USING THE CONCEPT OF A LEARNING ORGANISATION TO BUILD A THIRD GENERATION UNIVERSITY. CASE STUDY OF THE JAGIELLONIAN UNIVERSITY

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Abstract

Background. Currently, the university management requires undertaking the execution of new activities. In response to the challenges of the contemporary processes of the management – building a third generation university - universities are adapting the concepts of management, which up to now have been first and foremost availed of in the sector of enterprises. Such a solution is the concept of a learning organisation.

Research aims. The aim of the research conducted was to verify the using of the concepts of a learning organisation during the building of the third generation university

Methodology. In the research methodology, a systematic literary review was applied, as well as a case study of the Jagiellonian University. The choice of this university was made on the basis of a subjective evaluation of the process of evolution of the university from the second generation to the third generation. The adoption of such research methodology shall facilitate the building of propositions of good practices of the university management for other universities in the future.

Findings. The research conducted reveals that the university has been using a learning organisation to build a third generation university

Keywords: university, university management, learning organisation, third generation university.

JEL Codes: M41, M48, I2.

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INTRODUCTION

Over the past few years, universities, together with the economies, have been evolving and changing. Knowledge based economy is a method in which knowledge is used to create value added. This knowledge is used by the university in various economic fields to create value added. The combination of science and practice, and the university and industry, despite their contradictory characteristics, is one of the vital principles of the country's economic development.

The conversion of universities to an entrepreneurial university is necessary for survival and development in the future. If a university is an entrepreneur, scientific research ends to the production of a new service, activity or product, and if this is not the case, scientific research is rarely transformed into innovation and is often stored in libraries (Qanaati *et al.*, 2010, pp. 115–133). Therefore, universities should evolve and build an individual model for their structure, performance, processes, and infrastructure, taking into account the political, environmental, and legal conditions specific for each country.

The university must apply methods, in addition to maintaining and improving the quality of education and research, to solve the problems of society and generate wealth from knowledge and technology (Amiresmaili, Saberi & Barkhordari, 2019). The university management nowadays believes that university management is not only about inventing a new product, idea or technology, but also about the effective commercialisation of innovation – this is how third generation universities are built.

The aim of the research conducted was to verify the using of the concepts of a learning organisation during building of the third generation university. In executing the research aim indicated, the following research questions were put forward:
- Is the Jagiellonian University a third generation university?
- Is the Jagiellonian University a learning organisation in terms of securing the accuracy of the process management of the university?
- What factors, behavioural traits, or tools indicate this fact?
- May the management of the university be acknowledged to be management of the third generation?

BACKGROUND

Evolution of the development of universities: University management

All times considering the economic, cultural, social, and political changes, needed for universities to teach and promote the creativity and spirit of entrepreneurship and innovation to talented students and faculty members (Taghipoor Zahir & Hasanmorad, 2006, pp. 31–40). The fundamental role of universities in the training of a specialist workforce has to fundamentally be changed in various countries, especially in developed countries (Datta, Mukherjee & Jessup, 2014, pp. 215–249).

The 1990s witnessed a spread in the new concept of the entrepreneurial university, while also gave rise to the theoretical models of the functioning of such universities. In 2000, H. Etzkowitz emphasised in his work that the role of universities had grown significantly and is extraordinarily significant in environments based on knowledge. However, in 2001, B. Sporn emphasised the necessity to conduct a transformation within the framework of structures and processes of universities so that they are ready and adjusted to the changing environments. Shortly after that, in 2004 H. Etzkowitz created the model of the Triple Helix describing the cooperation of the government, the economy, and the universities with the aim of supporting innovative activities for a society based on knowledge. Two years later, D. Kirby described the barriers for universities implementing the principles of entrepreneurship in its facilities. All the aforesaid changes to the concepts and models gave rise to the formation of the Third Generation University (Bielicki & Stevenson, 2020, p. 121).

Subject-related literature distinguishes three main generations of universities (see: Table 1).

Table 1. Comparison of chosen features of three generations of universities

Feature	First Generation University	Second Generation University	Third Generation University
Aim	Education, schooling	Education, schooling, while also scientific research	Education, schooling, scientific research while also use of knowledge
Function and role	Protection of truth	Familiarisation with nature	Creating added value
Staff	Practitioners	Practitioners and scientists	Practitioners, scientists and entrepreneurs
Language of instruction	Latin	Native language	English language
Management	Chancellor	Scientists working part-time	Managers

Source: Self-analysis on the basis of Kotosz *et al.* (2015, p. 5).

