and this is not only related to potential job cuts, but to AI misuse or unethical use. Access to new technologies can be limited for certain social groups, which can increase inequalities in society. They also mention the positive value of AI and the importance of support for development and research in ethical and sustainable AI. The question on the projects that would be of the utmost importance was open ended to make sure that the answers are unbiased.

2. Literature Review

There are various ways of modelling influences of AI on the Sustainable Development Goals. As the related processes are multidimensional, the research methodologies should consider various aspects that the goals are connected to.

For example, Sh. Nahar (2024) uses system dynamics perspective in a cross-country setting to assess impact of AI. According to this study, cultural and economic context is a defining factor in how countries can benefit from AI and what negative impacts it can have. The author also emphasises the role regulations have and importance of spreading awareness and upskilling of society.

As previous research shows (Visvizi, 2022), developing efficient policies is crucial on the path of countries towards sustainability.

Governments today invest in developing national AI strategies. It is crucial to understand the direction and multidimensionality of AI for sustainable development on a national level. Examples of AI strategies include Singapore. Their strategy is based on the achievements and advances the country has already made in the sphere of technology. Authors of the strategy project the possible improvements of this sphere and highlight how beneficial the developed infrastructure is. One of the integral components of the strategy is education. To fully use the opportunities that AI brings, Singapore prioritises developing awareness and digital literacy (National AI Strategy, Smart Nation Digital Government Office).

While supporting AI development, governments also mitigate potential risks by developing legal frameworks. The EU is adopting AI regulation with the AI Act, which is a pioneering document in this sphere (EUR-LEX, 2020). We were particularly interested in how the respondents of the survey understood it as the participants were mainly representatives of European countries.

It is crucial to incorporate the perception of the youth on AI for developing policies. Work by A. Pawluczuk (2023) emphasises this fact. The author presents results of a survey of youth workers. The data was collected as a result of in-person workshops and interviews. The results show that there is still a need for more discussions on how AI can impact the youth and how they can adapt to its emergence.

Authors of work (Hasse et al., 2019) target youth of ages 12-18, in the survey that they conducted. It has questions in the context of domains such as education, health, future of work, creativity and entertainment. Perspectives of younger teenagers are also important as they can be the most vulnerable to potential threats coming from AI.

The key to overcoming the challenges of AI is education and development of digital literacy, especially among young students. As well as more emphasis on sustainability in the curricula (Palomares et al., 2021). Authors of this work also emphasise that the holistic approach must be taken when evaluating potential impact of AI.

Young people are not only impacted by the AI, they also shape the future of it and of our society. Their voice will define how AI is used and perceived. That is why it is crucial to take into account their views. Work by V. Stefan (2023) highlights the connection between the role of the youth and how efficient the developed policies can be, namely in the context of EU countries.

3. Methodology, questions, and main points

The survey shows that participants are highly concerned about potential negative implications of rapid uncontrolled AI development.

Respondents included young students of universities in Ukraine, France, Georgia, Germany. The following specialisations are represented among participants: Politics, Pedagogy, and STEM specialisations, namely, Computer Science, Energy Engineering, Geography, Biology, Mathematics. It is important to mention that all of the spheres can benefit from AI and all of them have various potential challenges related to it. Age of the participants ranges from 18 to 24. The survey is ongoing and the authors plan to improve the outreach to more diverse categories. It is also important to mention that the paper primarily focuses on the European context, but we aim to expand it to understand the global context better.

Previous research (EUR-LEX, 2020; Kaloudi & Li, 2020) also shows that AI should be considered with caution to mitigate all the potential risks.

The participants of the survey also mention the need for the governments to regulate the publishing of AI generated content, adding watermarks, notes on the fact that the particular published text or images/videos have been generated using AI.

