Novice Teachers’ Perceptions of e-teaching modality

Percepciones de los profesores noveles sobre la modalidad de enseñanza digital

FLORES-GONZÁLEZ, Norma†*, FLORES-GONZÁLEZ, Efigenia, ZAMORA-HERNÁNDEZ, Mónica, and CASTELÁN-FLORES, Vianey

Benemérita Universidad Autónoma de Puebla, México.

Abstract

The teaching process in a virtual environment has marked a change in the skills and abilities of novice teachers to innovate their teaching practice during the post-pandemic period. Due to these implications, it is crucial to investigate this topic specifically at a higher level, the context of the present investigation. The objective is to know how they perceive this new educational modality and identify if the platforms used in their praxis are useful for their educational purposes. For this, cross-sectional-descriptive quantitative research took place on a sample of 20 novice teachers from the English Bachelor (BUAP, obtaining the following results: Teachers affirm that the modality is ideal for working in a post-contingency. However, they need the training to use ICTs with a pedagogical approach since the effectiveness and success of the teaching process depend on the knowledge and use of both. Besides, teachers perceived the Moodle platform as more acceptable than Blackboard or Schoology.

Percepciones de docentes noveles, Enseñanza virtual, Modalidad de enseñanza digital

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Introduction

The pandemic has modified the execution of plans, programmes and curricula, implementing the use of platforms, digital tools or applications that allow for innovation in the teaching-learning process in order to satisfy the individual and collective needs of learners.

However, these new digital spaces require teachers prepared to make pedagogical decisions regarding the selection of content, the creation of activities and techno-pedagogical design as well as teaching strategies and methodologies.

In this sense, knowledge management technologies enable not only access to information but also the construction of new knowledge. Taking into account the aforementioned background, the aim of this research focuses on how novice teachers perceive this new educational modality and identify whether the digital platforms used in their praxis are useful for such educational purposes.

In order to contextualise the phenomenon under study, the following sections present the theoretical conceptualisation of the main terms related to the topic in question.

Teaching practice

Teaching practice refers to the actions, strategies and approaches that teachers employ in classroom or teaching environments to facilitate student learning. Teaching practice is a key component of education and plays a fundamental role in the development of students' skills, knowledge and attitudes.

This implies knowing and determining the means, resources and ways of learning culture that involve cognitive, affective and self-regulation dimensions (Mato-Vázquez, and Álvarez-Seoane, 2019). Some of its key components for effective teaching practice are:

Instructional planning. This involves designing lessons that address learning objectives, selecting materials and using teaching methods appropriate to the learning environment.

According to Hodges et al. (2020), teaching practice, mainly in virtual education, requires planning that addresses the characteristics of remote teaching, as well as the use of minimal resources in a short time under the trend towards faster access to information. In this sense, the teacher uses planning as a means to respond to the characteristics of flexible learning environments, generating the appropriation of content and the improvement of digital educational tools (Castañeda and Vargas, 2021).

Effective teaching. Teachers employ a variety of strategies to present information in an understandable and accessible way, encourage student participation and facilitate active learning, including expository teaching methods, practical examples, class discussions and hands-on activities (Véliz and Gutierrez, 2021). In general, the creation of interactive learning communities and teacher-student communication is promoted.

Active Methodologies. Application of methods that provide competences and skills for problem solving, placing the student as the central agent of this process, modifying the traditional role of receiver to active manager of their learning (Misseyanni et al., 2018). In this sense, these active methodologies strengthen the creativity and constant participation of students, create dynamic work environments for the development of skills and allow the incorporation of new technologies (Silva-Quiroz and Maturana, 2017).

Classroom manager. This involves creating a positive and orderly learning environment, maintaining discipline and promoting collaboration and respect among students. It also involves the generation of positive and orderly learning environments, generating respect, communication and integration of the participants, as well as managing the appropriate time to stimulate the student's attention and interest (Castañeda and Vargas, 2021). It also generates the creation of good practices understood as a series of teaching actions that encourage and favour the complex cognitive processes (autonomy, creativity, reflection, among others) of the student, in search of innovation in their praxis (Guzmán, 2018).
Continuing professional development. Teachers seek to improve their skills and knowledge through continuing education, collaboration with colleagues and reflection on their own practice. A fundamental part of this is pedagogical training, which seeks to develop competencies for the conceptualisation, application and experimentation of knowledge, methods and strategies for teaching specific knowledge in educational contexts (Hinestroza et al., 2019).

