

# MANAGING DIGITAL CHANGE IN EUROPEAN HIGHER EDUCATION

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## Abstract

*The purpose of this paper is to reveal the concepts of how digital transformation affects higher education, introduces the peculiarities of managing digital transformation, discusses good practices and emerging challenges. For fulfilling the papers' objectives, the main research questions established are: How do higher education institutions manage digital transformation? Which are the main challenges and solutions for the digital transformation process? The research objective is realized through studying secondary data from previous studies, online sources, and reports. Therefore, the study revealed that the digital change and the tension associated with it are inevitable and facing the challenges through a good strategy and openness seems to be the right way to be followed by the academic environment. Under the pressure of current situation universities must move towards the new requirements and react to the flexibility and inquiries of the external and internal digital and technological changes.*

**Keywords:** digital transformation, higher education, managing digital change, digital strategy

## Introduction

The emergency of digital change is inevitable in higher education especially in the latest worldwide context caused by the pandemic. Digital technology is changing people's lives, businesses and society as a whole. Higher education institutions are particularly affected by digital changes and evolution. These changes can certainly provide new services and innovation opportunities, but they can also represent huge challenges. This particular crossroad moment might be a good moment for turning the crisis into a development opportunity for the universities' programs.

The quick evolution and development of digital technologies contribute to changes and turning points in every aspect of the modern society. As education is one of the most important bricks at the basement of a society, digital changes in this area should keep the pace with the emerging technologies. However, this would be

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possible in an ideal situation; in the real-life scenario higher education is struggling to keep the pace and require collateral help in fulfilling the needs and demands to adapt to the new era.

Digital innovation influences the manner in which people communicate, interact, learn and work which actually triggers further change and digital transformation. The process of digital transformation involves an ecosystem of technologies like artificial intelligence, IoT (Internet of Things), big data, 5G, etc. Higher education institutions are particularly affected by the continuously evolving technology and the need to create a synergy between technologies, teaching/learning methods, students' preferences and needs.

Managing these the digital changes in higher education becomes a real challenge because universities as public institutions are much more limited by financial support and public policies in this regard. However, for digital success, the right balance and 24/7 connectivity among students, academic staff, and department are the key elements for staying relevant. In the digital age, the expectations that students have from their universities have changed. Nowadays, new challenges and opportunities create incentives for adapting the teaching methods, the ways of learning, and researching.

In the current paper I will seek to answer to the following questions: *How do higher education institutions cope with / manage digital transformation? and Which are the main challenges and solutions for the digital transformation process?* The goal is achieved through studying the secondary data from previous studies on the topic, online sources, articles, reports and statistics.

## 1. A conceptual framework of digital change in higher education

The involvement of digital technologies in higher education framework is lately in the spotlight of many stakeholders. It is particularly difficult to change universities because they are resistant to change. Managing change in universities (in this case a digital change) is perhaps the most daunting challenge faced by senior managers in today's organizations. The integration and innovative use of digital technologies in education is a policy priority in the entire European Union. There is a wide range of measures to support the digitalization of education, which is also a key priority for several Europe 2020 pilot programs, in particular for the skills and jobs agenda, youth on the move, the digital and innovation agenda.

The European University Association (EUA) launched in 2020 a project that is designed to create a self-reflection tool which will help higher education institutions from Europe to develop and improve their approaches to digital transformation (The European University Association, 2019). Also, regarding the digital matter, the European Commission settled the new "Digital Education Action Plan 2021-2027" which emphasizes the Commissions' view for high quality, engaging and accessible education in European Union (EU). The plan represents a call to action for stronger collaboration at the EU level and enhanced two major

aspects. First of all, the need to learn from the current experience with the COVID-19 crisis, which forced using technology at a very large scale. Secondly, education system needs fit to the new digital era (European Commission, 2020). Therefore, the recognition of the high need and importance of the information and communication technology (ICT) in higher education environment is increasing also with national and international European policies.

In order to be as effective as possible, digital educational development should correspond to a strategy, clearly described and supported by a plan developed by the academic environment. According to the survey conducted in 2017 by Ernst & Young, with universities and their students, 93% of respondents believe that digital evolution will have a significant impact on universities over the next decade. The same representatives of the institutions argue that universities adopt digitalization because this contribution to learning more efficient and better results from students (EY-Parthenon, 2017). Navitas Ventures performed in July 2017 a study through which he collected data on digitization and transformation into higher education. The participants of the study were leaders, facilitators of change but also of those affected by digital transformation in universities (26 leaders of Navitas partner universities, 100 students from Navitas partner universities, and 42 start-ups in education). The purpose of this study was to obtain information on the perspectives of the groups target, with reference to digital change - opinions and experiences. At least 50% of the participants of the study expects the “traditional university” model to undergo major changes by 2025. There was generally a consensus regarding the importance of using technology to improve student experiences through automation, digitization, integrated processes, etc (Navitas Ventures, 2017).

