

Estrategias para la formación e innovación universitarias en tiempos de pandemia

Strategies for university training and innovation in times of pandemic

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RESUMEN.

En este artículo he tratado de evidenciar la necesidad de que se opte de manera definitiva por un modelo centrado en el alumno de manera que sean ellos los que a través de las TIC y el buen uso de éstas se conviertan en personas con sentido crítico, con creatividad y conocimiento. Pero en este proceso se hace fundamental la mediación del docente que debe conocer no ya las TIC sino cómo se le puede sacar el máximo partido para que la docencia no sea un mero “contenedor” de contenidos. Se expondrá una breve reseña cronológica de los acontecimientos de la pandemia y las consecuencias más inmediatas al pasar de una enseñanza de carácter presencial a otra online en tan poco tiempo. Y finalmente se reseñarán las actuaciones en el ámbito de la formación e innovación llevada a cabo desde la Universidad Pablo de Olavide de Sevilla (UPO).

PALABRAS CLAVES.

Evaluación, formación, innovación, e-learning, TIC.

ABSTRACT.

In this article, I set out to demonstrate the need for a student-centred model, which would enable students, through the proper effective use of ICT, to develop critical awareness, creativity, and knowledge. However, this process must be mediated by a teacher who is competent in the use of ICT and knows how to get the most out of them, so that teaching becomes more than merely a “container” of content. This paper presents a brief chronological overview of the events of the pandemic and its most immediate consequences of moving from face-to-face teaching to online delivery in such a short space of time. Finally, it will review the actions carried out by the Universidad Pablo de Olavide, in Seville, in the field of training and innovation.

KEY WORDS.

Assessment, training, innovation, e-learning, ICT.

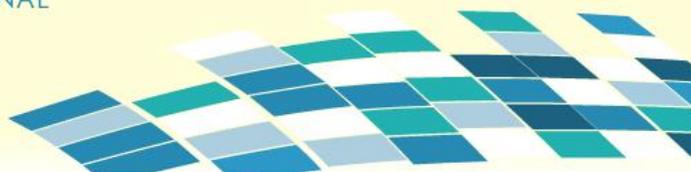


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1. Introduction.

Education is a right that must always be protected, even under the most difficult circumstances. Society will be unable to return to normality unless we accept that we are currently living in an emergency situation and, clearly, we will not get through this emergency situation if we continue to use the measures applied under normal circumstances. In no way can we believe that the tools, processes, and strategies we have used in normal times are useful now, in these times of uncertainty (UNICEF, 2020). This is more than a change of era; this is an era of change (Cabero, 2014). Bauman (2007), ahead of his time, stated:

In a volatile world of liquid modernity, in which hardly any form keeps its shape long enough to warrant trust and gel into a long-term reliability (at any rate, there is no telling when and whether it will gel and little likelihood that it ever will).

Change is occurring in all sectors, but this process has been accelerated by the COVID-19 pandemic, especially in universities.

In this article, I will discuss the effects of the new scenario brought about within Higher Education by the pandemic. The first section will set forth the essential premises governing what we consider to be innovation, to offer as reliable a definition as possible. In the second section, I will focus on the negative influence of COVID-19 on institutions, especially their learning-teaching processes, which is affecting the quality of teaching delivered in this new scenario. In the next section, I will set out the most relevant measures and decisions taken by decision-making bodies and the guidelines they are issuing to prevent the deterioration of quality in this situation, while measures are being put in place to stabilise the situation, and solutions are being sought to *protect development, since, as I have already pointed out, education must always be protected, even under the most difficult circumstances* (UNICEF, 2020). In that same section, I will highlight the need for universities to draw up and develop specific action plans for innovation training, realistic plans to tackle this situation with the strongest chance of success. In any case, one essential factor will become highly relevant: the collaboration of all participants in the education and training process - teacher, student and institution - is not only necessary, but indispensable, as are the necessary adaptations in processes of innovation to respond to this time of uncertainty.