The first of them is concentrated on creating a workforce and a more practical side of science (Amiresmaili, Saberi & Barkhordari, 2019, pp. 1–2). The firstgeneration universities were education based. These universities were involved in the research and production of science (Datta, Mukherjee & Jessup, 2014, pp. 215–249).

The second generation broadened its activities to include strong support for research and scientific activities (Kotosz *et al.*, 2015, pp. 4–7). Then, the second academic revolution occurred in the second half of the 20th century during which entrepreneurial universities emerged as the third generation to train the entrepreneurial workforce and connect with industry (Datta, Mukherjee & Jessup, 2014, pp. 215–249).

The concept of the Third Generation University itself was proposed in 2009 by J.G. Wissema (Ghorbani *et al.*, 2020, p. 63). In his view, universities are undergoing transformation that is caused by the growing competition associated with investments, students, while also the rest of the academic society. H. Etzkowitz described the third-generation university as an institution that has many research contracts and strategic partnerships with other organisations and is financially independent (Etzkowitz, 1984, pp. 198–233). Most of the research studies, which have been done to evaluate the readiness of universities to become third-generation universities and to change policies to encourage and support entrepreneurial activities, are theoretical and models that have been offered solely in expressing some

relationships between events without accountability explanations (Darling-Hammond *et al.*, 2019).

The third and second generation in terms of the most contemporary generations, perceives the need for cooperation with entrepreneurs, the market, and industry, in order to educate the future specialists, while also to share knowledge with the external environment. It is worth mentioning that multiple researchers also notice changes in the direction of the Third Generation University (see: research by, among others, Kotosz *et al.*, 2015, pp. 4–7; Amiresmaili, Saberi & Barkhordari, 2019, pp. 1–2).

The third-generation universities worldwide, have established a centre for training and promoting entrepreneurship among students and faculty with the aim of training managers to succeed in knowledge-based companies (Datta, Mukherjee & Jessup, 2014, pp. 215–249). Also, innovation university management as a key feature of the third-generation universities (Clark, 1998). and the idea of founding spin-offs by academics, graduates, and students to the main concept of the entrepreneurial university are more necessary in this area (Chrisman, 1995, pp. 267–281). These changes may be treated as a response to the expectations of relating the mission of the universities to economic growth, while also social and economic development (Ghorbani *et al.*, 2020, p. 63). This also causes the necessity to modify or change the principles of managing the finances.

J.G. Wissema also distinguishes the key factors that universities should have in their aspirations to transform into the Third Generation University, which are the following, among others (Bielicki & Stevenson, 2020, pp. 121–122):

- wide use of the broad notion of *know-how*,
- conducting interdisciplinary scientific research,
- global orientation,
- creating values,
- conducting research and courses in English,
- transforming the university into a centr of technology transfer of a global nature.

It is worth mentioning the fact that researchers also distinguish the four missions of universities, which are often identified as the aims and models of their generation and are as follows (Kotosz *et al.*, 2015, p. 5; Rubens *et al.*, 2017, p. 357; Fernández *et al.*, 2018, pp. 33–35):

- First mission: education.

- Second mission: research.
- Third mission: entrepreneurship, economic efficiency.
- Fourth mission: sustainable development.

Contemporary universities are undergoing a profound change, by means of which they are transforming into Third Generation Universities. In the opinions of R.V. Nikolaevich, A.G. Ivanovna, and F.T. Alexandrovna, it is possible to distinguish several chosen factors where this transformation occurs (2019, pp. 327–328):

1. The search for new sources of financing, which, depending on the normative acts of a particular country may be increased by means of, among others, scientific grants.
2. Globalisation and the accompanying increased competition between universities, while also their clients (students, employees, etc.).
3. The perception of universities as incubators of knowledge, technology, or enterprises.
4. More frequent execution of research and joint teamwork in terms of the cooperation between researchers of various scientific fields.