The academic environment should manage the necessary changes by having a formal plan or strategy that sets out (Bates, 2015):

- motivation for change;
- the objectives or results achieved as a result of these changes (for example, students with specific skills and competences);
- actions that will support the changes (for example, funding for new course design, reorganization of services);
- a financial strategy to support planned changes;
- a way to measure the successful implementation of the strategy.

The true potential of technology can be harnessed by expanding human capabilities for teaching, learning and research. Digital learning technology is a change by itself, so it is not the organizations that change, but the stakeholders: employees, managers, colleagues, academic staff and students change through the way they work. Change management is a combination of processes, activities and approaches that guide the people of the organization from the old way to a new way of training and learning. This process focuses on attitudes and behaviours, and the goal is to win the battle for the “hearts and minds” of all people in the organization (Brandon, 2007). The introduction of a new way of learning involves a change in culture, habits and requires a change in resistance to new technology and learning methods mainly from fear of risk. The field of education is a prime example of how



some organizations may be reluctant to embrace change. Implementing change is primarily process-based, inclusive and always two-way, an approach that does not prevent individuals from thinking and acting differently and focuses on developing and strengthening new individual and organizational attitudes and behaviours. The administration, faculties and other members of the institutional staff often choose to remain in their comfort zone, which makes it difficult to introduce their new technologies or skills. But staying immune to change is no longer an option. In order to evolve at the level of the institution, everyone must be “on board” and be ready to face the much-needed change (Spear, 2019).

The traditional higher education structure has been maintained in the geographical and cultural boundaries of nearly a thousand years and the social, economic and political changes of hundreds of years. Some higher education officials believe that relying on traditional hierarchies is outdated because of the digital evolution and unmet challenges by today’s higher education (Fishman, 2014). Organizational leaders are managing change in various ways. Access to data anywhere and anytime made the business structures more transparent and, in some cases, democratizes decision-making, thereby ensures that the employees, faculty, and leaders have a say. Leaders at the University of Surrey, King’s College London, and the Open University believe that this approach can help the academic environment to be more inclusive, develop future strategies and improve the graduation ration (Educase, 2018).

A change implementation model is based on three important phases that form a continuous cycle: information, involvement and integration. Institutions need to understand that it is not enough to have the right content, the right design and the right technology. To ensure success you need to pay attention to student involvement, staff motivation and dynamism of organizations. Many authors have put the spotlight on higher education and the need to change and adapt. Hundreds of pages discussed the reimaged university and the critique to higher education digital drawbacks (Marshall, 2018; Selwyn, 2017). Whereas when facing the COVID-19 emergency for remote learning a lot of universities were caught barehand. Jisc, the UK digital education organization, displayed the results of a current report on the students’ digital experience insights. The study revealed that three main focus areas needed to be addressed: teaching and learning design, digital access and inequality, students’ digital capabilities (Jisc, 2020). Regarding managing and leading the change the Digital Clarity Group conducted a study which revealed that one of the key success elements for digital transformation in higher education sector is to develop digital leadership. The study reveals that digital leadership is one of the biggest gaps nowadays and addressing this element should be on the top of the list (Elliot *et al.*, 2016).

Digital transformation refers to changing from a traditional (paper-based) university to a one based on digital instruments and it affects all the areas of academic environment. This is does not only refer to equipment related



transformation but one that includes the management process and the right management model.

