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DIGITALIZATION AND SUSTAINABLE HIGHER EDUCATION: CONSTRUCTIVE AND DESTRUCTIVE POTENTIAL OF PROFESSIONAL DYNASTIES¹

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ABSTRACT. *Our paper focuses on digitalisation and sustainable higher education using the analysis of the institutions of professional academic dynasties and assessing their constructive and destructive potential for the sustainable development of universities and higher education institutions (HEI). In this paper, the development and functioning of professional dynasties are viewed from both sides constructively and destructively in relation to the processes and organisational mechanisms in the academic sphere. We find that destructive tendencies are often associated with nepotism and clannishness which makes it possible to restrict access to resources and career growth, as well as to extract institutional rent associated with the administrative weight. Furthermore, it also appears that constructive trends in the development of academic dynasties are associated with the concepts of continuity, reputation, and increase in research and scientific output that can be measured using advanced information and communication tools. Moreover, the paper also contemplates the impact of recent innovations and changes in academia and HEI brought about by the COVID-19 pandemic. We assess those changes and their potential for the further digitalisation of higher education that would lead to conserving energy, promoting a sustainable way of living and environmental education. Our results confirm that the digitalisation of higher education would lead to its sustainable development and optimal energy usage. Further decisive steps need to be made by the policy-makers and stakeholders in higher education for continuing the current trends and taking them to another level. Shaping up views and opinions on the sustainable future can and should be effectively delivered through educational processes.*

KEYWORDS: digitalisation, sustainable development, higher education, professional dynasties, c, sustainable education.

JEL classification: D02, I23, O33.

Introduction

Digitalisation constitutes an important part of higher education of the large penetration of information and communication technologies into the sphere of education (Roszko-Wójtowicz *et al.*, 2019). In a way, alongside being a tool to address sustainability challenges, it also contributes to the sustainable development of higher education institutions (HEI) in the digital age (Amhag *et al.*, 2019; Sedziuviene, Vveinhatdt, 2019; Bauk, 2019; Ramísio *et al.*, 2019; Nureev *et al.*, 2020; Rof *et al.*, 2020). Transformation and sustainability need to be harmonised, and to address these issues fully, sustainability and digital technology communities need to connect in a sustainable way (Crittenden *et al.*, 2020; Leal Filho *et al.*, 2019).

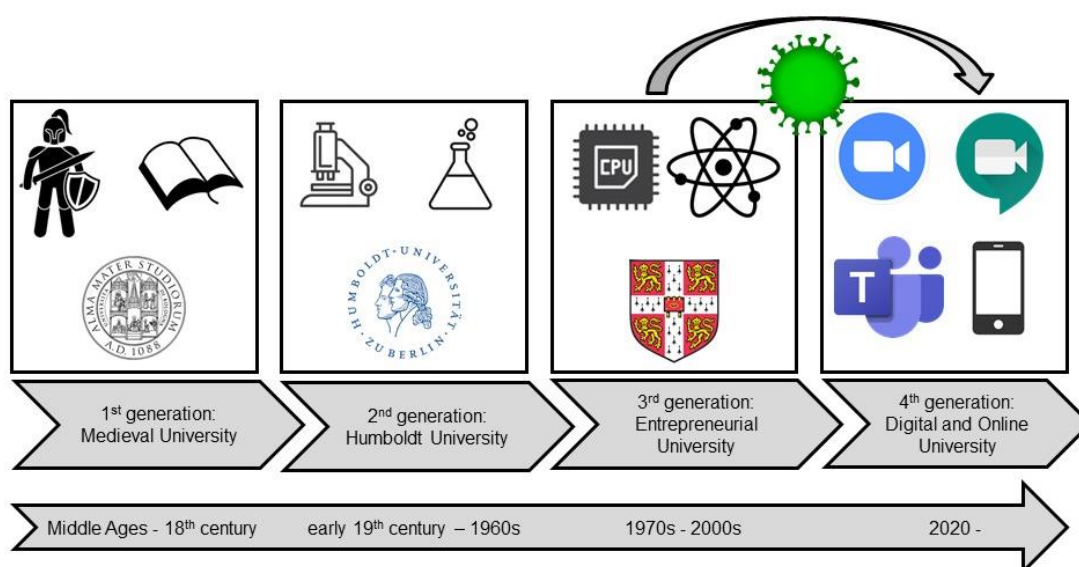
Digitalisation, sustainability and the convergence of business and society offer managers opportunities and challenges across organisations and organisational boundaries.

Companies use digital tools to map their ecological footprint and assess the impact of environmental change on their businesses. New digital technologies can improve sustainable innovation while creating new vulnerabilities, from cybercrime to data loss. HEI also need to act accordingly by adapting the experience of business companies and organisations (Kohoutek *et al.*, 2017).

Global warming and climate change call for a pressing need to promote and increase the use of renewable energy, energy efficiency and energy-efficient technologies in higher education. Students and staff should make significant use of facilities on campus, their knowledge, skills and habits are crucial to successfully achieving the sustainability goals (Cabelkova *et al.*, 2020). In order to achieve that, a systematic approach to user creation, integrating educational tools and innovation processes based on the principles of user-centred design and user engagement, as well as the application of sustainable design principles and practices should be applied (Rausser *et al.*, 2018).

More than 6.5 million higher education institutions are affected by sustainability, including more than 1.2 million in Africa and more than 2.3 million worldwide (Srivastava *et al.*, 2019). The 2030 Agenda was adopted by the Heads of State and Government of the Member States, and 193 countries adopted the Sustainable Development Goals (SDGs) of the United Nations Development Program (UNDP). It calls for a universal program of sustainable development to combat inequality, exclusion and injustice, end extreme poverty, combat climate change and biodiversity erosion and combat poverty and inequality. SDGs are international objectives that are currently being implemented and taken into account by the UNDP and its member states at national and local levels.

One would probably agree with us that transformation to sustainability induces the most important factors in the use of digital technologies in the areas of education, health and social development, as well as in social and economic development. This effect was deepened by the ongoing COVID-19 pandemic that altered many traditional ties and relations and impacted the sphere of higher education due to the massive deployment of distance and online learning introduced as measures to stop the spread of the coronavirus infection (Pardal *et al.*, 2020; Rapanta *et al.*, 2020).



Source: created by the authors.