In their pursuit of greater efficiency and productivity, universities include systems of management within their framework that are frequently designed for all types of business activities, while also government organisations. R. Birnbaum notes and agrees with the statement that new concepts and ideas within the scope of management or business are frequently widely advertised and illustrated as universal systems that are not simple to implement and which require a great deal of dedication from the managers that are to work on them. Unfortunately, they are displayed as ineffective and antiquated just as quickly as they begin to spread (Birnbaum, 2000, p. 2).

However, D. C Moosmayer notes that it is possible to refer to profound changes with regard to universities. Universities have begun to concentrate on the processes of internationalisation, the changing environments, while also on new styles of management. These changes, as well as the increased market orientation are the result of, among other things, the need to adjust to the clients of the university and fulfill their varied expectations. Likewise, there is no lack of opponents to such a solution, in the opinions of whom, the relations of the university with the market may impose subject matters and areas of future research that would restrict the autonomy of the university (Moosmayer, 2010, pp. 49–50).

R. Birnbaum distinguishes five fundamental phases that illustrate the process of adaptation in terms of the new processes and ideas in both the business and academic environments, which in turn, has an impact on the process of their management (Birnbaum, 2000, pp. 4–9). These phases are as follows: creation, evolution, delay, degeneration, and dissonance (see: Table 2).

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Table 2. The process of adaptation, five fundamental phases

Phase	Description
Phase 1 – creation	The creation of new techniques and concepts of management is usually associated with the existing crisis in the particular business or market as a whole. In such a situation, new solutions are formed that are aimed at fighting the crisis in question or implementing techniques which facilitate the application of solutions to the emerging problems. The new concepts are usually supported by the paid consultants, as well as the enterprises that have just implemented the aforesaid solutions and ensure others of their success. The phase of creation usually includes the unimaginable promise of success of the new idea, concept, process, solution, etc. These promises also have an impact on other enterprises and institutions most frequently cooperating in various networks or partnerships, which in turn results in their joining together for the implementation of an idea in this phase, whereby the idea presented is often in a simplified version that indicates its rationality and attention is drawn to the necessity of its implementation that is to result in fundamental changes to the whole sector, which in extreme situations is to save it from collapse.
Phase 2 – evolution	New solutions are becoming increasingly widespread and more opinions expressing satisfaction in terms of enterprises with their effectiveness may be noted. In this phase, the majority of organisations focus on the effects and benefits, while significantly more seldom on the possible costs. At this stage, the number of consultants, managers, scholars, etc. advocating new concepts is growing. They are beginning to organise rallies, training, while even writing papers on the subject of the novelty and effectiveness of the idea. This concept is gaining increasing popularity and enterprises that implement it are deemed to be innovative and keeping up with the times, while also noticing the existing problem in the sector. Simultaneously, organisations that failed to decide on the adoption of the new concept are openly criticised and acknowledged to be behind the times.
Phase 3 – delay	The concept and the benefits arising from it are still widespread. At the same time, there are opinions that degrade the concept, or indicate its possible risks. Organisations are starting to notice the lower level of benefits than those promised, or even the complete lack of benefits. Researchers, as opposed to the previous phase, start to notice in their research, analyses, or papers that the new concept is not as effective by basing on, among others, newly formulated analyses that were not available in the previous phases. In this phase, the concept achieves its peak (popularity, scope of implementation, etc.).
Phase 4 – degeneration	The solutions implemented are encountering increasing levels of septicism. Reports increasingly illustrate the failure to implement new concepts. Simultaneously, the enthusiasm which was so strong in the previous phases is cooled. In analysing the new data, researchers note that the idea does not bring the promised benefits and sometimes brings none at all. At the same time, enterprises and other institutions that implemented the concepts, also display their dissatisfaction, while the environment of the sector and market itself ceases to support the concept. Scientific press frequently publishes papers and reports illustrating the concept as being crossed off.
Phase 5 – dissonance	The concept is acknowledged to be a failure as researchers note that the outcome may have arisen from its mistaken foundations and assumptions. In this phase, a new enhanced model of innovation frequently appears, which once more ensures and promises only benefits. This improved version is also essential for the improvement of the sector, branch, market and the whole cycle itself starts afresh and phase one ensues.

Source: self-analysis on the basis of Birnbaum (2000, pp. 4–9).

