

# The Digital Transformation of Higher Education: From INTALL Project Results to Practical Implications for the *New Normal*

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## **Abstract:**

The Covid-19 pandemic has shaped every area of our lives in few months, and the consequent effects at personal, professional and organisational level are unprecedented. Specifically, as a consequence of this forced change, Higher Education systems have registered the necessity to transform learning and teaching processes to provide responses to new learners' needs. The aim of the paper is to present the output of a comparative group discussion of Intall project, and to show how it supports reflection on some practical implication for the *New Normal*. Reflecting on the output obtained through a comparative group discussion on 'Re-thinking teaching and learning during the pandemic Covid-19', the paper wants to present the main issues that the education systems have been facing during the pandemic, and to provide insight into the practical implications for the *New Normal* in higher and adult education. This paper provides some contributions to the debate on teaching and learning in higher education for the *New Normal*.

**Keywords:** Covid-19; Higher/Adult Education; Learning; *New Normal*; Teaching

## 1. Introduction

The outbreak of Covid-19 has upended life (EdSource 2020) and caused an enduring threat to our educational institutions from kindergarten to tertiary level and day by day exacerbated the teaching-learning. It has required faculty and students globally to respond to an unprecedented challenge: to transform rapidly their traditional face-to-face curriculum to distance learning formats. Teachers and students felt compelled to embrace the digital academic experience as the *summum bonum* of the online teaching-learning process (Lederman 2020). Many students have been at home and they have been required to maintain their academic work under completely different circumstances and demands than prior to the annulment of face-to-face instruction at university. In different ways for students and faculty the virtual classroom and its associated activities has become the anchor to normalcy in their dramatically changed lives.

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While the shift from face-to-face to online teaching and learning seems like a temporary adjustment required by the circumstance of the pandemic, the catastrophic event of pandemic has played the role of a ‘change agent’ into the ecological university system. In fact, it has forced the higher education systems to react and try to achieve a new equilibrium, waiting for the things to return to normality.

Despite the effort made by different academic organisations to face the challenges caused by the pandemic, the delivery of learning pathways through virtual classrooms has shown quite soon the challenges related to the quality of education, faculty’s digital abilities, students’ engagement, distance teaching and learning approaches, and assessment processes as well. The mentioned weaknesses have shown how much unprepared we are and how the early universities’ reaction was interpreted as a temporary adaptation.

The named issues were the main themes of discussion for the participants in the comparative group work, during the intensive programme that was the heart of the Intall project. They belonged to three different countries: Brazil, Serbia and Nigeria.

The initiatives of teaching and learning adopted by the three higher education institutions (HEIs) of the different three countries, as reaction to the Covid-19 pandemic, were the units of analysis during the sessions of a comparative group work-2021 of the Intall intensive programme, that was led by two Italian moderators. The comparative approach used for the analysis of the three cases, provided a meaningful picture of the main issues connected to the online teaching and learning during the pandemic. The paper, after presenting briefly the process of the analysis carried out by the CGW, focused on the topic of ‘Re-thinking teaching and learning during the pandemic Covid-19’, sought to respond to the following research questions: (i) What are the main challenges that Higher Education Institutions (HEIs) have faced during the first year of pandemic? (ii) What are the main practical implication for teaching and learning in higher education in the *New Normal*?

## 2. Teaching and Learning in Higher Education During the Covid-19 Pandemic

The Covid-19 pandemic has caused never-before-seen global challenges for learning and teaching processes in higher education, generating impact on individuals and on the contexts, and heightening the importance of online teaching and learning (Paudel 2021). It was an unpredicted event that has rapidly accelerated the digital transformation of education globally, and many universities have had to make a lot of changes to their teaching styles, research process, and relationships. For many universities, the most substantial change has been the shifting from fully residential of providing instruction to fully online, or hybrid learning environments (Mseleku 2020). This, inevitably, affected many aspects of higher education systems, such as:

- The *spaces of learning*: universities were constrained to move from physical contexts to exclusively online setting for delivering the different courses. In general, distance learning is a free option or, in some universities, is just a part

of the learning process, while during the pandemic it has become an essential determinant for maintaining the activity of universities (Coman et al. 2020). HEIs were obliged to guarantee the continuity of the educational processes but taking in account the governmental measures aimed at avoiding the spreading of the virus. The shift from face-to-face to online teaching required, in the different HEIs a substantial transformation related to routines, the structural organisation (with attention to the ways of using spaces, resources, tools), rules, responsibility, and policy. It was a process that required HEIs to think about themselves in a new way. Indeed, this forced transformative process has showed their levels of readiness for facing the unpredicted changes, creativity, proactivity, and reaction as well. The pandemic has opened Pandora's box and has shown the strengths and the weaknesses of the different HE systems.

- *The way of learning:* distance learning has offered students a flexible format for learning, through both synchronous and asynchronous lessons; it has facilitated the access to learning and content to a larger number of learners, and it has offered them the possibility to control their time according their needs and goals (Yusuf and Al-Banawi 2013). The online learning is indeed practical because it can be used anywhere and anytime (Özyurt et al. 2013; Nakamura et al. 2018), but it has presented some disadvantages for both the HEIs, and for some students. In fact, HEIs that has limited experience of e-learning or few e-learning resources have met difficulties, especially, when teachers haven't knowledge of how to use online applications (Zaharah and Kirilova 2020). For many students the online learning hasn't been a free choice, but an enforcement that required them to change their expectations, their way to follow the lessons, to interact with peers and teachers, to experience the academic learning. In some cases, the lack of physical distance, has caused the decrease of students' motivation, and the rise of feelings of isolation due to the lack of physical presence of their peers with consequent impact on their ways of learning. In fact, they needed to become more self-directed in the use of technological tools for learning, for interacting with others, and, sometimes, for receiving and providing feedback from/to peers or teachers.
- *Teaching methods:* during Covid-19 pandemic, distance learning has also represented a challenge for both those teachers who hadn't so much familiarity with technology, and those who usually believed that learning occurs only in the classroom by using traditional approaches. Therefore, in many situations, distance learning highlighted not only the lack of teachers' digital skills, but also the lack of online teaching design skills. In fact, face-to-face teaching methods and strategies were often just transferred to the online settings, without thinking of the development of an accurate integration of pedagogical, technological and content knowledge (Koehler and Mishra 2008, 2009). The effective integration of technology in a specific educational and training context should be based on a careful alignment of content, pedagogy and technology. This process assumes that teachers who want to integrate technology into their teaching practice must be competent in all three domains (Koehler et al. 2013).

- The *interaction between teachers and students*: the communication between teachers and students has been, in many situations, a real issue during the online learning in pandemic time. In fact, the lack of using proper teaching strategies to give students feedback or help at the right time while their learning process has affected their educational relationship, participation and motivation (Irfan et al. 2020). The complexity of teacher-students interaction has often been due to, also, the lack of teachers' experience in using E-learning and the sudden transformation required of their teaching style to the new conditions; the lack of care to the equilibrium between online courses that require taking in account students' spending hours in front of a screen, and non-digital activities. Reducing the complexity of distance interaction would have required teachers to taking in account of the pandemic effects on student's emotional status, providing them with support throughout the process of learning, managing and facilitating their collaboration and interaction with peers and teachers (OECD 2020). In some cases, further challenges that have made teacher-student interaction more difficult were related to accessibility and connectivity. They are aspects that, sometimes, have increased the difficulty of interaction and the social distance with effects on the students' sense of isolation.

All the aspects above mentioned show important practical implication for HEIs in the *New Normal*. In fact, the construction of virtual classes similarly to a traditional face-to-face course, the lack of teachers' digital skills and distance learning and teaching pedagogical knowledge, the unpreparedness of some HEIs to face transformative events, the lack of the proper digital resources to respond students' needs and goals, have arisen different important problems that need to be considered. They refer to the development of learning contexts that can combine distance and face-to-face teaching; teachers' professional development that should include the development of their digital skills, the use of innovative teaching methods focused not on instruction but on learning, and aimed to facilitate students' participation, motivation, learning and engagement also during distance learning, the use of strategies for providing students with proper and continuous formative feedback, the use of interactive strategies aimed to make students feel part of a learning and welcoming environment also in virtual class. In other words, the distance teaching and learning experienced during pandemic pressures HEIs to shift from a traditional education based on teacher-centered perspective to a student-centered approach (Gallie and Joubert, 2004; Coman et al. 2020).