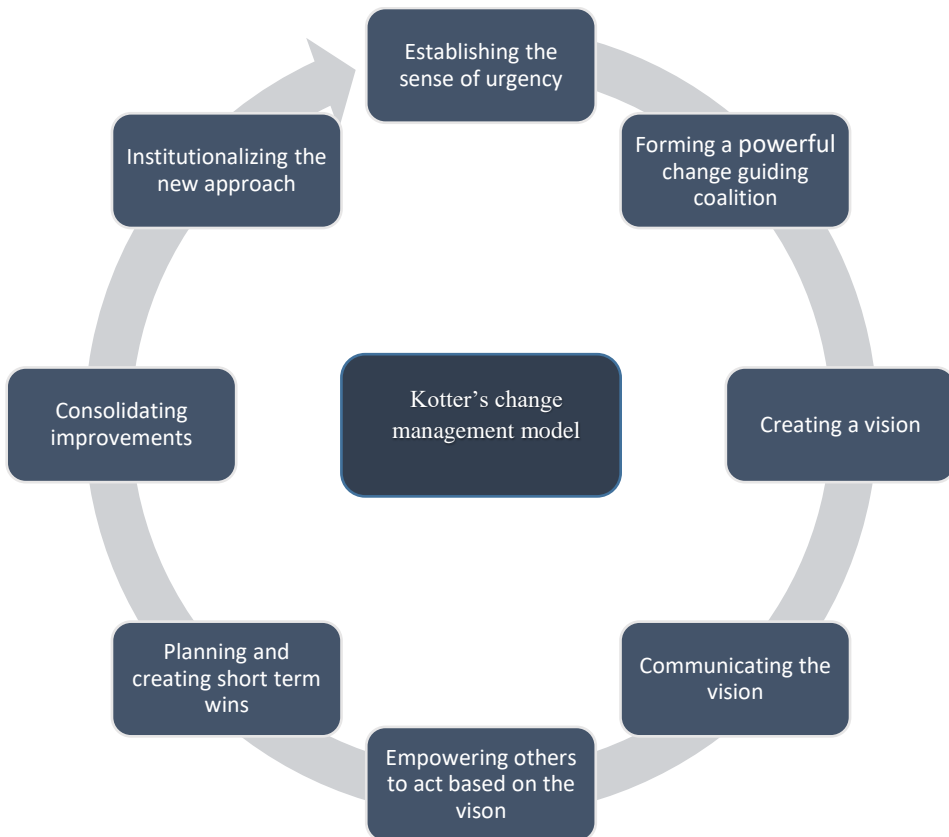
## 2. Managing digitalization in higher education

Digitalization in higher education is a process of change that makes the institutions get out of their comfort zone as a result of the processes that need to be changed or adapted to the new technological reality. In order to manage this the institutions need to choose and adapt a change management process. This is an inevitable process as long as they want to remain relevant and support their growth and viability.

One of the most cited methods for an organizational change in the literature is the Kotter's model (1996). This model is used on a large scale in many industries and environments, including higher education. Keyser Wentworth *et al.* (2020) provided in their research an example of how the Kotter change management model can be suitable and appropriate in implementing change regarding a variety of topics and areas within higher education institutions. The authors' practical approach was regarding implementing an evaluation system that came to replace the older, limited one. Kotter's model (Appelbaum *et al.*, 2012) is built on eight steps or stages as presented below.

- I. Establishing the sense of urgency – in this phase the urgency is set by the element/factor/process that requires change. In this case, the academic process that needs to be changed to keep the pace with the technology evolution. This could be triggered from the internal or external environment and the responsibility of the institution's leader is to communicate the need to the stakeholders.
- II. Forming a powerful guiding coalition – the change will barely succeed if it is conducted by one individual, therefore a guiding team is required. In a higher education institution this team could be formed by head of departments, director of information technology, responsible for teaching and learning advancements, etc. This team should act as an initiator of the change process and work on setting the vision, the strategies to be applied and plans.
- III. Creating a vision and strategy – a vision is very important in clarifying the direction/path of the change in place. On the other hand, the strategy defines how the vision will be reached. Specifically, in this case these are higher education digital strategies and digitalization plans. Usually higher education professionals do care very much about the mission of their institution.



**Figure 1. Kotter's model for change management**

Source: Appelbaum *et al.* (2012)

Therefore, Kotter's enhancement on developing a vision for the change process can create an emotional attachment.

I. Communicating the vision – it is a very important step for delivering the vision to the team and it should be focused, flexible and desirable.

II. Empowering others to act based on the vision (also called eliminating obstacles) – in this phase the implementing process starts and the plan established is on moving wheels.

III. Planning and creating short term wins – this is an essential step in the process because it enhances the fact that the change is worth it.

IV. Consolidating improvements – this step is important for the institution to evaluate how far it has come with the implementation of the strategy and how much it has achieved. However, this is not the moment to celebrate entirely the victory, it is the moment for assessing the achievements and to focus on future wins.

V. Institutionalizing the new approach – this is a very important phase because at this moment the new way of doing things should be the new normality. When institutions start for example recording classes and make them available for later access this should not be only a solution for extraordinary events (as the pandemic) but a normal way of conducting the classes.