2. Innovation in times of uncertainty.

Covid-19 is here to stay and has affected the entire global education system. This is not a change of circumstances but a transformation that requires a change of mentality and a new way of viewing and approaching teaching, as well as innovation. Now “artefacts” are becoming objects that are given unprecedented value and require training to ensure the process is not undermined by the aimless, unfocused use of New Technologies (hereinafter NT). Salinas (2004) pointed out that, in addition to the incorporation of such “artefacts”, all parties must get involved. We believe that, in this situation, change must be intentional, vocational, and inspired by a genuine desire for change, which would enable the process to gel within the education system. In light of the current circumstances, responses to such change must be implemented swiftly, *in the heat of the moment*, driven precisely by the arrival of an inopportune *annoying guest* who is reaching the ends of the earth. Because there is no other way to react than by





taking a proactive stance, because classes can no longer only be held within a classroom, given the obligation to maintain strict safety measures that do not allow for close physicality, to wear facemasks, and other measures besides. As a consequence, teaching must be carried out differently: blended (through cameras installed in teaching spaces), remotely, online or virtually, using tools that were used in a limited way pre COVID-19, and which now, given the circumstances, would appear to be essential.

We are undoubtedly moving towards new scenarios that require acceptance first and then necessary guidance and training to ensure teachers do not become trapped in a web of tools and *gadgets* without knowing fully how to “bring them to life.” Virtual teaching platforms such as *Blackboard* in the academic world, *Noodle*, *Exweb*, *Zoom*, and others are becoming essential tools for synchronous connection, and asynchronous tools are beginning to be used actively, such as *blogs*, *wikis* and many others, requiring changes and new knowledge, learning to forget what we have learned and to relearn. It is not just a case of knowing how using these new tools, but of knowing how to use them properly and effectively to achieve meaningful learning.

Originality and, above all, acceptance (Hannan and Silve, 2007). We can no longer remain entrenched in the view that teaching and innovation are temporary changes to give shape to purely bureaucratic demands (Zabalza, 2000). Changes are not, and should not be, external processes, but should be configured as internal changes that affect strategy itself and practices in their daily evolution (Esteberanz, 1994).

It seems to me that we should not lose sight of what genuine innovation or a paradigm shift should entail. We must underscore that innovation as a whole is not a fireworks show that produces *in the spectator* the desired light effect; it is about knowing what you want to do and to what end (Salinas, 2009). This is, in my view, the crux of the matter: Information and Communication Technologies (hereinafter ICT) are undoubtedly necessary and sometimes essential tools, but their introduction is not innovation by and of itself. Moments of urgency, such as these current times, should not create within us an urgent and unthinking need to purchase ICT equipment for innovation, since technology does not guarantee the successful achievement of meaningful learning. Cebrián de la Serna (2004) posed the following question: ¿What do we want to achieve? And once our objectives are clear, which ICT should we acquire? Otherwise, acquiring ICT and then asking that question leads to failure, and a fair few educational institutions have become entangled with *gadgets* that become mere *mementos* when the question has not elicited the right answer. The new situation we are facing requires institutions to develop realistic and well-oriented specific training and innovation plans, with the direct participation of teachers to achieve some success in innovation. We should stress once more: ICTs by and of themselves do not effect significant and definitive change, since innovation is carried out by people, not by machines (Salinas, 2009). Therefore, this concept must be approached with careful deliberate planning and, above all, with the conviction that well-understood innovation must be grounded in the acceptance of all participants in the educational process.





This next point cannot be ignored: the importance of the student in this process. Since Bologna (1999), emphasis has been placed on independent student learning. The teacher must become a mediator between knowledge and the student. This notion cannot be emphasised enough: the student is the goal and the end of any innovation. The question is: should ICT training be geared specifically towards them. I would go even further: are academic institutions fulfilling their task of developing plans for all students to achieve competency in the use of ICTs in times of uncertainty?