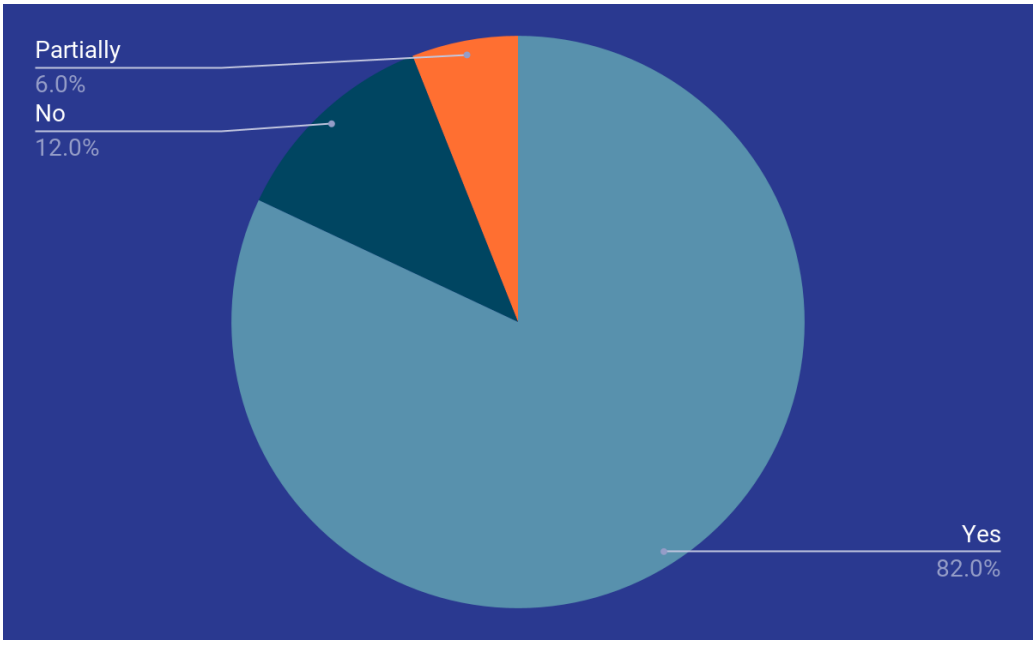
The survey consisted of open-ended and single choice questions:

- Your age
- Country of residence
- Subject of your studies/work
- In your opinion, how can the state promote the development of artificial intelligence technologies?
- What threats and challenges associated with the rapid development of artificial intelligence technologies do you see?
- What would be a way/ways to mitigate such threats?
- I have heard about the Artificial Intelligence Act, which the European Parliament adopted its negotiating position on
    - Yes, I completely agree with its statements
    - Yes, but I believe that the document does not take into account all aspects and needs changes or additions
    - No, I haven't heard
    - Other

- Should the development of artificial intelligence systems be regulated by the state by law?
    - Yes
    - No
    - Other
- Why?
- In which applied areas (e.g. health care, media, etc.) is it important to support the development of AI first?
- What positive changes can be achieved with the help of artificial intelligence technologies, which projects, in your opinion, would be useful?

4. Vision of the youth on AI regulation in context of SDGs

Due to the nature of the event, we were particularly interested to know the views of the youth on the topic of AI regulation by the governments. The majority of the participants stated that such regulations are needed.
Answers to the question "Should the development of artificial intelligence systems be regulated by the state by law?" have the following distribution:



In this regard, it is also important to mention that 62% of the respondents have not heard about the AI Act (AI rules: what the European Parliament wants, European Parliament) that has recently been approved.

Participants tell that it is important and would be helpful to create an ecosystem for development of safe AI technologies by different means, namely, by providing financing

(here, can also talk about special tax policies, etc.), building partnerships between universities, research institutions and businesses, contribute to developing necessary infrastructure, including high-performance computing resources, cooperate with the private sector to create innovative solutions. The EU supports research in the sphere of AI regulations (EUR-LEX, 2020; Resource Guide on Artificial intelligence (AI) Strategies), and participants think it should be promoted even more.

Cooperation with the private sector is important, their views must be taken into account when making decisions, the pace of developing regulations must be aligned with the pace of developing the technologies.
Some participants also mention that a clear plan and vision developed by the government is important: it is the time to take AI seriously and develop a clear action plan, anticipate various scenarios.
They also mention that it is important nowadays to introduce AI since secondary school, people of all ages must be aware of the AI technologies and the impact they have or may have.