The Third Generation University should be based on interdisciplinarity and internationalisation, which arises from its structures and financial efficiency. The formation of third generation universities is the effect of economic, environmental, and social change and revolution. In contemporary times, universities change their structures into more flexible ones, which in turn has an impact on the formation of innovations and survival in a changing environment. Such flexibility of the structures and independence result in the better flow of information (Ghorbani *et al.*, 2020, p. 64). Furthermore, researchers are usually in agreement when it comes to a greater number of universities functioning in the world as models of the third generation that pursue or illustrate the features of this model (Kotosz *et al.*, 2015, p. 5; Molnár & Lukovics, 2016, p. 518).

The learning organisation

There is a wide range of definitions that describe learning organisations (see, among others, Campbell & Cairns, 1994; Yeo, 2005, p. 369; Hee Kim & Callahan, 2013, pp. 184–186; Örtenblad, 2015, pp. 167–166; Reese & Sidani, 2018a, pp. 354–355; 2018b, pp. 435–436; 2018c, pp. 200–202). The main theory of theirs is based on the assumption that all the employees of a particular enterprise are geared towards the expansion of their skills and knowledge, not only as individuals, but as an entire organisation that consists of all the members (Van Eijnatten & Putnik, 2004, pp. 420–421). Learning organisations should not only implement the processes of expanding knowledge into their structures, but also constantly enhance the quality of this knowledge thanks to availing of special tools or mechanisms (Armstrong & Foley, 2003, p. 74).

In order to consider the mechanisms and activities of learning organisations, it is necessary to first of all understand how to create them. The foundations of this process were previously described by P. Senge by means of distinguishing five key areas as follows (Coto, 2012, pp. 264–273):

– Systemic thinking
  Systemic thinking is an exceptional tool that not only develops, but also enables a better perception of knowledge. Such an approach is possible to implement in organisations of various magnitudes and structures (Mella & Gazzola, 2019, pp. 58–59).

– Personal mastery

An organisation learns thanks to the development of all the individuals, thus developing knowledge in each employee is so important. Of course, employees in enterprises must be very suitably motivated in order to develop their skills. Managers must be first and foremost responsible for this by means of perceiving potential in their subordinates, not for the purpose of attaining perfection and higher efficiency, but to enable them to achieve unlimited development in terms of abilities and the desire to learn new things (Day, 1994, pp. 21–22; Coto, 2012, pp. 266–267).

– Thought models (maps)

Thought models are the presentation of certain patterns embedded in the minds of all individual human beings. For the concept of a learning organisation, it is important that the aforesaid models are standardised among all the co-workers. This relates to models that present positive patterns, not stereotypes or harmful ones. In contemporary times, enterprises sometimes have problems in the processes of self-development due to the fact that the models are excessively embedded or there is tacit consent in terms of their existence (Bui & Baruch, 2010, pp. 211–212; Coto, 2012, pp. 268–269; Rook, 2013, pp. 38–43).

– Common vision

The future common vision of an organisation is aimed at strengthening the need for sacrifice to achieve the goals among the employees. The common vision should be derived from the personal mastery, which is created in every employee in its own individual version. Individuals that win championships focus strongly on their own values, such as aspirations, convictions, which they are able to sacrifice for some achievements (Hodgkinson, 2002, pp. 89–90; Bui & Baruch, 2010, pp. 215–217).

– Grouped learning

Mental and personal mastery facilitate bringing out the potential from individuals. Despite this fact, even the most talented employees who are unable to cooperate with others do not have a strong impact on the increase in the efficiency of the organisation at hand. Hence, it is so important to implement team learning into the enterprises, which would not be possible without a

common vision that is shared by the employees (Bui & Baruch, 2010, pp. 214–215).

Thanks to cooperation, dialogue, and common visions, grouped employees may develop their own intelligence, as well as the organisation in a sphere that they would not achieve individually (Oudejans *et al.*, 2011, p. 308).

Learning organisations develop at an individual level (thought models, personal mastery), while also at a group level (team learning, common vision) simultaneously. Both levels should function on the basis of systemic thinking. The result of these components is that of learning, or to be more precise, a learning organisation. It is possible to distinguish several key factors of learning organisations as follows (Halmaghi, 2018, pp. 99–102):

- creation of systems supporting the learning process,
- appreciation and perception of values arising from the organisation-environment relation,
- encouragement of sharing knowledge,
- awakening cooperation and dialogue,
- constant creation of conditions that are favourable for employees wanting to learn,
- elimination of current mistakes,
- learning based on experience,
- emphasizing and advocating relations based on the individual employee and the organisation,
- creation of atmosphere and organisational culture that are favourable for learning.