Figure 1. Transformational Timeline from Medieval to Digital Universities

Higher education institutions and universities have long been transforming from the traditional, research and then entrepreneurial to the digital and online ones (see *Figure 1* that follows). COVID-19 pandemic that took the world by surprise in spring 2020 only helped to speed up this process by removing the “red tape” – most norms and regulations concerning digitalisation of education that would have normally taken months and years to be approved were implemented literally overnight.

Given the high cost of online learning and the lack of access for students and teachers, some universities have begun exploring virtual take-away laboratories for courses that require practical solutions to problems such as computer science and technology. These advanced institutions have teachers who are well versed in online teaching. Finally, we need to rapidly improve the software and hardware infrastructure for on-campus learning, including for students who are not connected and for teachers. As the world becomes more digitalised, universities are struggling to understand what this means for their students. Online options that reduce the cost of textbooks offer an opportunity for university leaders, but they must be smart and far-sighted. Those pursuing digital strategies, such as Google, Amazon, Microsoft, and Apple, tend to have strong track records in their respective industries. California State University in Sacramento plans to join 14 other colleges in tracking where students are and what they do during their time at the university. It is not difficult to imagine the resulting insights that could help students to succeed. There are a number of principles that companies follow to create new value for customers. For example, what does this mean for the economy, given the accelerating digitalisation of the flow of data? One of the greatest limitations on entrepreneurial creativity is the institutional and historical tradition of thinking in silos. Universities tend to spread silo-thinking, and universities have their own rules for thinking within a university. Companies with their departments or industries with limits are to be thought of, but a great restriction on entrepreneurship and creativity is the imposed traditions of an industry that have limits. Artificial intelligence (AI) has created new ways to cross-pollinate and track threats, particularly in the areas of security and security technology (Chatterjee, Bhattacharjee, 2020). People are made aware of where consciousness enters the discussion and influences decisions about the use of individual data. Colleges and universities are more likely to appoint privacy officers, a new role that was barely discernible a few years ago. The increasing use of social media and social networks has made it possible to give away information in order to obtain data-rich culture.

1. Institutional Framework of Professional Dynasties in Higher Education

Professional academic dynasties play a significant role in higher education and largely determine its sustainable and steady growth. This role is due to the historical characteristics of the development of the academic sphere, institutional inertia, as well as the specific characteristics of the institutional environment and social capital. Professional dynasties become the subject of research focus relatively rarely. The reason for that is the lack of institutionalisation of professional dynasties in the modern market social order. However, there are areas of professional activity where dynasties firmly exist and are associated with reproducible social statuses over long periods of time. Therefore, when studying the institution of professional dynasties, it is necessary to clearly distinguish between spheres of activity, as well as socio-economic contexts within the framework of various social orders (Posukhova, Klimenko, 2019).

The institution of professional dynasties can be viewed as a set of rules and enforcement mechanisms that structure repetitive interactions between people (see e.g. North, 1989, p.1321) and making them regular or as a set of hierarchical institutions from basic to private dynasties, for example, rules for transferring status within various types of family. Within the framework of this study, we consider the institution of dynasties as a set of rules in the context of their constructive or destructive impact on a particular area of professional activity.

In the planned social order, dynasties were viewed as a form of labour succession. It was often elaborated on labour or labour dynasties in the context of positive connotations (see Chernyaeva, Sorokina, 2019) due to the state policy. The principle of professionalism in the formation of dynasties by spheres of activity remained more subordinate than social cohesion and class solidarity. With the transition to the market economy, the pathos of labour dynasties dried up, and the very institution of dynasties in terms of employment began to undergo transformations.

Within the framework of the clan, capitalism dynasties become one of the forms of manifestation of groups of special interests that participate in the redistribution of resources and obtaining rent. In this context, the rent-seeking behaviour of members of professional dynasties is the norm, which is institutionalised for a long and stable existence. Thus, one can say that groups of individuals united by a professional dynasty extract institutional rent (Volchik, Posukhova, 2019).

Clan capitalism is a social order in which the processes of modernisation are constrained by traditional institutions. In the system of clan capitalism, coalitions are formed that convert various types of monopolies (political, economic, administrative) into stability. Stability as a factor is the most important generic characteristic of clan capitalism. Special interest groups in the system of clan capitalism promote the idea of stability as the basis of ideological attitudes related to continuity in all spheres of social life.

Institutionalised rent-seeking behaviour is based on the creation of local monopolies or restrictions (Mossetto, 1994). Receiving institutional rent is associated, on the one hand, with the monopolisation of administrative and organisational functions, and on the other, with the reproduction of inequality. Therefore, professional dynasties that monopolise administrative and organizational functions generally negatively affect economic and social processes. In a destructive vein, the institution of dynasties is associated with the restriction of vertical mobility within an organisation or in another area associated with a certain professional activity. In this context, dynasties can be viewed as atavisms in the evolution of tribal and guild institutions, as a social monopoly.

In modern science, much attention is paid to the problem of identity. Dynasties in professional activity are connected by intergenerational transmission (transfer) of symbolic capital within the framework of a group limited by family ties. Therefore, belonging to a dynasty can be associated with both professional superiority and the formation of restrictions on access to material and non-material resources that it controls.

Can the institution of professional dynasties be viewed only in a destructive vein as an institution characteristic of undeveloped democracies or developing social orders? The answer to this question depends on social contexts and the state of the institutional environment of a particular social system. Using the terminology of North, Wallis, and Weingast (North *et al.*, 2009), professional dynasties in the developed natural state persist and play a significant role in the redistribution of income.

Professional dynasties can be viewed as an institution associated with the “skill instinct”. If we consider the instinct of mastery as interpreted by Veblen (1992), then, relative to professional dynasties, the transmission of this instinct through generations has constructive connotations. Within the framework of dynasties, in this context, two variants of inheritance can be considered: 1) the transfer of professional skills (mastery), 2) the transfer of statuses or places in the organisational hierarchy. Therefore, professional dynasties in the political or administrative sphere are often perceived negatively, as a manifestation of corruption, parochialism or clannishness.

On the other hand, the institution of dynasties is associated with the development of specific human capital. In this aspect, dynasties become elements of an environment conducive to the transmission of specific knowledge, which have explicit and implicit forms. Specific investments in human and organisational capital within dynasties can be seen as forms of implicit barriers to entry for individuals and groups from outside. Therefore, the longer a dynasty exists, the more likely such barriers restrict competition in certain spheres of professional activity.