For managing the digitalization process each institution needs a well-established digital strategy. This represents the “bible” of the change process. In the private sector there is a saying “digitally disrupt or be digitally disrupted”, based on the latest worldwide pandemic situation this applies very well also to the higher education sector. Therefore, universities need to align to the modern digital trends. In order to take the maximum benefit from the technological evolution higher education institutions must use digital tools in their daily activities and for their own advantage. Using but most important implementing digital technologies in all the academic aspects takes a lot of time, effort and resources. Some of the challenges that might be encountered alongside this process are listed below:

- Cultural drive: Universities are mission-driven public organizations, which operate under the goal to deliver prepared workforce (contribution to the society) and of course to evolve in by gaining knowledge in the scientific area. Their basic goal is not product/service development that will create profit for the shareholders, therefore the decision-making process does not look the same as in a commercial organization. Usually in higher education situations the decision-making process is slow, drawn back by complex hierarchy with slightly different interests sometimes. Kezar and Eckel (2003) stated in their paper that changes of any kind are not successful unless they are aligned with the cultural aspect of an institution. The institutions that did not have these two elements aligned experienced difficulties in the process.
- Funding limitations: Higher education institutions have state offered budget and they operate under a certain budget uncertainty as they depend on these public funds. This dependency creates a certain lack of control and risk-averse culture. Therefore, investing in digital technologies, new infrastructure, modern teaching technologies, technology enhanced learning methods might be perceived as risky movements. Universities would rather invest in projects that are small in their scope but have a tactical approach. They are continuously seeking for best efficiency at available costs.
- Staff risk aversion: This is specific not only for higher education and it means the fear for new and the lack of desire to change the actual well-established habits. When talking for example about the course design, professors have already prepared, and well settled method and it certainly takes time and effort to adjust these to the new digital requirements. Also, leaving the comfort zone it takes courage and willpower which certainly needs to be promoted by the institution.
- The multi-stakeholder context: It is obviously time consuming and it required a lot of effort to understand the needs and desires of different stakeholders and to bring them all on a common ground with respect to the digitalization process.





An important factor that helps to fulfil the managing aspect is the change strategy which is part of the management model of change. This is like roadmap for the institutions that takes it from the current state of business to a desired future state. The strategy is not only a template that shows how to proceed, but also a tool based on which the course of activities is built. Basically, the strategy states where the institution currently situated, where it is going and how it is going to get there. Higher education institutions are activating in a very dynamic and competitive environment and most probably the forces of change will accelerate some processes over time. These forces of change however are coming from two sources internal and external one.

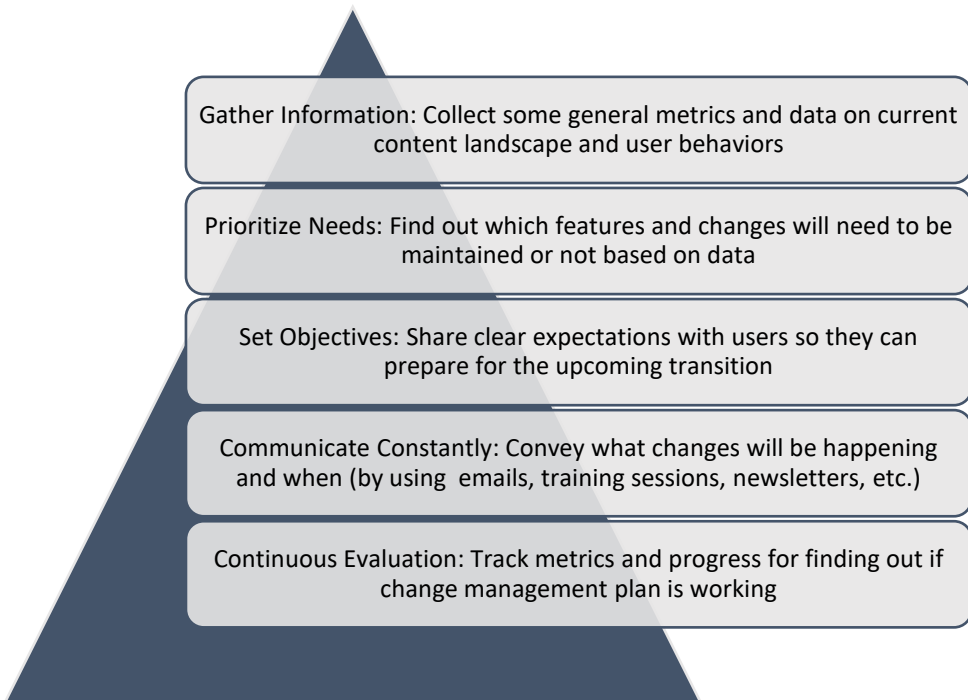
There are various ways in which digital change strategy can be developed, including top-down and bottom-up processes for setting general goals, in a university it can be done also through an annual academic planning process in which departments / faculties must present their plans for the next three years, including the necessary resources, based on the fulfilment of the general academic objectives established by the university. In such a planning cycle, it is important to include objectives to meet the needs of learners in a digital age as a “target” for departments when developing their plans. These plans should indicate not only the content to be covered, but also the teaching methods to be used accompanied by a justification for them (Bates and Sangra, 2011).

