

## TRANSFORMATION TRENDS OF HIGHER EDUCATION UNDER SUPERCOMPLEXITY

*Yurii Mielkov, Doctor of Philosophical Sciences, Senior Researcher, Chief Research Fellow of the Department of Social and Institutional Transformations in Higher Education, Institute of Higher Education of the NAES of Ukraine, <https://orcid.org/0000-0002-8186-0357>, email: [uka7777@gmail.com](mailto:uka7777@gmail.com).*

**Keywords:** *higher education, supercomplexity, reinstitutionalization of university, knowledge society*

### Introduction

While the current situation of the war going on for more than two years already in Ukraine gives little reason for idle philosophical musings, to say nothing of them being optimistic, it is still a necessity for us to imagine ways and features of post-war renovation and to consider possible scenarios of the more or less desirable future. A special role in constructing such a future belongs to higher education, as it is the mission of contemporary universities that lies not only in providing humans with knowledge and skills required to live in the volatile and unpredictable future society, but in shaping the knowledge society as well. The trends for the transformation of higher education are dictated by the rapid changes in practically all spheres of human life: the development of AI-based technologies, the impact of the COVID-19 pandemic, the climate issues, and the escalation of social and international tensions that has its result in the current war – all those force us to consider radical changes in both the methods and the contents of higher education in order to ensure sustainable future for the people of Ukraine and for all the humanity.

### Methodology

The paper employs methods of analysis, comparison, philosophical comprehension and dialectics, as well as methodology peculiar to the post-non-classical approach, in order to consider the possible trends of transformation of higher education in today's world.

### Results

The already noted special role of higher education in the task of coping with the today's world of uncertainty and complexity means that higher education has to work ahead of the curve by preparing students to live and work under social and economic conditions that do not even exist yet. Under such a perspective, it is of no sense to consider education in its old "realistic and practical" way of providing skills and knowledge, as universities are, amongst else, to produce specialists in such jobs and spheres that are still to

appear with one or another degree of probability. However, it is not at all surprising from a philosophical point of view that such a situation implies not abandoning, but reinforcing the classical European idea of the university that presupposes the all-round development of personality and education of a cultural person as opposed to the parochial approach based on professional skills only. That is, the task lies first of all in shaping such qualities as critical and independent thinking, tolerance, communication, decision making etc. That is, in providing not a set of given skills or knowledge, but the ability to create knowledge and obtain skills in one's on-going life activity, both everyday and professional (Mielkov 2019).

Such "New Enlightenment" is actually supported by many international organizations like the Club of Rome, World Economic Forum, UNESCO et al. that call for "reinventing higher education" – for the universities to "update and upgrade" their ways of thinking, communicating, acting and making decisions in producing knowledge, educating people and practicing their social responsibility (i.e. in the three missions of today's university) in synergy with the on-going transformations of society, science and economy. For Ukraine, however burdening the realities of the war are, such a call presents itself a historical chance to overcome the situation of permanent "catching up" and to reshape its higher education in accordance with the leading world trends. Like the COVID-19 pandemic became the catalyst of digitization of education in many countries of the world and contributed to the formation and popularization of new forms and methods of teaching in schools and universities, the post-war recovery can be a positive factor in a similar way. Particularly, some time ago the Ministry of Education and Science of Ukraine presented the transformation program called "Education 4.0: Ukrainian Sunrise" (2022): the idea is that Ukraine should immediately move on from the "second" paradigm of education to the "fourth" one. The latter emerges as a response to the formation of "Industry 4.0", which is associated with the fourth industrial revolution and features the decisive role of such factors as "smart technologies", artificial intelligence, cyber-physical systems and robotics, so that's why it requires new skills from future specialists, and from higher education – both the ability to form them and its own corresponding transformations.

I would argue that relying on numbers is not a good choice here: "Education 4.0" makes a catchy slogan, but it is a poor concept. In particular, it is misleading in its understanding both economic and social transformation as a discrete and linear instead of continuous and non-linear process, and at the same time in suggesting some quantitative transformations instead of qualitative as well. The dialectics of historical development of education, as well as that of science, corresponds rather to post-non-classical methodology of re-actualizing classical values than to both modern belief in linear progress or post-modern negation of the past. Still, that does not mean denying that change of paradigms could be quite radical.

The radicalism corresponds to the fact of qualitatively new situation the humans are facing. That situation – both in education and in society as a

whole – could be best described as “supercomplexity”. According to the leading world expert on transformations of university Ronald Barnett, who coined the term, “a situation of *supercomplexity*... exists when the basic framework governing the situation is challenged” (Barnett 2000, p.115). That is, we are dealing not with merely quantitative complexity of usual homogeneity, like with many factors of more or less the same degree we have to account for, but with different layers of complexities that requires thinking outside the box. Barnett links supercomplexity to the situation of university as the latter is at least partly responsible for producing it, because it is research by higher education institutions that arms society with its frameworks (what I’d call sets of senses). – and also due to the university’s mission of making the students capable of withstanding a world of supercomplexity, as well as to its task of civic enlightenment.

I would outline three possible trends or perspectives of the transformation of universities under supercomplexity. From the perspective of research activity, the university manifests itself not only as a center of knowledge creation, but as a catalyst for spreading the *academic culture* in society as a whole as well. That culture could be considered the epitome of critical thinking and the ethos of rational discourse. For instance, instead of forcing all students into writing standard term papers on pre-established topics (as many of students do not have neither the skills nor the call for that, such a procedure achieves little and leads but to an escalation of plagiarism!), it would be wiser to get students acquainted with ideas of what knowledge is and how it is formed; what scientific inquiry is; how rational argumentation works and how to distinguish reliable sources from unreliable ones and facts from fakes – something that would benefit both their everyday life and professional activity unrelated to science per se.

From the perspective of institutional transformation of higher education, the development vector is that of re-institutionalization, deformalization and decentralization. Under supercomplexity, neither a government body nor the institution of higher education itself can act as a single subject both in their activity and in determining the strategies of transformations. Such tasks have to be initiated by grassroots in a democratic way as they require active participation of all individuals and structures involved in the educational process as its full-fledged subjects. Moreover, the university in today’s world no longer possesses a monopoly on higher education, giving way to other actors and especially to self-education.

The latter phenomenon leads us to the consideration of the social perspective that would enable the synergy of higher education and the contemporary industry. The development of information and AI-based technologies makes it necessary for humans to understand all limits and possibilities of machines and to be in control of their creations. In that way a contemporary university would turn from creating knowledge to shaping the knowledge society itself.

## References

Barnett, R. (2000). Reconfiguring the university. In P. Scott (ed.), *Higher education reformed* (pp. 114–129). London and New York: Falmer Press.

Mielkov, Yu. (2019). Human-dimensionality and values of higher education: Strategies for the future of complexity and sustainable development. *Philosophy of education*, 24(1), 79–96. doi: 10.31874/2309-1606-2019-24-1-79-96.

Ministry of Education and Science of Ukraine. (2022). *Education 4.0: Ukrainian Sunrise*. Retrieved from <https://mon.gov.ua/storage/app/media/news/2022/12/10/Osvita-4.0.ukrayinskyi.svitanok.pdf> [in Ukrainian].