5. Main challenges

Regarding the challenges that the young people are concerned about, AI can increase the gap between countries and social groups, and this is not only related to potential job cuts, but to AI misuse or unethical use, e.g., developing biased application systems (output that AI systems generate heavily depends on the training data). Also, access to new technologies can be limited for certain social groups, which can increase inequalities in society.
One of the concerns is misuse of AI to create weapons and organise cyber attacks. The development of artificial intelligence can make it possible to create powerful weapons systems that can be used for aggression purposes.
Mis/dis information, manipulation and threats to quality of education are also among the main concerns. Quality education is one of the SDGs that can both benefit and be challenged by AI technologies. On one hand, for example, LLMs can make the learning process easier, on the other hand, students can misuse it, which can have an impact on their creative soft skills, and information found on the internet can not necessarily be trustful.
Several measures can be taken to protect against threats related to artificial intelligence: 1. Development of ethical standards: It is important to develop ethical principles and standards for the use of artificial intelligence to prevent its misuse. This may include limiting the use of information manipulation, protecting privacy and preventing discrimination. 2. Regulation: Governments and international organisations should develop legal frameworks and policies governing the use of artificial intelligence. This may include limiting the use of certain types of artificial intelligence, controlling its development and implementation, and establishing liability for its misuse. 3. Training and reskilling: Education and training play an important role in preparing people for the changes that artificial intelligence brings. Developing skills that cannot be replaced by artificial intelligence, such as creativity, creativity and interpersonal skills, can help avoid

unemployment. 4. International cooperation: Countries and organisations should cooperate to develop common standards and policies on artificial intelligence. This can help prevent a divide between countries and social groups, and ensure that the benefits of AI development are shared. 5. Research and development: It is important to continue the research and development of artificial intelligence, including its ethical and social aspects. This will help identify potential threats and develop strategies to avoid them. All these measures must be implemented in a complex to ensure the safety and sustainable development of artificial intelligence.

Raising awareness about the importance of digital literacy is also important according to the survey. Participants mention that it can be a key to mitigating potential risks related to the fact that AI can replace people for some jobs. It can help people conquer the technologies and use them for their development and for more efficient work, for creating new jobs. The issue is multifolded, and right usage of AI can bring more opportunities for achieving social equality.

Regarding the reasons why society need regulations on AI, it should be correlated with national security and therefore be regulated by state law, but at the same time, when it comes to innovation, it should also be co-regulated with stakeholders.

The development of artificial intelligence (AI) systems requires government regulation for several important reasons. Privacy and security: AI can process large amounts of personal data. State law may establish rules regarding the collection, storage, and use of this data to protect citizens' privacy. Ethics: The state can set norms and standards for the ethical use of AI, especially in areas where ethical dilemmas may arise, such as medicine, law, and the military. Security and liability: State laws may determine liability for harm caused by the use of AI and provide appropriate liability for the owners and operators of these systems. Competition and innovation: Regulation can promote competitiveness and innovation in AI by protecting the rights of innovators and ensuring a level playing field for all players. Threats to society: States have a responsibility to ensure that the development of AI is in the interests of citizens and society, and to respond in a timely manner to potential threats.

6. Opportunities of AI in context of SDGs

The development of artificial intelligence (AI) is important to support in various areas:

Health care: The use of AI in medicine can improve diagnostics, drug development, treatment planning, and the health of the population in general.

Media and Entertainment: AI can help automate content, increase personalization, and combat misinformation in news and social media.

Transportation: Autonomous cars and transportation management systems can improve traffic safety and efficiency.

Infrastructure and city management: AI can help in the development of smart cities, production automation and energy efficiency management.

Finance: The use of AI in financial services can improve risk analysis, portfolio management and fraud prevention. Finance is the art of creating opportunities and making things possible. AI can be used to analyse financial markets, predict trends, limit fraud and develop financial products.

Education: AI can support personalised learning and increase access to education for all.
Energy: Using AI in the energy sector can help optimise energy production and consumption to reduce emissions. The use of artificial intelligence can help improve the management of energy supply systems, reduce costs and increase the efficiency of energy use.
Agricultural sector: AI can be useful for optimising production, monitoring plants and animals, and combating losses from natural disasters.
Media and entertainment: AI is used for recommender systems, content generation, speech recognition and media processing.
Science and research: AI helps in working with large amounts of data, creating mathematical models and conducting experiments.
In the media, artificial intelligence can be used to personalise content, improve advertising strategies and combat artificial disinformation. These technologies can also be applied in the fields of education, transport, finance and other industries, which contributes to increasing the level of convenience and safety of people's lives. AI helps in creating personalised recommendations for content, analysing large volumes of data to understand audience tastes, creating virtual assistants and voice technologies.