### 3. From the Comparative Group Work Results to the Implications for the *New Normal*

In this section, there were presented the topic of comparative group work (CGW) discussion, the related and involved contexts, the methodological process that supported the international group during the implementation of the

comparative approach, but the main attention was focused on the results of CGW, because from them emerged different practical implication for HEIs.

### 3.1 The Comparative Group Work: Context, Problem Discussed, and Methodology

#### Context of CGW

The comparative group work named *Re-thinking teaching and learning in higher and adult education during COVID-19*, of which the author was one of the moderators, was part of the intensive programme of Intall project during 2021.

In general, the programme has always foreseen the comparative groups work made of people coming from different countries, and during this last experience, in the mentioned group the 4 participants came from:

- Brazil (State of Rio Grande do Sul) (1);
- Nigeria (University of Lagos) (2);
- Serbia (University of Belgrade) (1).

The three countries represented an interesting context of analysis, due to their differences in terms of culture, geopolitical positions, their resources, and contexts of teaching and learning.

#### Problem Discussed

The CGW discussion was focused on the outbreak of Covid-19 that has required faculty and students globally to respond to an unprecedented challenge, transforming rapidly their traditional face-to-face courses to distance learning formats. The rapid shift from the traditional classroom engagement to virtual learning has also exposed the gap in policies and practices to support online teaching/learning. There is no doubt that the pandemic will affect the future of teaching/learning. Therefore, the main question has been to understand to what extent the unpredicted event will shape teaching and learning processes. This requires innovative methods, especially, they need to be tailored on online education. The pressure to migrate from the traditional face-to-face mode to online teaching was faced in different ways within the diverse contexts, and the level of success of this transition depends on several factors. The attempt to identify these factors opened up dialogue and comparison among the representatives of the three countries about their Higher Education online policies and practices.

#### Methodology

The main purpose of CGW discussion was to identify and compare in which way the HEIs in the different contexts faced the challenges generated by the pandemic, and what are the factors that have determined the different modes of managing the unpredicted teaching and learning changes.

The CGW carried out the discussion according to a comparative approach that focused on the context of comparison useful for answering the specific research questions as required by comparative adult education research (Egetenmeyer 2017). The comparative methodological perspective foreseen to analyze the three case-studies through different phases: (i) during the juxtaposition phase, the group members described the different countries' situations taking in account the purpose of discussion; (ii) the following phase involved participants in the identification of three comparative categories: digital literacy, political and economic issues, attitudes towards online education (referred to students, teachers, family); (iii) the next phase required to compare the three categories identifying similarities and differences among the three HEIs of countries involved; (iv) the last phase involved the group members in the interpretation process aimed to explain the reasons of differences and similarities among the HEIs.

The CGW was involved in this comparative analysis for one week, and at the end of the process on the basis of the three selected comparative categories, the group members presented the main results of CGW discussion, and comparative analysis and interpretation.

### 3.2 Main Findings of Comparative Group Work

In line with the purpose of the CGW, and on the basis of the three selected comparative categories the long process of analysis led the group members to present the results related to the main challenges that Higher Education Institutions (HEIs) have faced during the first year of pandemic. Specifically, the three different systems reacted similarly or differently due to different factors:

- the availability of resources and funding;
- the distribution of resources among states of the same countries;
- the political priorities;
- the level of the government's attention to educational issues;
- the level of technological access and internet connection;
- the level of infrastructure development;
- the level of prompt political solution and strategies for facing the teaching and learning challenges caused by pandemic;
- the level of individuals attitudes and dispositions forwards changes, innovation, and the use of technology for learning and teaching.

To respond the first research question 'What are the main challenges that the Higher Education Institutions (HEIs) have faced during the first year of pandemic?'. The results that can be summarised according three contextual levels of comparison (Fig. 1).