2. Social Context and the Evolution of Institutions

The social context is fundamental to understanding the evolution of institutions (North, 1990). Specific sectoral social values, routines and culture form the environment that must be taken into account when assessing the impact of certain forms of repetitive social interactions on organisational development. Estimates of the effects of the functioning of the institution of professional dynasties, thus, depend on the involvement and rootedness of a certain type of social action.

By the “social context”, we mean the organisational and institutional environment in its expanded interpretation, including, in addition to complementary institutions, social values, organisational routines, historically and culturally determined behavioural attitudes. Also, to understand the social context, it is necessary to comprehend the professional ties between actors through the prism of their identity.

In order to understand the regulatory role of institutions, it is important to take into account the mental structures of agents (North, 2005). In the case of the institution of professional dynasties, we must consider as a relevant factor the widespread beliefs about the constructive or destructive role of this institution in public life. Increased attention to dynasties by the media can significantly increase, for example, negative assessments if professional continuity is associated with concepts of corruption, nepotism, or monopolisation of administrative functions in an organisation that are understandable to the layman (Hudson, Claasen, 2017).

The development of the labour market makes it possible to consider professional dynasties through the prism of the concepts of monopoly and competition. In the planned economy, there was no full-fledged labour market and could not exist in the conditions of total rationing of resources, including labour. However, there were dynasties in areas of activity that required large expenditures of human capital. Such dynasties were formed in the academic, legal, medical and some other spheres. The institution of professional dynasties, which was formed in non-market conditions, like many institutions, is associated with the phenomenon of institutional inertia.

During the transition to the market in Russian conditions, many institutions that have gone through the bottleneck of market reforms have received opportunities for development

(Volchik, Berezhnoy, 2012; Åslund, 2019). The Institute of Professional Dynasties became one such institution. In the labour market, the institution of dynasties performs functions both related to the reproduction of human capital and the creation of restrictions on the access of actors who are not related by kinship.

In the specific conditions of clan capitalism, conditions arise for the reproduction of the institution of monopoly dynasties. Clan capitalism is a form of social sclerosis, where a significant share of financial flows in the country is redistributed by special interest groups. The redistributive nature of clannishness is complementary and even often associated with the use of kinship relations as a marker for membership in one or another group participating in the redistribution.

The formation of the institutional environment in a particular field of activity can also be viewed through the prism of complementarity or non-complementarity to the institution of professional dynasties. An important aspect in this context may be the issue of professional social values. For example, such values can be academic freedom in education and science. The problem of social values is traditionally a key one within the framework of the original institutionalism (Original Institutional Economics). Social values that can be correlated with professional dynasties in a destructive way are associated with ceremonial values. Ceremonial values are the basis for various privileges, determination of status in society, relations of power in the context of social classes and strata, relations between superiors and subordinates, based on traditions and myths rooted in society (Bush, 1987, p.1079).

Organisational or social capital should also be taken into account when researching occupational dynasties. Within the framework of various large organisations, various forms of social capital can be viewed as an extension of the institutions of nepotism or clan capitalism. For example, within large corporations, Taiwanese corporations' specific Confucian surnames and clan capitalism may be associated with specific forms of corporate social responsibility (Ip, 2008). In this context, dynasties are viewed as a way to ensure stability and continuity in external organisational interactions, as well as social communication.

The institution of professional dynasties is associated with the formation of a specific family social capital. The development and functioning of, for example, a family business is associated with the expansion of network interactions, both market and non-market. Social capital in such firms can be supplemented by financial capital, which is associated with savings on transaction costs (James, 2008, pp.21-22). In the academic realm, professional dynasties are in some cases quasi-business, such as contracting with family-owned affiliated commercial organisations.

The inclusion of family relations in the sphere of professional activity can significantly increase the level of trust among actors. Trust and network interactions within associations of various types are traditionally one of the most important characteristics of social capital. Thus, within the framework of a professional dynasty, the creation and transfer of specific human and social capital occur, which gives the actors involved in family or clan relations to receive advantages over outsiders.

The institution of dynasties is also based on the principles of succession, which allows, for example, to talk about political, academic and business dynasties. Continuity in this context can be viewed in both constructive and destructive terms in relation to socio-economic development. Reforming the system of clan capitalism requires the cultivation of new institutions that do not contradict the principle of maintaining stability, but meet new challenges, for example, associated technological changes or external shocks.

Institutional and organisational changes affect not only the transformation of the social context, which is reflected in the discourses of actors but also create windows of opportunity for the formation of new interest groups and coalitions. Interest groups as institutional innovators, by their joint actions, can introduce as acceptable new behavioural patterns in the process of adaptation to changes. This can lead to the problem of “substitution of concepts” when the changed social phenomena retain names associated with past social orders or the formation of “simulacra” in the case of imitation of involvement and loyalty to new rules and orders in a profession or organisation. Contradictions in narratives can serve as an important source of information about the social context and adaptation problems of actors (see Yalovitsyna, 2020, p.132).

The social context or institutional setting is also closely related to the problem of the formation and transmission of tacit knowledge within a professional community or organisation (Volchik, Maslyukova, 2019). Tacit knowledge or meta-knowledge cannot be explicitly formalised, but it, or rather its importance, can be indirectly assessed through narrative knowledge (Hannabuss, 2000, p.412) contained in stories, which the authors consider relevant to the social interactions under study.

The industries in which professional dynasties are formed in Russian conditions were formed relatively recently. Also, there is no satisfactory solution to the issue of the continuity of the dynasties that existed in the Soviet period and the newest period of order with an emerging market economy. Of course, institutional inertia must be taken into account when analysing dynasties. Institutional inertia is primarily related to the properties of institutions that are deeply rooted in a particular social order and are associated with even more inert social values. According to North (1990), historically conditioned processes of institutional change are mostly incremental and path dependence. Also, the inertia of institutions with the inertia of social habits (Kingston, Caballero, 2009) and our ability to change mental constructs to assess and comprehend certain social phenomena.

Path dependence also provides important cognitive tools for understanding the evolution of the institution of professional dynasties. In the framework of the theoretical tradition of Arthur (1989), while investigating path dependence, we must sequentially isolate and analyse: a random historical event that caused the formation of the rule, an increasing return in its distribution, as well as blocking (Khalil, 2013) associated with significant costs of changing the trajectory of development in case of abandoning the rule.