Learning from one's own mistakes, availing of experience, and constant learning should be composite parts of a learning organisation. The concept assumes the existence of an almost perfectly planned organisation, which by investing in learning achieves new phases of development and assigns itself new goals (Halmaghi, 2018, p. 102).

In Polish literature, there is a distinction in the concepts of learning organisations and smart organisations (Łapuńka & Pisz, 2014, pp. 68–79; Godlewska-Majkowska & Komor, 2019, pp. 292–293). However, in English-based literature, the aforesaid notions are usually identified with each other and are applied interchangeably (Stein & Pinchot, 1995, p. 35; Stonehouse & Pemberton, 1999, p. 131). Simultaneously, some researchers describe smart enterprises on the basis of the same indicators, data, or assumptions, such as in

the case of learning organisations, by adding modern technologies to their definitions (Schwaninger, 2001, pp. 137–140; Bone, 2017). In this paper, the English-based model was accepted, which associates learning organisations with smart organisations.

Learning organisations cannot be simply created, nor are there possibilities to design or implement them. The variables that are responsible for their creation are, among others, social and market processes, or to be more precise, the blurring division between the possible disproportions existing there. The creation of such an organisation, apart from knowledge, should be based on the pursuit of decisions taken, or cooperation undertaken aimed at attaining the common good, or even the simultaneous avoidance of possible chaos. In the opinions of R. Stein and G. Pinchot (1995, pp. 34–36), it is possible to distinguish six of the most important prerequisites, on the basis of which, it is possible to build an organisation. These are as follows:

1. Cooperation of teams. In order for teams to be the most effective and productive, they must have an assigned goal, direction, or common vision, thanks to which they will know what direction to pursue, or how not to waste the resources of the enterprise. The employee teams are in themselves the fundamental elements of smart organisations. In order to support the efficiency of teams, it is necessary to pay particular attention to the environment and the vibe of the organisation which supports the integration of the aims of the team, independent choice of the possible co-workers, partners, etc., while also rewards for the team as a whole.

2. Designing freedom. Employees should have the freedom to present ideas and creativity which is not restricted by the management board or managers of the organisation. It is important here to break away from bureaucracy and allow for the personal initiatives of the subordinates, or their vision that is derived from the synergy with the values and mission expressed by the entire organisation.

3. The universality of principles and flow of information. The creation of smart organisations is based on the accumulated values of intelligence of its employees. In order for the employees to pursue the assigned goals, they must receive clear communiqués relating to the course of action and requirements, etc. In order to inform the subordinates in a reliable manner, it is possible

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to use simple channels of communication, such as e-mails, staff meetings and others.

4. Voluntary and free-flowing networks of knowledge. Employees may create a channel of the flow of knowledge independently, which is directly from the departments, partners or people from whom they want to extract knowledge and skills. The creation of such networks is not possible in a traditional hierarchical organisation by means of imposing the creation of a network on employees and instantiation of their channels.

5. Integrated society that is full of variety and equality. The organisation and its environments make its employees understand that each of them has value and is an important individual and not just a cog in a much greater machine. Simultaneously, appreciating human capital as valuable must go hand in hand with the perception of individuality and variety. Only the appreciation of an individual who has various talents and skills at his/her disposal creates a cohesive and productive society along the lines of smart organisations.

6. Independent management based on democracy. Despite the fact that independent management may suggest general chaos and a greater number of mistakes made, this practice suggests the complete reverse of this assumption. Such a situation facilitates breaking through the organisational and business conventions by means of involving employees in management and decision making.

The first three conditions mentioned relate to the choices that are featured by freedom and arbitrariness, whereas the subsequent three refer to bearing responsibility for the entirety as the organisations, departments, teams, and employee community. R. Stein and G. Pinchot (1995, p. 35) also draw attention to the existence of a seventh condition as the foundation of a smart organisation relating to the restricted possibilities of management offered by the ruling section of the organisation. Employees should have clearly defined limits and boundaries in terms of their freedom and that of the managerial staff, while also a clearly defined dimension of the organisational justice.