Regardless of institution size, every university should create a change management strategy for deploying their plan and drive its adoption to ensure a smooth transition to their new technology. According to Brazeau (2020) the change management in higher education institutions has a five-step structure as in the figure below. DePaul (2016) highlighted some important elements to consider in the process of managing change within a university:

- Organizational culture of the institution - the culture of a university can encourages or inhibit change;
- Accepting discomfort - any change creates discomfort; it is a natural tendency to resist change;
- Making allies - it is very important in the process of change to have its supporters, people who will be enthusiastic about the process, those who will be considered promoters of change;
- Continuous communication - a strategic and tactical approach to communication is essential for managing expectations, asking for feedback and informing others;
- Time management – considering the available time sets the tone of the whole project;
- Anticipating obstacles - change management processes are usually derailed but in avoidable ways. Most change management programs do not consider the emotional component. Change causes fear, it is completely normal and completely natural, but framing it differently can turn fear into enthusiasm.





**Figure 2. Five steps of an effective change management**

Source: Change Management in Educational Institutions During COVID-19<sup>1</sup>

### 3. Digital transformation in higher education

According to Reis *et al.* (2018) digital transformation has three important anchors:

- Technological aspect – the use of new technologies, like social media, tablets/mobile devices, online learning materials.
- Organizational aspect – which triggers the change of organizational processes or the creation of new ones.
- Social aspect – the human related influence, such as user experience, openness to change or resistance.

The use of digital technology in academic environment is related to different levels of digitalization. Meaning that technology could be used universally (Office tool for example), they also could be used to support the traditional methods for teaching, learning and for enabling new and innovative ways to do things.

Digitalization and globalization have triggered major challenges for teachings and learning processes. It is particularly difficult to predict how the current students

<sup>1</sup> available online on <https://www.skysync.com/>.



will advance on the future labour market. Therefore, in this whole process of transformation and change the academic environment is in high need of multi-disciplinary skills, collaborations with other parties and the supreme ability and analyse, gather insights and deliver solutions for process improvement. The trends regarding change in higher education do relate to several areas: the course content, the study medium or location, the degrees of qualification and interdisciplinary research.

Digital transformation was for sure on many universities' agenda, but the current pandemic situation triggered the acceleration of the process. The new teaching methods, assessment and evolution procedures will suffer changes. The academic programmes will be adjusted to include a certain digital content and increased use of *open educational resources*. The trainings / professional development for academic staff on digital skills should not be neglected this is particularly necessary in order to achieve and ensure higher quality of the courses. Therefore, the educational content will add to the actual content additional, distinctive features in order to compensate for the lost or very few campus experiences. One of the important tools in the course design is the assessment mechanisms which also will be adapted to the new environment. Given that face to face collaboration is missing the emphasis will fall on collaborative activities between students and will encourage the exchange of practices. The direct beneficiary of this will be the students who will have a large palette of options to choose from and an educational system enhanced with distinctive features. This will support the internationalization of students that currently was shut down because of travel restrictions, but which could be revived through digital solutions. New educational platforms and collaboration channels can support social connectivity and establish good collaboration between academic and also non-academic members.

As many other systems the Romanian education system was shattered as it is still difficult to quantify how much it is affected by the crisis caused by COVID 19. The crisis meant many challenges, as well as opportunities for personal development. What is certain is that Romanian education has been subjected to the same transformations, adaptations and challenges, as education on the entire planet, affected by the pandemic. The main challenge was the relocation, practically overnight, of the entire educational process (with its specific infrastructure and logistics), respectively the transition of the university activities into the online environment. Students and professors had to figure out the puzzle of the institutional communication and collaboration of the virtual version of teaching and learning.