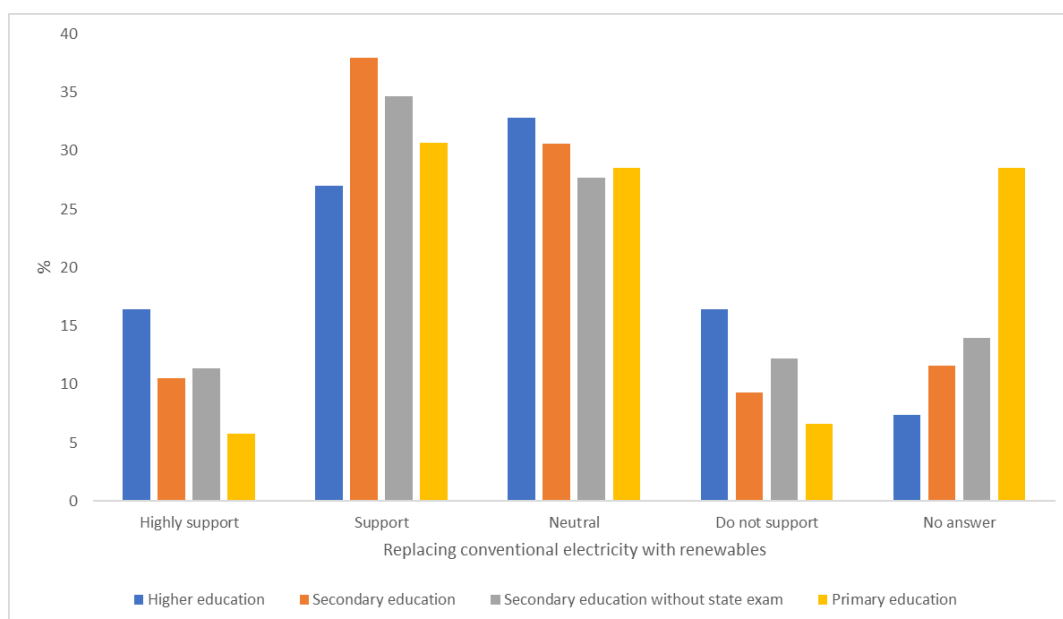
In the system of clan capitalism, the effects of dependence on the previous trajectory of development are quite strong. This is due, in part, to the legacy of the Soviet planned system and a very specific transition period, during which many Soviet institutions survived only slightly changed to adapt to new conditions. One of such institutions is the institution of professional dynasties in industries where the benefits of limiting access to resources from outside are significant.

3. Sustainable Education in HEI

The study of the institution of professional dynasties is aimed at understanding the rules, habits and norms with which their development and activities are associated. For this, it is necessary to obtain data on the practices adopted in the professional environment where there are stable dynasties. Such data may result from the application of qualitative methods in the field research process (Overberg *et al.*, 2019; Srivastava, Shree, 2019). In this case, the biographical method possesses heuristic potential, which makes it possible to analyse

professional dynasties in a wider scope of the problem both in spatial and temporal intervals. Narrative interviewing in this context appears to be one of the most relevant methods of the biographical method (Schütze, 1983).

Within the above framework, special attention should be paid to the three elements of the idea (morality), the institutional context and the personally expressed attitude of the actor towards the problem of dynasties. This approach is close to the new research program of narrative economics (Shiller, 2019). For example, in the context of the formation of dynasties and the continuity of generations, the ideas of nepotism, group solidarity, which correlate with the deep-rooted ideas about acceptable or unacceptable behavioural patterns from the moral and ethical points of view, can be considered relevant.



Source: created by the authors.

Figure 2. The effect of Education on the Opinion of Replacing the Traditional Energy Sources with Renewables

Figure 2 summarises the results of the survey where the following question was posed: “Do you think it is possible to replace electricity generation from conventional sources (such as coal-fired or gas-fired power plants, nuclear power plants or large hydroelectric power plants) by generating electricity from wind, solar radiation and biomass combustion?”. The respondents had to choose from the following answers: 1 –definitely possible to replace traditional energy sources with renewable energy sources (RES); 2 – rather possible to replace traditional energy sources with RES; 3 – rather not possible to replace traditional energy sources with RES; and 4 – definitely not possible to replace traditional energy sources with RES.

Moreover, it becomes apparent from Figure 2 that the ratio of the respondents with no clear opinion regarding the possibility to replace traditional energy sources with RES increases with the decreasing level of education. One can see that for the respondents with primary education almost 30% did not express any opinion.

Attention to the ideas or morals contained in narratives (Volchik, 2020) is due to the search for recurring elements in explaining the role of continuity based on family ties in certain areas of professional activity. Through analysis and reconstruction of the actor’s

attitude to a particular idea, we can understand how the professional community evaluates and comprehends the possibilities or limitations for the development of an organisation or industry in connection with the existence of dynasties (Garcia *et al.*, 2020).

Based on the foregoing, in terms of researching the institution of dynasties, we are faced with the task of identifying patterns that are associated with the existence of dynasties in the academic sphere in the course of a qualitative study of the discourses of actors from the academic sphere. When analysing narrative interviews, we interpret the significance and effects of these patterns through the prism of our own experience.

Actors' discourses during in-depth interviews reflect their subjective understanding of the processes related to the functioning of family and group ties within a profession or organisation. It should be borne in mind that habitualisation (definition) of rules is also associated with their accessibility for understanding by all members of the group involved in social interactions (Berger, Luckmann, 1995, p.92).

Through narrative interviews, we learn about the personal interpretations of actors, as well as their implicit and explicit assessments of the influence of the social environment on relationships associated with family ties in the implementation of professional activities. Of particular interest are descriptions of practices that are common to professional dynasties in various organisations.

Analysis of narrative interviews provides information that can be divided into two large groups: firstly, about the informants' subjective perception of the rules, habits, ideas that are associated with professional dynasties and therefore perform the function of structuring repeated interactions within and outside interest groups, and secondly, about the attitude of informants to the institution of professional dynasties, through their interpretation of the constructive and destructive consequences of this kind of social relations in the profession in general and in a particular organization, in particular.

Narrative interviews reflect the respondent's subjective perception of the academic environment. The academic environment in Russian conditions has undergone significant changes over the past decades. These changes also affected the basic social values with which the academic sphere is associated. Changes in the social context are undoubtedly associated with the transformation of the idea of the role of family groups in science and education. Therefore, when interpreting and reconstructing the social context of the existence of academic dynasties, we must take into account the historical factor.

Informants tend to exaggerate the constructive role of academic dynasties, since they themselves are their representatives. Therefore, to build a balanced picture of the development of the institution of academic dynasties, along with interviews, we also used materials from open sources (mass media, memoirs), which reflect the critical perception of the dynasties by members of the academic community.