It is not a question of “cramming” students with new technologies. Students must first understand what is requested of them, and then become competent users of the tools made available to them to acquire significant knowledge. This is certainly a challenge that institutions must take into account since, in agreement with Cabero (2014), I believe it would be advisable to stop focusing on ICT and move towards Learning & Knowledge Technology (LKT). This entails knowing how to use ICTs to acquire knowledge, knowing what their purpose is and how to use them in a context of e-learning, in which the user, who produces information, is able to consume other knowledge, a kind of *prosumer*, through a continuous and constant search for information, selecting information, combining that information with other data from diverse sources, and finally sharing it with others in a networked world, a kind of *Connectivism* defined by Siemens (2004) as *a different way of seeing and understanding the world, where knowledge flourishes*. Hence, in line with the premises of *Connectivism*, the importance of sharing knowledge through the digital tools made available to students, which shape their Learning Environment, would be emphasised. This assumes the notion of Learning and Empowerment Technology (LET). Through these NTs, students are empowered, share, mix, define, and create information that in turn re-creates. ICTs, therefore, pave the way for a different way of doing things, of processing and generating information in a less superficial way. This is perhaps the best way to approach the concept of innovation in times of uncertainty, compared to a *techno-centred* vision that focuses on the technology itself, given that *innovation is carried out by people, not machines*. Accordingly, assessment, as a process of checking the simple attainment of objectives or knowledge (Tyler, 1950), should evolve towards the notion of guidance, regulation, reorientation and management of learning, in order to improve the teaching/learning process (Castillo Arredondo and Cabrerizo Diago, 2009) as intended within the European Higher Education Area (hereinafter EHEA), and which emanates from the guidelines of the Bologna Declaration itself (1999). The new situation caused by Covid-19 is accelerating this other perspective to which Siemens (2004) referred, which will hopefully prove helpful in these times of uncertainty, and will provide a solid opportunity. The next section sets out a few considerations and improvement plans.





3. COVID-19 in our lives: situation in higher education.

The year 2020 will be remembered for the arrival of Covid-19 and the pandemic it caused. The economic and social consequences are still to be determined, since we are currently in a process of easing lockdown measures under Decree-Law 21/2020, which sets out the process to gradually lift lockdown and provides for urgent measures to prevent the spread of the pandemic. Prior to this Decree-Law, lockdown was brought in throughout the whole of Spain on 14th March, via Royal Decree 463/2020, although many universities, through their management teams, had already decided to close and move to online synchronous and asynchronous delivery, *in the heat of the moment* (García-Peñalvo, Corell, Abella-García and Grande, 2020), a process that was extremely disconcerting for both teachers and students. Thousands of people were forced into lockdown and were subject to considerable restrictions. These measures were considered essential to curb the spread of infection. These measures were made even more restrictive on the 29th March, via Royal Decree-Law 10/2020.

One of the first measures set out in these Royal Decrees was the closure of institutions at all levels (Zubillaga and Gortazar, 2020), which affected 91.3% of the total number of students enrolled in the world as indicated by García-Peñalvo, Corell, Abella-García and Grande (2020). UNESCO (2020) has estimated more than 1,500 million people have been unable to attend their face-to-face classes.

The early closure of education institutions has meant living with a sudden, uncertain, and highly worrying situation, since teachers had planned their teaching activities based, by and large, on face-to-face activities. The move to online delivery has entailed a great deal of hard work and sacrifice on the part of both teachers and students.

The circumstances that have surrounded much of the teaching and assessment during lockdown have undoubtedly been exceptional and have had a major impact on the education of students. This situation has helped to highlight that, although we have very advanced technologies, we did not know how to get the best from them, as many of the virtual tools available to schools had not been used prior to lockdown. This has provided a good opportunity to ascertain the usefulness of on-line resources and evaluate their effectiveness in improving the quality of student education. One of the objectives of technological development is, without doubt, to offer teachers different options when it comes to teaching and assessing their students that could be truly innovative and, if used correctly, could lighten part of the teacher's workload. However, we should not lose sight of the fact that the priority aim is to increase the quality of student education and, for this reason, any reflection on new technologies in education should be based on the following question: Do they make a positive contribution to student learning?

In relation to assessment, one of the issues at the heart of this scenario has been the concern felt by many teachers to ensure invigilation during exams as if they were being carried out in person. There has been much debate surrounding the use of video and audio devices, knowing that this is an exceptional situation requiring exceptional adaptations. In certain circumstances, students have protested about the use of very short tests, which has brought added pressure in these extreme circumstances. In other cases, very complex procedures have been developed to carry out examinations with *video surveillance*, asking students to





complete the test by hand while they are monitored and then send an image of their test to the teacher, which has further complicated the act of assessment and caused confusion. All of this shows that the education system was not yet ready for online evaluation, since this situation has caught both teachers and students unprepared. It has been pointed out that some teachers lacked the necessary training and procedural knowledge to achieve minimum adaptation of their subjects, and even if they do possess such training and knowledge, the true purpose of online tools has been misunderstood. Indeed, assessment should pursue a new learning-oriented approach, where the focus is on feedback, which contributes to the continuous improvement of learning (Ibarra Saiz and Rodríguez-Gómez, 2010; Luo, Murray and Cropton, 2017; Nicol and Macfarlane-Dick, 2006; Olmos-Migueláñez, 2008). In some cases, final exams are only used to fill in a certain numerical percentage of the assessment so that each student can be graded, but the usefulness of the exam may need to be reviewed, because it often involves more memorisation than a true reflection and assimilation of knowledge. Online teaching requires other evaluation options to be mobilised, which will allow students to be graded while at the same time activating a larger number of competencies than just a final test, and which, ultimately, would enable students to become more critical, proactive, creative, and knowledgeable.