7. Positive change

Artificial intelligence technologies have the potential to bring significant positive changes to all areas of human life. Here are some examples that the participants mention:
Medicine: AI can be used to develop new treatments for diseases, diagnose diseases at earlier stages and personalise treatment for each patient. The development of artificial intelligence systems for the diagnosis of various diseases and individual treatment planning can improve the quality of medical care and reduce health care costs. AI systems can analyse medical data and images for more accurate diagnosis of diseases, algorithms can take into account individual characteristics of patients to optimise treatment regimens.
Education: AI can be used to create personalised learning programs tailored to the needs of each student. It can also be used to help students learn and understand complex topics. AI systems can tailor curricula to the needs of each student, improving learning, and electronic platforms and various chatbots can provide access to educational resources even to those who live remotely.
Transportation: AI can be used to develop autonomous vehicles that are safer and more efficient than traditional vehicles. Autonomous cars can reduce road accidents and improve mobility, particularly for people with disabilities.
Manufacturing: AI can be used to automate tasks and improve production efficiency and quality.
Security: AI can be used to detect and prevent crime, as well as protect critical infrastructure.
Ecology: Using AI to monitor environmental pollution and predict climate change can help preserve nature and reduce negative impacts on the environment. It is also relevant to improve the field of energy, where AI systems can optimise the production and consumption of energy, which leads to a reduction in greenhouse gas emissions.Also, projects using artificial intelligence can improve production efficiency, contributing to the

optimization of processes and reducing resource costs. In the field of *combating climate change*, artificial intelligence can help predict natural disasters and develop effective methods to protect the environment. Such projects would contribute to the creation of a better and more stable future for the entire society.
Agricultural sector: Using AI to optimise food production and distribution can contribute to providing the world with quality and affordable food.
Science: Big data and AI analysis can help solve complex scientific problems and understand phenomena that were previously inaccessible to research.
Social services: AI can improve access to social services and help identify and support people in need.
Security: Artificial intelligence can be used to develop new security systems to help protect people from crime, terrorism and natural disasters. For example, artificial intelligence can be used to detect suspicious activity, prevent mass incidents, and provide assistance to victims.
Intercultural communication: Improving automatic translation systems can facilitate communication.

Thanks to the development of artificial intelligence technologies, many fields can be improved, according to the results.
Some **specific projects that the participants think would be useful**:

- Developing new treatments for diseases such as cancer, heart disease, and Alzheimer's disease.
- Creating personalised learning programs for each student to help them reach their full potential.
- Development of autonomous vehicles that will reduce the number of traffic accidents and environmental pollution.
- Automation of tasks in production, which will lead to increased efficiency and product quality.
- Development of security systems that will help protect people from crime and other threats.

8. Conclusion

Perspectives of young people can not only inform policy decisions related to AI governance and SDG implementation, but significantly improve them and must be taken into account for their development. They can promote the creation of state institutions related to the implementation of educational and legal norms and will also contribute to the inter-organizational factors of changes, will ensure agreement on the goals of sustainable development and consideration of aspects at the early stages of cooperation: formation of strategic goals, legal obligations. The nature of the case study makes it possible to determine the factors that are relevant for the AI sector and to expand the spectrum of interaction with youth and state structures, which will implement the developed data in the work of state institutions and their activities. The national and international context of research results can play an important role.

The participants of the survey are concerned about the consequences of AI usage. Needless to say that AI is already influencing many spheres and only right regulations and increasing level of digital skills can help achieve SDGs. Participants mention various spheres, in context of SDGs, mostly related to goals on social equality, quality education, health and well-being. These are the key goals in achieving the overall target of SDGs. And AI can be the key to achieving them.

The paper primarily focuses on the European context, but it is important to mention that AI has global context. This work is a starting point for research, which would incorporate perspectives from other regions and global initiatives related to AI and SDGs. We aim to improve outreach to more diverse categories of participants. Ensuring representation across various demographics, including gender, ethnicity, socio-economic background, and geographical location, would provide a more comprehensive understanding of youth perspectives on AI and SDGs.

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