Reconstruction of the social environment in the academic sphere is necessary for a more complete understanding of the conditions under which the institution of professional dynasties evolves. The personal attitude of informants to the role of seed ties and continuity in professional activity should be correlated with an understanding of the conditions within which dynasties develop and play a significant role in one or another organisation.

The role of dynasties in the professional environment and in a particular organisation will differ depending on whether the members of the dynasty had or have administrative power. Attitude towards power and the ability to influence the development of an organisation is an important criterion in assessing the destructive or constructive role played by the dynasty

and family ties. The administrative resource associated with group solidarity and collective action can be seen as a source of monopoly barriers and institutional rent.

We begin the analysis of interviews by identifying ideas relevant to our problematics that are related to the problem of family relations in the profession. Further, the ideas or beliefs of the actors are considered in relation to existing explicit or implicit norms, organisational routines and rules.

The study of rules is central to the study of the institution of professional dynasties. The rules are analysed in two aspects: firstly, as components of the social context and accompanying complementary institutions, and secondly, as the actual elements of the institution of professional dynasties.

Evaluation of the effectiveness of the institution of professional dynasties is complicated by the problem of the comparability of the role of a dynasty in a particular profession and in various organisations. In the course of the interpretive analysis of the interviews, we identify local correspondences of certain rules to constructive or destructive tendencies, in the respondent's opinion, for the development of the organisation.

4. Constructive and Creative Potential of Academic Dynasties: a Case of Russia

National, historical and cultural features of the formation of the institution of professional dynasties are of great importance in identifying constructive and destructive tendencies in those areas of activity where the factor of dynasties is significant (Chiabai *et al.*, 2014). Therefore, it is necessary to take into account how the formation of professional dynasties relates to the development of the system of higher professional education, associations and other professional organisations, traditions and organisational routines, as well as stable rules that make up the institutional environment of a particular profession.

The institution of professional dynasties can also be viewed neutrally in relation to the development of a particular organisation. However, this does not mean that on the scale of the country and the professional community, this role of professional dynasties remains neutral. Within the entire professional community, the role of dynasties is transient and dependent on the previous trajectory of development.

The tradition of professional dynasties, as already noted, can be viewed as one of the manifestations of institutional inertia. Within the framework of the dynasty, there is habituation and, following, transmission through generations of certain patterns of behaviour. The behaviour that becomes a habit in the professional sphere begins with the choice of an educational institution for higher education.

The institution of reputation plays a key role and acts as complementary to the institution of professional dynasties. In Russian conditions, the institution of professional reputation is poorly developed. Several explanations can be found for this, for example, associated with radical social changes, which are associated with the instability of the institutional structure in a particular area of professional activity. Reputation in relation to a professional dynasty is formed over long periods of time, which allows the social environment to perceive certain scientific achievements associated with a certain surname or family. One can identify five professional dynasties in the Russian academic field. These examples show that the emergence of a dynasty is associated with specific conditions, both organisational and scientific, and cannot be replicated en masse. Academic achievement can be associated not only with science but also with an administrative career or position: head of a department, laboratory, dean or rector.

It is difficult to identify the destructive signs of dynasties and family relationships in academic organisations. This is due to the fact that informants tell stories related to their own biography. Only in one interview we see an attempt to talk about the destructiveness of dynasties in the academic environment, expressing a latent social monopoly on the promotion of his family members. The negative moments associated with the dynasty relate rather to the problem of inertia inherent in family relations, and which is associated, respectively, with professional activities. The informants mainly associate the constructive features of the dynasties with the times of the Soviet Union. Informants associate professional dynasties with continuity across generations in academic or teaching activities. Continuity is viewed as a significant and positive characteristic that characterises the target orientation in the upbringing of future generations.

In organisations in which there are strong family ties, the problem of conflicts of interest inevitably arises. A conflict of interest is inherent in any social order - planned and market. Traditionally, the conflict of interests is associated with such a serious social ailment as corruption. Therefore, there are formal institutions regulating relations associated with conflicts of interest at the level of federal legislation.

In Russian legislation, several pieces of legislation are devoted to conflicts of interest. The law “On Combating Corruption” provides the following definition of a conflict of interest: “A conflict of interest in this Federal Law is understood as a situation in which the personal interest (direct or indirect) of a person filling a position, the replacement of which provides for the obligation to take measures to prevent and resolve a conflict of interest, affects or may affect the proper, objective and impartial performance of his official (official) duties (exercise of powers)”. In this definition, the main semantic load is associated with the idea that personal interest can interfere with the proper performance of official or official duties.

With regard to the institution of professional dynasties, a conflict of interest can manifest itself in the creation of formal and informal obstacles for persons not involved in family relations. The personal interest of a member of the dynasty, endowed with administrative power in this case, is realised through the receipt of rent from his office. Thus, the dynasty creates a collective good in the interpretation of Olson (1971). A conflict of interest, in this case, will be the main motive for creating such a collective good for a small group – a dynasty.

Narratives from open sources serve as important information about the evolution of the institution of professional dynasties: published biographies and autobiographies of scientists, interviews in the media, analytical articles on the academic field, blogs. The value of such sources of narratives or stories of dynasties in the field of science is that they present a wider range of value judgments about the role of family ties. Indeed, in the narrative interviews that we received in the course of field research, informants tend to idealise their own experience, which is expressed in a predominantly constructive assessment. However, for completeness of the study, we need to consider both constructive and destructive evidence of the functioning of the institution of Russian professional dynasties.

A lot of information about family and similar ties appears in the media on the eve of and immediately after the elections to the Russian Academy of Sciences (RAS). The unique status of an academician of the Russian Academy of Sciences in Russian conditions attracts considerable attention to the problem of the dynasties of academicians and corresponding members. For example, in 2016, in connection with the elections, there was a significant

discussion about nepotism. An illustrative example is a discussion on elections in the department of medical sciences (Manuzina, 2016).

The Russian society received a negative reaction to the results of these elections but the Russian Academy of Sciences rejected the principle of nepotism and clannishness as a guarantee of successful elections: “*the number of elected close relatives of Academy members is approximately 3% of the number of those who accepted the conditions in the elections. And relative to the total number of members of the RAS, this figure is about 0.5%, which does not give grounds for statements about the development of nepotism in the RAS*” (Kosmarsky *et al.*, 2016).

In the biographies of prominent scientists, you can find references to important differences between the concepts of dynasty and nepotism (Sadovsky, 2017, p.15).