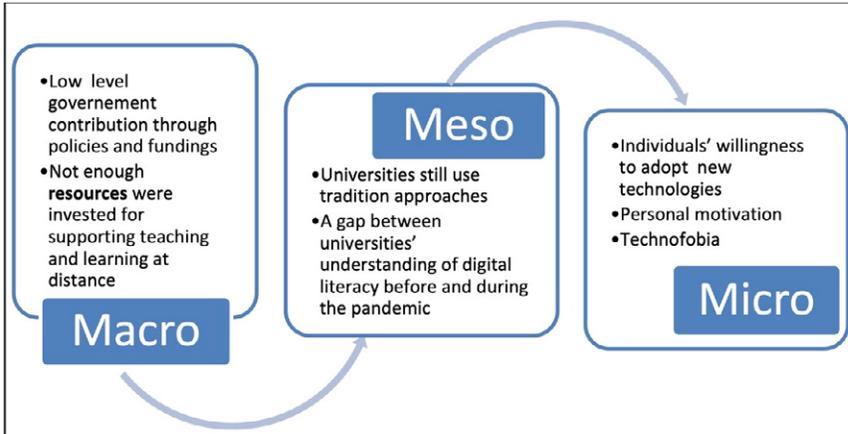


Figure 1 – The main issues faced by universities during the pandemic (own illustration).

#### 4. From Intall CGW Results to the General Issues and Consequences Emerged during the Pandemic

The three main issues highlighted by the CGW-members and identified also in other studies carried out during pandemic (e.g., Dubey and Pandey 2020; Jena 2020; Mishra et al. 2020; Williamson et al. 2020; Pokhrel and Chhetri 2021) are related to: (i) the risk of exclusion and inequality in education; (ii) the lack of resources and educational policies; (iii) the risk of a low level of education quality.

The pandemic has not increased only the differences among the HEIs according their characteristics (old, new, urban, rural, in the North, in the South), but it has also sharply increased the inequality among countries and enforced its links with mutual constitutive factors such as gender, culture, race, and their geopolitical position.

The lack of proper infrastructure sharply increased the difference between poor and rich countries or institutions, and the phenomenon of educational exclusion. For countries and HEIs, having effective infrastructures means to guarantee home internet access and high-speed connectivity to universities and schools, high-quality of devices, the quality of digital content and resources for the quality of interactive lectures, an effective feedback and assessment for students during their learning path.

A further issue connected to the pandemic event has been the risk of a low quality of education, above all where HEIs haven't reacted immediately, because of the lack of appropriate policies and educational priorities, the digital unpreparedness of academic staff and students, the lack of resources and their investment in providing the proper responses to students' educational rights. These are factors that have affected the construction of effective online learning environments that should always be, in any setting (face-to-face, online, blended, hybrid), focused on the students, and on the quality of content and processes aimed to ensure the learning outcomes for students.

## 5. Practical Implication for Higher Education Institutions in the *New Normal*

The digital transformation of higher education during the pandemic has not only shown the relevant learning and teaching issues, but it has also generated consequent implications for HEIs in the *New Normal*. In fact, the pandemic, playing the role of Pandora's box, has brought to light issues that probably were hidden.

The risk of *inequality and exclusion* in education is a phenomenon that has always existed. Approximately, 264 million children and adolescents are not in school (UNESCO 2017) and this unpredicted pandemic event made this situation further worst. In fact, it highlighted the existing problem and also expanded it, involving a larger number of individuals. Consequently, the first implication of this first big issue for HEIs is related to the necessity to develop a new higher education digital culture based on inclusive education. Thinking of inclusive digital, HE transformation requires to rethink the ways to create contents and products for learning. This includes the development of: (i) open educational resources (OER), for which both teachers and students can be prosumers (producers and consumers); (ii) reusable open resources made of content and learning materials that can be recognised as effective and gain credit in any academic context; (iii) free spaces of sharing teaching and learning practices, as way to support also the harmonization of HE courses, as required by Bologna process (1999); (iv) an Open Learning Students Community formally recognised by the EU and by all the other universities in the world that want to take part, providing digital resources, exchanging content, strategies. It could be an useful organism to support students in each country and in the world, above all in those situations in which unpredictable events threaten their educational rights.