METHOD

A systematic literary review (the databases of ProQuest, Emerald, SCOPUS were applied, while also resources collected in the Jagiellonian Library were availed of, including monographs and reviewed papers in leading Polish magazines) rendered an objective evaluation possible, while also the interpretation of the scientific output in the area of the sphere of management of a university, as well as a learning organisation. An additional effect was the identification of the principal areas that both determine and are related to the management of universities.

By conducting a detailed and multifaceted analysis of the accumulated references, it is possible to define the further conceptual framework that arises in the case study of the management of finances of the Jagiellonian University as a learning organisation, which constitutes the aim of this research. The case study constitutes empirical research, which provides a profound analysis of the contemporary phenomenon in the context of its real life, particularly when the boundaries between the phenomenon and the context are not clearly visible (Yin, 2015, pp. 49–51).

During the course of research, qualitative data was collected, which was subsequently subjected to analysis based on the propositions of Creswell (Creswell, 2013, pp. 201–205).

In order to identify the features of the third generation university, the Jagiellonian University applied the classification proposed by Borhani *et al.* (2020, pp. 111–123) indicating four key areas of activity:

1. Individual characteristics including academic entrepreneurs, motivations such as career experiences and faculty networking
2. Organisational resources including faculty quality, interdisciplinary research centres, nature of research, technology transfer, resources and expertise, the process of technology transfer
3. Institutional and cultural characteristics including leadership mission goals, history and tradition
4. Environmental factors including financial and venture capital availability, regional infrastructure, and environment.

The starting point of the research was the ordering and preparation of data for analysis. The validation of the accuracy of the information was conducted in several stages. At the outset, all the source materials were pored over in order to indicate their significance for the research

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process. Subsequently, the process of codification was commenced by assigning categories and grouping the sources under them. The data for analysis was acquired from chosen sources (annual reports of the university, information bulletins, reports for the Ministry of Education, and internal documents), while the subsequent step was to verify all the results with the aim of acquiring general information and reflections on the common significance of the particular information in terms of the management of finances of the university.

Following this, a detailed analysis was conducted, which was preceded by a clarification of the information acquired in the context of the previously set research questions. The aforementioned procedure increased the accuracy of the results as it connected the information from various sources and led to entering the data into specified categories in terms of the university management. The acquired results are of a flexible structure with an emphasis on the individual interpretation of the contents.

A further stage in the research was the presentation of the way of illustrating the description and topics in the qualitative narrative.

In the final stage of analysis, we conducted an interpretation of the findings. The adoption of the afore-mentioned methodology facilitated the creation of the set of recommended good practices for the future.

RESULTS

Case study of Jagiellonian University – research findings

Deliberations over the problematic issues of financing the Jagiellonian University should commence with becoming familiarised with the principal normative act that encompasses the aforesaid problematic issues, while also the general principles of the functioning of universities.

The Jagiellonian University is the oldest Polish university and was funded by King Kazimierz Wielki (Casimir the Great) on 12 May 1364. For over 650 years of its existence, the university has experienced periods of boom, implemented new reforms and created new faculties. However, the history of the Jagiellonian University has not been without periods associated with reformation, religious divisions, and world wars. The Jagiellonian University has educated

a multitude of famous researchers, scholars, writers, clergymen, and even future kings of Poland.

The university consists of 16 faculties and educates almost 40,000 students (Table 3) in 158 courses and employs almost 4,000 academic teachers (Table 4). It continues its scientific work and research together with the Medical College (Collegium Medicum), while also participating in international projects worldwide. Furthermore, the university to this very day is guided by the principle *Plus ratio quam vis* (a Latin saying, meaning "Mind before force," "The mind means more than force") (UJ, 2020a; UJ 2020b; UJ 2020c).

Table 3. Number of students

Number of students	Students of full-time studies	Students of part-time studies
1st Degree Studies	14,325	1,443
2nd Degree Studies	8,946	1,914
Uniform Master's Studies	6,817	1,667
3rd Degree Studies	2,151	
Postgraduate Degree Studies	2,289	

Source: based on BIP UJ (2020).

Table 4. Number of fully employed academic teachers

Number of academic teachers	
Professor/ Full Professor	488
University Professor/Associate Professor and Visiting Professor	593
Assistant Professor	1,560
Assistant Lecturer	657
Other	543

Source: based on BIP UJ (2020).