Nepotism (familism) in the Soviet sense was close to the modern concept of nepotism. In the post-Soviet Russian conditions, nepotism in science has become a noticeable factor in the development of academic teams. One of the explanations for this may be the factor of significant administrative rent. After the collapse of the Soviet Union, the academic sector experienced monstrous underfunding. The salary of a research assistant was so low that it did not provide an opportunity for physical survival. Researchers at that time were forced to find additional work, emigrate or stop their academic careers. However, those with administrative power could receive additional income, for example, from the lease of vacant premises or contractual work. Therefore, belonging or closeness to academic dynasties with administrative power was a factor in maintaining a scientific career.

Nepotism can also indirectly characterise the quality of social capital in the academic sphere. Low levels of trust within the academic community are associated with motives for organising groups within which trustful long-term cooperation is possible (Strielkowski, Chigisheva, 2018). The dynasty is one of the varieties of such groups.

Another important factor in the evolution of academic dynasties is associated with the system of awarding academic degrees. The rapid development of the shadow market for dissertations in the nineties and the early 2000s led to the fact that it was possible to get an academic degree without doing science at all. Under such conditions, many administrators from science could transfer their administrative statuses, practically without participating in real scientific research and work.

The professional organisation, which includes interest groups, is widely studied within the framework of the neo-Weberian approach to the profession as a monopoly: “*Within the neo-Weberian approach, traditional professions are defined as interest groups that have managed to take a monopoly position in the market of health services, legal services, education and science*” (Mansurov, Yurchenko, 2009, p.41). The formation of a monopoly can be effectively ensured by a small group (Olson, 1971; Olson, 1995; Weber, Weber, 2020), which has significant selective incentives. A kinship group is ideal for this type.

Restrictions on the part of professional dynasties may not only be related to administrative barriers. Within the framework of dynasties, rules related to high requirements for scientific competencies can also be formed. On the one hand, such requirements are aimed at maintaining high research standards but on the other hand, in the absence of transparency and independent qualified expertise, they are associated with restricting access to the most promising projects.

The long tenure of members of a professional dynasty in administrative positions creates a situation in which mechanisms of negative or deteriorating selection are triggered. In

situations of deteriorating selection, the main criteria for advancement in the organisation are loyalty and belonging (with varying degrees of kinship) to the dynasty.

In interviews, members of a professional dynasty tend to exaggerate the importance of family ties in terms of their influence on the development of professional competencies. The idealisation of the influence of family and relatives on the entry and formation of the profession follows their subjective perception of their life path in connection with the institution of dynasties. In their subjective assessments, respondents, through the high assessment of their families, convey values that are rather incomplete with the principles of competition and cooperation in the modern academic sphere.

The institution of professional dynasties is associated with the formation of a kind of “rut”, which, on the one hand, facilitates the mastery of the skills of the profession, and on the other hand, is an obstacle to the disclosure of personal potential.

Education in an environment created by a professional dynasty forms habits that are complementary to academic activities, for example, the habit of reading, solving problems, logical reasoning, etc. Growing up and choosing an educational institution, and then a place of work, members of the dynasty are more likely to achieve success due to the skills formed thanks to the environment and the example of their elders.

If we analyse the membership of a dynasty in economic terms, then this gives first of all savings on transaction costs and also gives advantages in social and economic communication due to the transferred social capital. Therefore, belonging to a dynasty facilitates and makes more accessible social interactions within professional groups and in general in a particular field of activity.

Within professional dynasties, there are examples where kinship with a prominent scientist serves as an obstacle to advancement in the scientific hierarchy. In many scientific organisations there are informal rules that within the framework of one scientific direction, relatives cannot carry out their activities.

Such informal norms can be considered along with formal restrictions, which in Russian practice are determined by the Decree of the Government of the Russian Federation of 05.07.2013 N 568 “On the extension to certain categories of citizens of restrictions, prohibitions and obligations established by the Federal Law”, On Combating Corruption “and other federal laws into combat corruption”. According to this resolution, direct subordination or control of relatives is prohibited if one of the lower occupies the highest administrative positions in the organisation. However, in practice, and especially in the scientific field, this limitation is rather easy to get around. In scientific organisations, the lack of direct subordination is not an obstacle to the implementation of various kinds of privileges through informal mechanisms for creating favourable conditions for the work and scientific career of an employee associated with the management of family ties (Kornelakis, Petrakaki, 2020).

Thus, in relation to professional dynasties in the academic sphere, informal institutions play a more significant role than formal ones. In the latest Russian practice, informal restrictions aimed at prohibiting the work of relatives within the same management hierarchy of an organisation are absent or in fact, do not work. Therefore, in the texts of interviews, we do not find statements that negatively assess kinship relations within the framework of one scientific or educational organisation.

Informants in interviews emphasise the importance of the example of their relatives for choosing a university, a field of study and then an academic career. The example of relatives is also associated with reputation. Informants generally assess the institution of the dynasty in the academic sphere as having a constructive influence on its development.

In this context, three characteristics of the dynasty in the academic field can be distinguished in a constructive manner: example (continuity), reputation and tradition. Therefore, belonging to a dynasty allows you to receive both explicit and implicit advantages for the accumulation of human and social capital and building a career in the academic field. Within the framework of professional dynasties in science, a very important problem, as the informants note, is the problem of continuity.

Overall, it appears that collective action within the framework of the institution of a professional dynasty plays a constructive role if it is aimed at transmitting academic values and, above all, supporting academic freedoms. Continuity, which the interviewed scientists singled out as a significant factor within the dynasty, fulfils an important function that contributes to the institutionalisation and integration of interactions within scientific organisations.

In modern Russian conditions, the academic sphere is not only shrinking in quantitative terms but also significant institutional changes are taking place in the course of incessant reforms. In addition, professional dynasties, especially those not related to the administrative resource, can contribute to the preservation of traditions and academic values which are important for creating an environment of creativity and scientific research.

5. Favoritism and Digitalisation in Higher Education

With online education on the rise and the proliferation of high-quality online courses, there is no doubt that campus studies offer an experience in the coming of age but many students still need and want the experience of the site (Simamora, 2020).