The issue related to the *lack of resources and educational policies* creates a second implication for HEIs related to the importance to develop a flexible political culture based on the ability to react and define educational priorities in emergency situations. This requires for HEIs to develop their proactive and creative attitudes, oriented to guarantee students' learning and professionals' support in any situation. Developing these attitudes in the digital era means for HEIs to be ready for changes, for promoting institutional priorities and policies that can guarantee the equal access to education and knowledge without leaving no one behind.

From the digital transformation of HEIs caused by pandemic emerged the *risk of a low quality of education*. Indeed, this issue outlines a third implication for HEIs, related to the importance to develop new universities' staff distance competences and new learning and teaching pedagogies. HE digitalization during the pandemic event has questioned teaching and learning methods used. It has remarked the weaknesses of traditional approaches made of lecturing based on the delivery of content and on the passive role of students, the staff's ability to design distance courses that would take in account new variables such as virtual spaces of learning, new teacher-student interactions and relationships, physical distance, students' distance engagement, distance feedback and assessment.

Considering a new horizon of opportunities for teaching and learning, and new pedagogies has become an emergency that calls for: (i) re-thinking methods, students' and teachers' roles, levels of interaction, responsibility, and collaboration; (ii) integrating technologies in teaching and learning to pursue pedagogical goals and learning needs; (iii) developing flexible resources for teaching/learning: synchronous, asynchronous, Hyflex, videos, simulations. Creating free diverse typology of resources allows HEIs to respond to all students' goals with different needs, and diverse resources available.

Responding effectively to these implications means that HEIs would play a relevant function in the development of some sustainable Goals, in relation to the reduction of inequality among individuals of different countries (*Goal 10*); the innovation through new free infrastructures of learning that can overcome the barriers of low individuals' incomes and lack of countries' resources (*Goal 9*); the quality of education for all individuals decreasing the disparities among countries and individuals despite their geo-position or their incomes (*Goal 4*).

The mentioned implications determine relevant responsibilities for HEIs in the era of digitalization. In fact, they call for responding not only individuals' and contexts' needs of local territories, but they also require that HEIs develop a new vision capable of taking charge of a global educational mission and transforming them as social change agents in the *New Normal*.

## 6. Conclusion

The global pandemic has reshaped higher education institutions' modes of teaching and learning radically and in unprecedented ways. Education has moved into the online space at breakneck speed. Higher education practices have altered significantly, causing new pressures on staff and students, because they were called for innovating their teaching and learning processes and strategies, for facing new challenges due also to the level of resources, connectivity, and access to knowledge. The Covid-19 pandemic, and the rapid moving from residential to online teaching and learning, made visible the invisible, or ignored manifestations and mechanisms of inequality.

The pandemic has forced us to look much closer to where our students are, where they are positioned, what resources they have, what opportunities they have to engage in learning. It helped us to reflect in action (Schön 1983) during the pandemic to develop a new HE perspective, imagining the way of remaking the future in the post-pandemic world. In fact, despite its terrible effects at national, institutional, and individual level, the pandemic has provided a critical moment to reflect on the current role and values of HE and it has built a new imagine of this level of education as a more resilient and transformative. The Covid-19 pandemic has given us the possibilities to re-think the role of universities, recognising them as change agents with social function, because it has opened up possibilities to transform disruption and precarity into creative, flexible and inclusive teaching and learning. In fact, well designed virtual programmes can

offer meaningful and inclusive learning opportunities and wider educational access, especially for those students from more disadvantaged backgrounds.

The higher education digitalization forced by pandemic has the potentiality to provide a practical support for one of the most important mission of HEIs: thinking of education as part of individuals' rights and social justice at global level. These are global goals that call for developing global partnerships among universities. All the implications mentioned for HEIs can be considered lessons learnt during the pandemic experience, therefore, the universities are now at a crossroads where they can choose to implement their practices according their traditional habits or promote changes at global level.

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