The Third Generation University has been built in in the Jagiellonian University (see: Table 5). Consequently, it also increased the number of highly qualified employee staff, as well as a number of international contracts and agreements.

Table 5. The Jagiellonian University is a third generation university – a learning organisation

Features of the third generation university	Jagiellonian University	Features of a learning organisation
	Four Doctoral Schools were launched: Humanities, Medical Sciences and Health Sciences, Social Sciences, and Exact and Life Sciences	Systemic thinking Personal mastery Thought models Common vision
	The University supports and deals with a wide range of scientific research, including through the Administrative Project Support Center, it is responsible for seeking and obtaining the necessary funds for the appropriate university units for future research projects.	Thought models Common vision
Individual characteristics including academic entrepreneurs, motivations such as career experiences and faculty networking	• International Relations Offices Forum (IROS FORUM) – a cooperation network associating Polish and foreign universities to, inter alia, implementation of joint seminars, projects or workshops, • Conference of Rectors of Academic Schools in Poland (KRASPS) – a conference bringing together rectors of universities authorised to award doctoral degrees, created in order to coordinate the activities of universities in accordance with professional ethics and the law, and to inform, speak and give opinions for the authorities on matters related to higher education, • Conference of Rectors of Academic Medical Universities (KRAUM) – a conference of a similar nature to KRASP with an additional aspect related to medical universities, • Conference of Rectors of Polish Universities (KRUP) – a conference giving opinions and presenting its position on matters important for the development of, inter alia, higher education. On the other hand, international networks with which the university cooperates include: • The Association of University Chief Security Officers (AUCSO) – an association of universities around the world to exchange knowledge, experience and practices related to security management, • The Baltic University Programme – a programme associating universities from the Baltic regions in order to exchange knowledge and experience in the field of sustainable development and democracy, • Coimbra Group – the group brings together universities from all over Europe in order to, among others: create student exchanges, share knowledge and experiences, and sometimes needed influence on European politics.	Personal mastery Thought models Common vision Grouped learning

Category	Description	Models
Organisational resources including faculty quality, interdisciplinary research centres, nature of research, technology transfer, resources and expertise, the process of technology transfer	University has the A+, A, or B categories in a minimum of 6 scientific disciplines. These categories have a significant impact on the management and financing of universities	Systemic thinking Personal mastery Thought models Common vision
	The educational modules in the form of entrepreneurship, changing the content of modules, and increasing workshops and informal courses	Personal mastery Thought models Common vision
	The Jagiellonian University may count on a large amount of the aforesaid subsidies, which is due to the appropriate accreditation that is granted for the research work implemented. Hence, it is possible to note that the university is strongly focused on research, which in turn is connected with commercialisation. The effects of these activities are the patents received and the trademarks on the domestic and foreign markets.	Systemic thinking Personal mastery Thought models Common vision Grouped learning
	For over 650 years of its existence, the university has experienced periods of boom, implemented new reforms, and created new faculties.	Systemic thinking Personal mastery Thought models Common vision
Institutional and cultural characteristics including leadership mission goals, history, and tradition	Priority areas of activity Sustaining and further development of potential in the field of didactics, namely: • development of university employees, • educating students in full-time studies, • developing and maintaining the university by taking account of canteens and dormitories, • execution of investments in the sphere of didactic activities. Sustaining and further development of potential in the field of research, namely: • Programmes of "Regional initiative of improvement" and "Initiative of improvement – research university," • educating students in a doctoral school, • execution of investments in the sphere of research activities, • marketisation of research findings, scientific activities and know-how, • conducting a broad perception of scientific activities. Benefits, such as scholarships, allowances, and others.	Systemic thinking Personal mastery Thought models Common vision Grouped learning