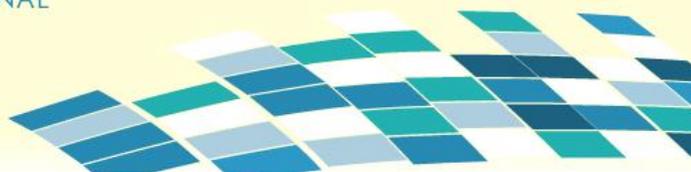
Teachers urgently need specific training in order to use online tools, because the international context in which we are currently living demands it. However, education must also be modernised and updated to be able to offer the best possible grounding to students, whatever the circumstances we find ourselves in. From this point of view, we should not lose sight of the reflection put forward in the previous section, emphasising that any evaluation must evolve towards a conception of guidance, regulation, reorientation and organisation of learning, in order to improve the teaching/learning process (Castillo Arredondo and Cabrerizo Diago, 2009), and in any case should steer clear of the fireworks set off by the misjudged use of ICTs.

4. Strategy from Institutions.

University institutions suddenly find themselves in a complex situation in the three aspects described below (García-Peñalvoa, Corell, Abella-García and Grande, 2020), which could be labelled the 3Ds:

1. *Access divide, related to having or not having access to electronic devices and/or an Internet connection.*
2. *A usage divide, related to the amount of time such devices can be used and the quality of this usage, because there will be households that do have devices, but they are shared among family members.*
3. *A competency divide, related to the digital competency of teachers and students to properly utilise digital platforms for educational purposes and the ability to create or provide educational content and activities through them.*





In the first case, an attempt has been made to bridge this divide by lending out computer equipment to students who have requested it and are in this situation, and thus to alleviate or reduce the disadvantages represented by the first as well as the second divide. Attempts have been made to bridge the third divide through training courses, hastily organised given the circumstances, paying particular attention to the most pressing issue of assessment in these times and reaching the highest number of teachers. However, we must take into account one particularly relevant fact: the planning on which I reflected in the first section of this paper. My reflections are grounded in the idea shared with many other specialists that “haste makes waste”. In other words, in our opinion, it is necessary to plan and propose training actions deliberately and intentionally, based on the conviction that genuine transformation requires the participation of all parties (Salinas 2009) and an approach to change already underscored in the Bologna Declaration and underpinned by the EHEA guidelines.

1. *Changing the role of the teacher.*
2. *Changing the role of the student.*
3. *Changing the teaching-learning process (methodology).*
4. *Involving the institution.*

As García-Peñalvo, Corell, Abella-García and Grande (2020) point out, we must remember that moving something (contents) from analogue to digital does not necessarily imply genuine digital transformation (Llorens-Largo, 2020), as we have seen in this crisis. And this step must be taken in line with one of the premises latent in this article: innovation is carried out by people, not by machines, so we need change made for people.

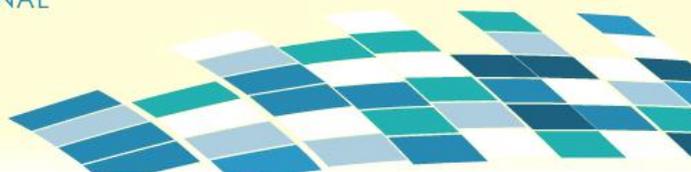
Precisely in order to achieve this objective, on the 17th March 2020, the Spanish Network of University Quality Agencies (REACU) issued a statement indicating that all quality agencies, in their evaluation processes (García-Peñalvo, Corell, Abella-García and Grande, 2020):

undertake to recognise the changes introduced and announced by university bodies in the development of training programmes in response to this exceptional situation; always taking into account the European, national and regional criteria and guidelines for quality assurance applied to online education. (REACU, 2020).