As responsibility in the higher education landscape increasingly rests on the shoulders of administrators, executives should think more about how formal succession planning is handled in their institutions, one would think. However, cronyism, nepotism, and political appointments are still pervasive in higher education (Brotherton *et al.*, 2018). As in any other industry, academics should know better but it seems that there are no longer enough different departments within institutions. Private universities, whether for-profit or not, even borrow and use the language of business, and many individuals and institutions in higher education recognise this. Efforts have also been made at the national and international levels to address the issues addressed in this paper and to stem the tide of fraud and deceit in higher education. These efforts are also being made at the national or international level. Higher education internationalisation has exported academic fraud to countries like Australia, which have achieved high scores in the Transparency International as Corruption Perceptions Index but are not considered systemically important. First and foremost, the fight against corruption in higher education is a matter for all actors involved, not just private institutions (Mohamedbhai, 2016).

Many academic departments had become leaner and smaller, with fewer resources for research and less time for teaching and learning. But the administration's bloat was not the only symptom of the bureaucratic abyss that permeated university campuses and prevented dramatic change. The direction science can take might underscore the threat to academic integrity and institutional legitimacy.

Unfortunately, there are common problems that afflict higher education in general: rising tuition fees, declining academic performance, identity-infused curricula, official diversity enforcers abusing their authority, and a climate of political correctness that overreacts to passing fads. Allegations of fraud pose a serious threat to the credibility of the

university, and the university must act to ensure that its practices are fair and do not become a playground for politically connected people. To some extent, the failure of many HEIs to prosecute academic misconduct is due to the considerable level of corruption that afflicts our education system. For example, it is claimed that the award of large research grants often depends on the number of applicants for a particular program and not on the quality of the research itself. The frequency with which allegations of corruption and bribery in the public sector, especially in academia, have come to light in recent years is evident not only in universities but also in the government.

In addition, researchers found that women dropped out of several STEM subjects, including social and biology, and make up only about a third of the total students and doctoral students in China. This is often attributed to a lack of interest in teaching rather than research, or the high cost of training, as well as gender bias. In some cases, legislation to hire different employees has shifted its narrative to “equal opportunities”. To be sure, academics have all too often witnessed the appointment of high-level officials to positions of power in higher education. Not only are they unqualified, but they also lack the required degree or any experience in the field of work. Many of these appointees have never worked at a higher education institution. As a result, they have no idea how other colleges and universities approach, solve, or manage large, escalating crises without looking through the tunnel. As responsibility in the higher education landscape increasingly rests on the shoulders of administrators, leaders need to think more about how formal succession planning is handled within their institutions. It seems that there are no longer enough distinct divisions within an institution, and cronyism, nepotism, and political appointments are still pervasive in American higher education. As in any other industry, academics should know better, you might think, but they don't.

Nowadays, private universities, nonprofit or for-profit, even in the language of business all use the term “public private partnership” or “private public partnership”, as in the case of Harvard University. American universities are still generally perceived as bastions of fairness, innovation, and insight (Reich, 2020). However, American influence on this dimension is shrinking, driven by laziness, complacency, and intellectual sloppiness. While these institutions trade academic capital, curiosity, and intellectual rigour for money, students struggle to find their way around, hoping for favours.

Higher education is a source of skilled workers and leaders and can produce graduates who can maintain or change the status quo. Fighting corruption in this sector is therefore crucial to breaking the vicious circle of corruption in society and indeed worldwide. Moreover, education has been an important factor that can strengthen social confidence and overcome problems of collective action.

For example, in Italy, cases of rampant nepotism and favouritism in the appointment of university lecturers have been exposed. Italian university departments, known as barons, awarded qualifications based on the exchange of favours to serve private and professional interests. In addition, some projects will receive double grants and additional funds can be used for personal and business activities. Nationwide, several universities have introduced policies focused on discouraging themselves from hiring and promoting their immediate family (Kington, 2017).

The returning graduates act as a cultural bridge and promote academic integrity in internationalised higher education. Many returns to their home or developing countries through their studies and many are offered scholarships and academic scholarships to strengthen the integrity and honesty of international students in the academic world. The vast

AcadOuput – academic output measured by the volume of published journal papers, books, book chapters and conference proceedings by the given HEI;

Establish – dummy variable which takes the value of 1 if HEI *i* has an editor at journal *j* in year *t-2*.

Before – dummy variable assuming a value of 1 during the period of three years before HEI *i* established a certain academic dynasty *j*.

After – dummy variable assuming a value of 1 during the period of three years after HEI *i* established a certain academic dynasty *j*

The results of our estimation are presented in *Table 1* that follows. The first column in the table yields the results from an OLS model, the second column depicts the outcomes from a negative binomial model added for the sake of comparison. The results in the third column show the estimates obtained from a Poisson model.

Table 1. The constructive and destructive potential of the professional dynasties

	OLS	Negative Binominal	Poisson
Establishing an academic dynasty	1.549** (0.267)	1.862** (0.149)	1.857*** (0.126)
Before establishing	0.934*** (0.189)	1.385*** (0.159)	1.205*** (0.132)
After establishing	0.817*** (0.116)	1.339*** (0.165)	1.225*** (0.134)
N		522948	
Log likelihood		-117726.3	-149776.6
Adjusted R ²	0.53		

Notes: ** - significant at 10% level, *** - significant at 5% level.

Source: own calculations.

Overall, our results confirm (with a significance at the 10% and 5% levels) that academic dynasties (same as the scientific schools (also called “chairs” or “centres”) and research groups) might effectively increase the productivity of the universities and HEI where they are established. One has to acknowledge the power of these academic dynasties in disseminating useful knowledge and raising the prestige of the academic institutions. This power and influence could and should be directed at raising environmental awareness among students and promoting the principles of sustainability in all fields of research.

Since the leading academic dynasties contribute to the receipt of additional funding and the associated technological modernisation, it can be said that the dynasties with high academic status contribute to the introduction of digital technologies in scientific and educational activities.

Although considerable work is still being done in this area, higher education research has contributed to understanding the role of learning in sustainability in the education system and its impact on the environment and the economy.

Conclusions

All in all, it appears important to identify sustainable practices that could reduce energy costs and improve the quality of life of higher education institutions by introducing sustainable practices. Crucial issues should be outlined that need to be addressed to maximize the opportunities and minimize the risks of digitalization for a sustainable future. Raise awareness and promote sustainable development in the HEI environment such as carrying out a state-of-the-art analysis highlighting the respective strengths and weaknesses of each country in order to develop a comprehensive set of recommendations for the future of higher education. In order to involve the entire university community and to promote transnational cooperation between the various institutions involved, interactive e-learning platforms can be developed to facilitate the cooperation and to encourages universities and higher education institutions worldwide to exchange ideas and best practices. Moreover, we need to better understand the potential of new technologies in the educational context and investigate the use of these technologies to improve learning practices. This new era in human history is marked by a new generation of human cognitive abilities that complement and perhaps surpass human cognitive abilities in certain areas.