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	Investments connected with research activities, education, together with projects and research: Centrum Łukasiewicz, Sieci Badawczej Łukasiewicz, NAWA, NCBiR, NCN Maintaining IT infrastructure, research stations or equipment of a scientific and research nature, only if they have relevant significance for the fulfilment of the state scientific policies. Tasks and items associated with handicapped people, specifically in terms of ensuring them full opportunities. Undertakings and ministerial programmes. Tasks, whose source of financing is EU funds or from sources that do not involve returns.	
	Proposing a candidate for the position of rector, following the issuance of an opinion on the candidate by the College Senate – as many as half of the members come from outside the ranks of the university.	Thought models Common vision
	Privatisation, culture building, reduction of the management pyramid, and creation of an information management system	Thought models Common vision Grouped learning
Environmental factors including financial and venture capital	The CITTRU Technology Transfer Center supports and manages, among others: the university inventions base, the research services base and start-up programmes. In addition, it deals with looking for future partners and investors in these projects.	Systemic thinking Thought models Common vision Grouped learning
availability, regional infrastructure, and environment.	The university applies for increased subsidies by way of participation in the programme entitled "Initiative of improvement – research university." This programme assumes the increased significance of the university on the international scene. The requirements to participate in this include, among other things, conducting doctoral studies, a positive programme evaluation, a lack of categories B and C, while also categories A, A+ in a minimum of three scientific disciplines out of the six conducted. Participation in this programme is limited and relates to a maximum of 10 Polish colleges at the same time.	Systemic thinking Personal mastery Thought models Common vision Grouped learning

Source: self-analysis.

CONCLUSIONS AND DISCUSSION

Learning organisations have been readily described by researchers for over 60 years now. Their models and specifications are widely described and analysed. However, there is a lack of references to the concept of universities that are usually described by means of four missions and four generations that are strongly based on education, research, development, competitiveness, and flexibility necessary to react and adjust to the conditions in the changing environment. These are reliable postulates, which are preceded by many years of observation of higher education and the changes affecting it, while in a broader sense, the entire worldwide economy.

Universities can implement the third model successfully and even the fourth generation in the area of managing their finances. The aim of this generation of university is the impact and acceleration of environmental change, which are a response to the current needs of the economy. Universities should be characterised by a strategic approach, whose significance is extraordinarily important with relation to the intensifying globalisation and the significantly wider use of IT technologies. Fourth generation universities may exert a real impact on shaping their economic and social environment (Kotosz *et al.*, 2015, p. 5; Molnár & Lukovics, 2016, p. 518).

In Poland, the normative acts facilitate the increased interaction with the environment, as well as changes in the structures that may be ensured by means of the subsidies paid out and the additional programmes. Furthermore, higher level education may avail of additional sources of financing, such as profits from conducting part-time studies, or commercialisation of their own scientific accomplishments and research. This may be aided by the following: basing their structures on the concepts of learning organisations, thus based on knowledge and a departure from the antiquated structures and habits by giving an opportunity to cooperate with their environment. The changes in the educational system described are constantly ongoing and are a response to environmental, social, economic, and market changes. The case study presented is the effect of pilot research, which shall be continued in other Polish universities.

Accepted, unedited articles published online and citable.
The final edited and typeset version of record will appear in future

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WYKORZYSTANIE KONCEPCJI ORGANIZACJI NAUKOWEJ DO BUDOWY UNIWERSYTETU TRZECIEJ GENERACJI. STUDIUM PRZYPADKU UNIWERSYTETU JAGIELLOŃSKIEGO.

Abstrakt

Tło. Obecnie kierownictwo uczelni wymaga podjęcia nowych działań. W odpowiedzi na wyzwania współczesnych procesów zarządzania – budowania uniwersytetu trzeciego pokolenia – uczelnie dostosowują koncepcje zarządzania, z których dotychczas korzystano przede wszystkim w sektorze przedsiębiorstw. Takim rozwiązaniem jest koncepcja organizacji uczącej się.

Cele badawcze. Celem przeprowadzonych badań była weryfikacja wykorzystania koncepcji organizacji uczenia się podczas budowy uczelni trzeciej generacji

Metodologia. W metodyce badań zastosowano systematyczny przegląd literacki oraz studium przypadku Uniwersytetu Jagiellońskiego. Wybór tej uczelni został dokonany na podstawie subiektywnej oceny procesu ewolucji uczelni od drugiego pokolenia do trzeciego pokolenia. Przyjęcie takiej metodologii badań ułatwi w przyszłości budowanie propozycji dobrych praktyk zarządzania uczelnią dla innych uczelni.

Kluczowe wnioski. Z przeprowadzonych badań wynika, że uczelnia wykorzystuje organizację uczącą się do budowy uniwersytetu trzeciej generacji.

Słowa kluczowe: uczelnia, zarządzanie uczelnią, organizacja ucząca się, uniwersytet trzeciego pokolenia.