Following this motivation, on the 3rd April 2020, and following the guidelines of the EHEA, the REACU issued the following general guidelines:

1. *the use of different evaluation methods, based on continuous assessment techniques and individual tests*
2. *these methods should enable the acquisition of competences and learning outcomes for the subjects to be assessed*
3. *evaluation criteria and methods, as well as grading criteria, must be made public in good time (REACU, 2020) and included in the teaching guides for the subjects as addenda (ANECA, 2020).*





For its part, and in relation to university institutions, on the 16th June 2020, an agreement of the Universities was published, called the *Agreement on Common Criteria for the Adaptation of University Education to Health Requirements arising from the COVID-19 epidemic during the 2020-21 academic year*.

The core objective of this agreement was teacher training, set out in point 8:

8. Universities shall schedule, individually or in conjunction with other universities, teacher training programmes to improve or reinforce knowledge of non-classroom teaching methodologies.

In addition to these recommendations, universities are urged to make assessments continuous if possible, through online testing to facilitate the transition from one scenario to another, underlining the need to regulate student privacy at all times during testing, but always guaranteeing privacy, which leads us to another complex scenario: privacy and the need to change applicable regulations to ensure that privacy.

In relation to training (point 8), at the Universidad Pablo de Olavide in Seville, emphasis was placed on courses for online assessment during lockdown, even though, from the outset, there was an acknowledged need to establish a specific Training Plan that would include the skills needed to tackle this challenge, which would be included in a General Training Plan. This would cover both ICTs and procedural aspects, that is, knowing how to use the programmes, tools and devices for teaching purposes and how to make the most of them, moving from ICT to LKT and LET, as mentioned previously, in line with Cabero (2014). There was also an acknowledged need to run courses aimed at stress management and other emotional aspects.

TITLE
1. The Teacher-Coach in times of uncertainty
2. Learning-centred assessment at universities in times of lockdown
3. Adaptation of the two modalities of the new scenarios A and B
4. Teaching methodology in the University Classroom. Innovation in the exposition session and promotion of student participation
5. Communication processes in the Virtual Classroom. Application to make teaching and tutoring more dynamic
6. How to teach “back to front”: Flipped Learning in the EHEA in these times
7. Virtual Classroom: Setting up and using virtual spaces (2 Editions)
8. Stress management in times of uncertainty
9. How to improve my continuous attention at University (Time management through mindfulness training)
10. eXeLearning as a virtualisation tool for the Virtual Classroom
11. Recording and editing videos for teaching
12. Editing and processing audiovisual materials
13. ICT for University Teaching: Practical Tools and Apps to Increase Student Motivation





This specific training plan is scheduled to run between September and December, and seeks to support teaching staff so they feel more secure and can transfer to their students not merely *contents*, but through this new scenario they can facilitate the transformation of our students into people with greater critical awareness, initiative, creativity, and knowledge through their work as teachers.

In relation to educational innovation projects, Universidad Pablo de Olavide, as part of its efforts to continue developing the necessary actions to facilitate the methodological renewal of teaching, is committed to the experimentation and improvement of new teaching models that allow students to develop greater autonomy and learning capacity. Training in competences must, therefore, continue to be promoted, with the aim of improving students' capacity for mobility and increasing their chances of scientific, academic, and professional integration. However, the year 2020 will be remembered for the arrival of Covid-19 and the pandemic it caused. The economic and social consequences are yet to be determined.

Given that the Innovation and Teaching Development Plan provides for innovation and educational development projects that are relevant to the University, in order to progressively implement the different actions considered in the Plan, the new teaching scenarios, and the need to innovate in these circumstances, the decision was made to activate action 2 for the academic year 2020-2021, despite the uncertainties that have arisen this year, with the title of: *projects aimed at the design and application of new teaching and assessment methodologies, focusing primarily on training in competences. In this case, the following evaluation criteria were proposed.*

In this case, the committee will assess, on a scale from 1 to 5, the following aspects, with the inclusion of another item owing to sudden unexpected circumstances, thus adapting innovation to the new reality:

- a) Evidence will be provided to assess whether this is a teaching innovation project.
- b) Objectives. The project must be adapted to the general objective of the programme. The committee will also evaluate whether the specific objectives are precise and concrete.
- c) Methodology. The specificity of the activities, procedures, etc. shall be assessed
- d) Evaluation. Estimations will be used to evaluate the way in which the processes, outcomes, and participation of teachers/students in the development of the project will be assessed.
- e) Projection. The possible application shall be evaluated. The degree to which innovation brings a new way of working, applicable to different degrees and subjects, will also be assessed.
- f) Timing. The level of description regarding the timing of the activities to be carried out shall be assessed.