Modern institutional research is often concerned with the problem of obtaining relevant data on the rules and regulations, as well as the repetitive interactions between people themselves, which are involved in the operation of an institution. Therefore, the choice of data sources depends on the interpretation by researchers of the effects of the functioning of institutions. We must also take into account the peculiarities of the subjective perception of information about institutions by actors who are included to varying degrees in social relations associated with rules and norms.

Large-scale institutional changes, for example, like the transition to a market economy, radically affect the transformation of the institution of dynasties. At present, the institution of dynasties is increasingly associated with the problem of cronyism. Clannishness can be viewed as one of the complementary institutions with respect to dynasties in social orders characteristic of developing countries.

Modernisation of the social order of clan capitalism is possible as an evolutionary process of transformation of a mature natural state. In the face of institutional change, professional dynasties must maintain sufficient incentives for development. The effectiveness of the institution of professional dynasties depends on the possibilities of combining competition with cooperation. Competition between different dynasties for access to resources in this vein can be seen as a weakening of local monopolies, which contributes to social mobility.

The effects of the institution of professional dynasties must be viewed in the context of organisational and industry specificities. The most important factor here can be specific investments in human capital. The investment in human capital required for a successful professional career is in itself a significant barrier to entry. In this case, professional dynasties are perceived as a way to adapt to the historically established conditions of human capital reproduction.

Our results demonstrate that the role of professional dynasties is often praised and highlighted while the destructiveness of professional dynasties in the form of the privilege of promoting their members is practically not articulated. In general, one can get a completely different social context of the destructive and creative potential of professional dynasties from research like this in comparison with the analysis of media narratives. The fixation of the

destructive potential of professional dynasties – a social monopoly on the resources of social mobility – becomes pronounced in socially significant periods. Thus, when analysing the institution of dynasties, one can fix their dual potential for the development of the society which means that it might be necessary to identify the complementary institutions that facilitate or hinder the ability of organised kindred groups to restrict vertical mobility and exercise a monopoly on organisational, administrative, as well as other social functions.

Finally, it becomes clear that in the years following the “digital revolution” in higher education that was triggered off by the COVID-19 pandemic, we would need to redefine our ideas of education to provide better access and support to all students, not just those with the greatest potential for success or coming from wealthier backgrounds (Bentata, 2020; Strielkowski, 2020; Tigaa, Sonawane, 2020; König, Winkler, 2020). The same holds true for the universities and other HEI who are underfinanced and cannot afford large-scale digitalisation. It is also very likely that with the digitalisation of higher education university budgets would shrink in the forthcoming years due to the reduced numbers of overseas students or smaller fees for online tuition. It is nevertheless important to maintain their sustainable development and evolution in order to preserve them as the centres of environmental education and sustainability (Mhlanga, Moloji, 2020).

When it comes to the pathways for further research in this area, two possible directions come to mind. First, similar cross-country studies might be conducted in various countries across the world. It would be very interesting to see the differences and similarities in the ways how professional academic dynasties impact the development and digitalisation of higher education contributing to its growing sustainability in different continents and countries belonging to varying income groups. Second, it might be interesting to collect more data on COVID-19 impact on higher education and the global changes it brought. It is well-known that institutional changes take some time to settle in, so one would need some time to see how the “digital revolution” shaped itself up and whether its effects would be visible in the long run.

Our results might be of special interest to education specialists, policymakers working in the areas of HEI and HEI-related policies, as well as stakeholders dealing with promoting sustainable growth and development in education and society. Time will show how the digitalisation in higher education would evolve and how it would impact all interest groups at HEI (such as academic centres and research groups) but one thing is clear now – higher education is undergoing profound changes and we need to react promptly to all the opportunities it presents.

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SKAITMENINIMAS IR TVARUS AUKŠTASIS MOKSLAS: KONSTRUKTYVUS IR DESTRUKTYVUS PROFESINIŲ DINASTIJŲ POTENCIALAS

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SANTRAUKA

Straipsnyje daugiausia dėmesio skiriama skaitmeninimui ir tvariam aukštajam mokslui pasitelkiant profesinių akademinų dinastijų institucijų analizę ir vertinant jų konstruktyvų ir destruktivų potencialą darniam universitetų ir aukštojo mokslo institucijų vystymuisi. Šiame straipsnyje profesinių dinastijų raida ir veikimas vertinami iš dviejų perspektyvų – konstruktyvios ir destruktivios atsižvelgiant į akademinio sluoksnio procesus ir organizacinius mechanizmus. Nustatyta, kad destruktivios tendencijos dažnai susijusios su nepotizmu ir klaniskumu, kurie leidžia apriboti prieigą prie išteklių ir karjeros augimą, taip pat išskirti institucinę nuomą, susijusią su administracine našta. Be to, paaiškėjo, kad konstruktyvios akademinų dinastijų raidos tendencijos yra susijusios su tęstinumu, reputacijos ir mokslinių tyrimų bei mokslinės produkcijos, kurią galima išmatuoti naudojant pažangias informacijos ir komunikacijos priemones, didėjimo sąvokomis.

Be to, straipsnyje taip pat svarstoma, kokią poveikį akademinėi bendruomenei ir aukštojo mokslo institucijoms daro COVID-19 pandemijos sukeltos naujovės ir pokyčiai. Šie pokyčiai ir jų potencialas įvertintas siejant juos su tolesniu aukštojo mokslo skaitmeninimu, kuris padėtų taupyti energiją, skatintų tvarų gyvenimo būdą ir aplinkosaugos švietimą. Gauti rezultatai patvirtina, kad aukštojo mokslo skaitmeninimas padėtų užtikrinti tvarų vystymąsi ir optimalų energijos naudojimą. Aukštojo mokslo srityje sprendimus priimančios politikai ir suinteresuotosios šalys turi imtis tolesnių ryžtingų veiksmų, kad dabartinės tendencijos būtų tęsiamos ir perkeltos į kitą lygmenį. Formuoti požiūrį ir nuomonę apie tvarytą ateitį galima ir reikia veiksmingai pasitelkiant švietimo procesus.

REIKŠMINIAI ŽODŽIAI: skaitmeninimas, tvarus vystymasis, aukštasis mokslas, profesinės dinastijos, tvarus švietimas.