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## СЕКЦІЯ 1

### СУЧАСНА МОЛОДЬ У КОНТЕКСТІ ІНФОРМАЦІЙНОГО СУСПІЛЬСТВА: НОВІ ВИКЛИКИ Й ПЕРСПЕКТИВИ

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#### WHAT A MODERN SCIENTIST SHOULD BE:

#### KEY ATTRIBUTES AND MORAL PRINCIPLES OF A SCIENTIST

From the moment we enter school, we are taught to aspire to become scientists, doctors, engineers, and other professionals. This is because science and technology have a significant impact on our daily lives, and they are essential for the growth and development of our society. Thus, it's no surprise that today's student is often seen as tomorrow's scientist.

However, the journey from being a student to becoming a scientist is not an easy one. It requires dedication, hard work, and a passion for the subject. It takes years of education, training, and experience to develop the skills necessary to become a scientist. But with the right mindset and guidance, anyone can become a successful scientist.

*The purpose of our work* is to explore what a modern scientist should be like, what qualities he should have, what values to adhere to, what moral principles to observe.

The role of scientists in modern society has evolved significantly over the years. In today's world, a modern scientist should not only have a deep understanding of their field of study but also possess a wide range of skills that allow them to navigate the complex, interdisciplinary nature of modern scientific research.

*An analysis of the literature* on this topic allows us to draw the following conclusions. Today's students need the skills to succeed in their careers in the information age and subsequently become successful modern scientists. We agree with

Bri Stauffer, who highlights the following 21st century skills – 12 abilities that young people should have: Critical thinking, Creativity, Collaboration, Communication, Information literacy, Media literacy, Technology literacy, Flexibility, Leadership, Initiative, Productivity, Social skills [3].

Indeed, without these skills, the path to achieving the goal of being a modern scientist is impossible. A modern scientist should possess several key attributes that enable them to thrive in today's rapidly changing scientific landscape. These include:

1. *Interdisciplinary collaboration.* Modern scientists must be able to collaborate with researchers from diverse backgrounds and fields of study to tackle complex problems that require a multidisciplinary approach. This requires an open mind, excellent communication skills, and a willingness to learn from experts in other areas.

2. *Technological proficiency.* Modern scientists must be comfortable using the latest technologies and tools to conduct research, analyze data, and communicate findings. This includes everything from machine learning algorithms to cloud computing to virtual and augmented reality.

*Curious. Patient. Courageous.* Scientists are curious about their world. They want to know why things happen and how things work. Scientists are patient as they repeat experiments multiple times to verify results. Scientists work to discover answers often times for years and with numerous failures. They recognize that failed experiments provide answers as often as successful ones [4].

3. *Critical thinking and problem-solving.* Modern scientists must be able to think critically and creatively to develop new solutions to complex problems. They must be able to identify gaps in knowledge, design experiments to test hypotheses, and interpret data to draw meaningful conclusions.

4. *Ethical standards.* Modern scientists must maintain the highest ethical standards in their research practices, ensuring that their work is conducted in an ethical, transparent, and socially responsible manner [1]. This includes obtaining informed consent from study participants, protecting the privacy of research subjects, and ensuring that research findings are used for the greater good of society.

5. *Effective communication.* Modern scientists must be able to communicate their research findings clearly and effectively to both scientific and non-scientific audiences. This includes writing research papers, giving presentations at conferences, and engaging with the media and general public to promote understanding of scientific research.

6. *Lifelong learning.* Modern scientists must be committed to ongoing learning and professional development, keeping up with the latest research findings, techniques, and technologies in their field. This requires a willingness to attend conferences, workshops, and other training opportunities, as well as collaborating with other researchers to share knowledge and expertise.

The pursuit of scientific knowledge carries a great responsibility, and modern scientists are expected to adhere to high moral standards in their research practices. If science considers ethical values, then the lives of humans and other creatures are not endangered by destructive agents like atomic bombs and chemical weapons. Measures should be taken to avoid using science against humans. This can be achieved by promotion of scientists' moral values [2].

Here are some moral principles of guilt for modern scientists:

*Integrity.* A modern scientist must maintain the highest levels of integrity in their research practices. This includes being honest and transparent about their methods, data, and findings, and avoiding any form of scientific misconduct such as fabrication, falsification, or plagiarism.

*Respect for Human Rights.* Modern scientists must respect the basic human rights of study participants and ensure that their research does not harm individuals or groups. This includes obtaining informed consent from study participants, protecting their privacy and confidentiality, and avoiding any form of discrimination or bias in their research practices.

*Social Responsibility.* A modern scientist must recognize their social responsibility to contribute positively to society through their research practices. This includes addressing pressing social issues such as inequality, poverty, and climate change, and using their findings to promote the common good.

*Collaboration and Openness.* Modern scientists must be willing to collaborate with other researchers and share their findings openly and transparently. Collaboration and openness facilitate progress in science and enable the development of more effective solutions to complex problems.

*Environmental Stewardship.* A modern scientist must recognize their responsibility to protect the environment and use resources sustainably in their research practices. This includes minimizing their carbon footprint, reducing waste, and promoting environmental stewardship in their work.

**Overall,** a modern scientist must possess a diverse range of skills and attributes to succeed in today's scientific landscape. From interdisciplinary collaboration to technological proficiency to ethical standards, modern scientists must be adaptable, innovative, and committed to advancing knowledge for the betterment of society. Modern scientists must adhere to high moral principles in their research practices. By embracing principles such as integrity, respect for human rights, social responsibility, collaboration and openness, and environmental stewardship, modern scientists can conduct research that is ethical, socially responsible, and contributes positively to society.

### References

1. On Being a Scientist: Responsible Conduct in Research. Retrieved on May 15, 2023, from <https://nap.nationalacademies.org/read/4917/chapter/13>
2. The Impact of Moral Values on the Promotion of Science. Retrieved on May 15, 2023, from <https://www.ncbi.nlm.nih.gov/books/NBK208723/>
3. What Are 21st Century Skills? Retrieved on May 15, 2023, from <https://www.aeseducation.com/blog/what-are-21st-century-skills>
4. What makes a good scientist? Retrieved on May 15, 2023, from [https://www.canr.msu.edu/news/what\\_makes\\_a\\_good\\_scientist](https://www.canr.msu.edu/news/what_makes_a_good_scientist)