And under the circumstances, the following item was also included:

- g) Flexibility. Contingency plan for situations arising from the change of model in the process of implementing innovation in the COVID-19 situation.





The inclusion of this new point provides a response from the institution to the current situation and to the need to adapt innovation to the needs of the moment. I believe that this should be the general approach adopted by the University, since institutions are expected to be very attentive to these sudden unexpected changes to ensure that teaching is not interrupted and there are no negative consequences in terms of quality and learning processes.

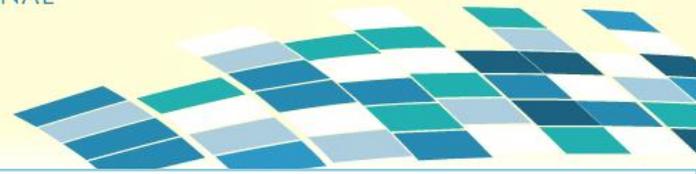
5. Conclusions.

In this article, I have sought to demonstrate the need to develop, once and for all, a student-centred model, enabling them, through the effective use of ICT, to develop critical awareness, creativity, and knowledge. However, in this process, teachers must become mediators and must have not only a grasp of ICTs but also understand how to make the most of them so that teaching is not a mere “container” of contents. The new scenario is an opportunity for this, an advantage that we must consider and harness. I have touched on what we should understand by innovation, stressing the need to steer clear of anything that involves “artefacts” or fireworks, in order to focus on what really matters: a change of mentality that leads us to consider ICTs as elements that require deliberate action by the teacher and to move towards Learning and Knowledge (LKT) and Empowerment (LET) technologies. I have highlighted the importance of independent student learning and of teaching them not just how to use NT but how to get the most out of them, through the support of the teacher.

I have also provided a brief chronological overview of the events of the pandemic and the decisions made, mostly in the heat of the moment, by universities in the move from classroom to online teaching in such a short space of time. Both teachers and students have found themselves in a difficult situation, and there have sometimes been conflicts and understandable unrest in these times of great uncertainty. Universities, through the agreements reached by the various higher institutions, have been acting in accordance with these guidelines. I feel it is necessary for universities to establish specific and realistic training and innovation plans to deal with the pandemic with certain guarantees, deliberately and consciously. In this regard, I have provided the example of the UPO Training Plan developed in line with point 8 of the Agreement on Common Criteria for the Adaptation of University Education to Health Requirements arising from the COVID-19 epidemic during the 2020-21 academic year. In addition, I have described certain modifications included in the evaluation of educational innovation projects to respond to times of uncertainty and adapt to these new circumstances.

We have taken into account both skills and ICT competencies in courses such as *Communication processes in the Virtual Classroom. Application to make teaching and tutoring more Dynamic, The Teacher-Coach in times of uncertainty, Learning-centred assessment at universities in times of lockdown, eXeLearning as a virtualisation tool for the Virtual Classroom, Recording and editing videos for teaching, Editing and processing audiovisual materials and ICT for University Teaching: Practical Tools and Apps to Increase Student Motivation.*





We have also taken into account teaching strategies courses for innovation such as *How to teach "back to front": Flipped Learning in the EHEA in these times* and *Teaching methodology in the University Classroom. Innovation in the exposition session and promotion of student participation*. The need to adapt to new scenarios A (semi-presential) and B (online) has been considered too in courses such as *Adaptation of the two modalities of the new scenarios A and B*. Furthermore, we have considered learning strategies and competencies for assessment in *Learning-centred assessment at universities in times of lockdown*.

Obviously, we must not forget human factors regarding teaching in times of pandemic so we have included *The Teacher-Coach in times of uncertainty* and *How to improve my continuous attention at University (Time management through mindfulness training)*.

Finally, I believe that all the parties involved must participate in this process: teachers, students, and institutions. If any of these cogs in the wheel fail, I believe that the implementation of educational measures to alleviate the effects of the pandemic will also fail.

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