The National Association of Student Organization from Romania (ANSOR, 2019) have prepared in 2019 a proposal report for the national authorities in which there are significant inputs regarding digitalization. Therefore, students' inputs and signals are available and higher education system is aware of their main "customers" desires. According the report digitalization has a number of components that would facilitate an important part of processes of the current education system and would improve the lives of students. One of the most important issues under discussion is



the complicated bureaucracy (actions needed regarding facilitating the processes of enrolment in college, accommodation, payment of fees, etc). Moreover, digitalization can be seen as a mechanism for implementing student-centered education, which also facilitates communication between students and professors.

Higher education institutions have to harmonize and strengthen their strategies and infrastructure for blended learning, as further on a great part of education processed will continue to be disseminating online, as according to the official data the face to face courses will most probably be back starting with March 2021. In this circumstance the blended or hybrid teaching and learning is a new normality offering a certain flexibility to the direct stakeholders. This new flexibility will create new learning pathways and give the students the possibility to have an influence on their own curricula, which can enhance lifelong learning. Students will also have the possibility to choose from a greater variety of course content. The creation or the insertion of more digital content in the teaching methods will allow to have reusable repositories of educational content, which could be used and revised by students whenever they need. Through accessibility to educational resources distance will no longer limit students to enrol or participate to classes from the entire world.

The academic staff will have to focus on their digital skills and the process of transformation will not leave apart this aspect. They will need to gain more confidence for using new platforms and tools by using an asynchronous approach. The focus will be on students' experience, their emotions and the affective dimension of learning and teaching in order to bring some human experience in the entirely digitalized world. There are many opportunities to improve the quality of education. Institutions have encountered many possibilities to go digital in the past but not until now did they feel the urge to do so. Even after the pandemic crisis will be a matter of the past universities will need to have in their portfolios blended, formal, informal and virtual elements. After this crisis situation the demand for disciplines like epidemiology, biology, genetics might encounter an increase in demand, while others which are currently related to a higher unemployment might decrease. Therefore, labour market disbalances are inevitable, which is also a matter of thought for universities.

## Conclusions

The digital transformation and all the management challenges associated with it are inevitable, but this could be faced through a good strategy implemented by the higher education institution. Openness to the new digital era is the key to the strategy development. Along with the evolution of the technology, the digitalization of the educational programs and infrastructure is a must. Therefore, universities should move forward and adapt to the new requirements triggered by students demands, digital evolution and industry development of course. Implementing digital change in higher education requires a long process of planning and involves different stakeholders. The Kotter's eight-step model is a very useful tool for driving the transformation in the higher education environment. It determines the institution to clarify its direction of change and set a well-established plan. However, each



organization can create its own successful organizational change starting from Kotter's model and derive similar models, more personalized, adjusted or tailored to their needs. Both administrators and business practitioners can learn the lesson from the emergent models in digital transformation, whereas higher education can question structural, contextual, and temporal inefficiencies that are specific to higher education's ability to manage change more or less effectively.

Managing and implementing change in universities is certainly a process complex and challenging. Higher education institutions can cope with all changes and can manage change, even if it can be extremely difficult because of the large number of people involved, procedures, rules and socio-economic changes. Universities will undoubtedly become more sophisticated due to the process of change digital, but at the same time simple principles will remain the basis. The learning environment will be focused on student and digital evolution with new technologies - indispensable support for teachers. Therefore, the first step in adopting a change model is to analyse the environment and emphasize the need, afterwards develop a plan by involving the main stakeholders and rising interest of participation by contouring their benefits.

A digital plan and strategy are not easy to implement in an academic environment, which is sometimes a rigid one, but these represent the pillars in a change management set-up. Starting from this premises the institutions can then trigger the transformation by going through the steps of the plan but not until it emphasizes how it will address obstacles and risks. Following the idea, challenges are of course many, starting from the cultural divide to the financial constraints, employees resistance, lack of good planning and public policies, these are important elements that can trigger the "derail" of the change process.

The basic and main responsibilities of a higher education institution is delivering knowledge and preparing the specialists for the labour market, and the way they chose to fulfil this is what differentiates them. With the growing offer for open source platforms and tools, the demands of the new generation of students and the digital evolution that will only move forward to even more high tech possibilities, higher education system cannot afford to stay behind. And the way they chose to manage this process is crucial, as a good management means moving a step closer to success. The adoption of digital innovation in higher education is a matter of recognizing the importance of generating value to the students, which are the main consumers of education.

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