Use of technology. The incorporation of technology represents new challenges; today it is increasingly important in teaching practice. This may include the use of mobile devices, computers, educational platforms and software to enhance teaching and learning. In this respect, the digitalisation of educational practice is imperative, adapting teaching strategies and trends to stimulate and encourage the development of competences and knowledge in students (Bautista and Zúñiga, 2021).

Relationships with students. Teachers establish relationships of trust and respect with students, which fosters a positive learning environment. They also seek to be responsive by being flexible and able to adapt their teaching approach to meet the particular needs of learners. This may involve differentiation, supporting students with special needs or adapting teaching resources. Assessment and feedback. The learner assesses student progress and provides feedback to help them understand their strengths and areas for improvement. This may include tests, assignments, projects, formative assessment and oral feedback. Successful teaching practice involves a combination of these elements and adapts to changing student needs and educational trends. Therefore, good teaching practice is essential to inspire and empower students to promote meaningful and lasting learning.

Innovation of teaching practice in digital modalities

Innovation of teaching practice in digital modalities is critical in an ever-changing world, which is why some of the strategies and approaches to foster innovation in teaching in digital environments focus on the application of project-based and collaborative learning (PBL), interactive multimedia content, personalised learning, adaptive learning, virtual reality (VR) and augmented reality (AR).

Project-based and collaborative learning (PBL). Designing projects that involve students in real-world problem solving and online collaboration. The fundamental basis of this model is the generation of meaningful learning, stimulating the teacher's creativity and comprehensively developing cognitive, attitudinal and value-based skills for group work (Maldonado, 2019). It also relies on tools such as Moodle, Microsoft Teams, Google classroom, Blackboard, Schoology and Trello to facilitate online collaboration.

Interactive multimedia content. Create engaging and current learning materials that use multimedia, such as videos, podcasts, infographics and simulations. As well as the use of platforms such as Youtube, Canva and Kahoot as teaching and learning media to enhance the transmission of information in a creative and playful way (Vázquez et al., 2019).

Personalised learning. It uses learning management platforms (LMS) to offer personalised content and activities focused on the needs and learning styles of students. In fact, microlearning enables ubiquitous and learner-centred intelligent learning, and is characterised by stimulating the assimilation and acquisition of new learning skills on a continuous basis with flexible and contextual content appropriate to the situation and circumstance (Maldonado, 2019; Vital, 2021).

Adaptive learning. Implement adaptive learning systems that adjust to each learner's progress and deliver content and exercises specific to their skill level. This allows for adaptive interaction through adaptive course presentation, information assembly and discovery, adaptive collaboration and memory (Kara and Sevin, 2020). Adaptive learning systems focus primarily on the areas of intelligent tutoring, cognitive uploading and stimulation, adaptive hypermedia systems in interactions and metadata generated by immersion in virtual environments.

This also promotes more motivating experiences for students, who explore the use of Virtual Reality (VR) and Augmented Reality (AR) whose main basis is the development of perception and interaction with the environment to generate immersive learning experiences and simulated practices (Vélez et al., 2021).
Through such practices, students' interest and commitment to the proposed activities is increased, promoting the use of real-time formative assessment, which implies the support of online resources and assessment tools that provide immediate feedback to students, adjusting as they progress (Mollo-Flores and Medina-Zuta, 2020).

This innovation implies the presence of gamification, which integrates game elements into the curriculum in order to increase student participation and engagement.

Platforms such as Kahoot and Quizlet, social networks, online communities are currently effective digital resources that in turn generate mobile learning allowing access to more current and real information (Ortiz-Colón et al., 2018).

Consequently, innovation in teaching practice in digital modalities should focus on improving the quality of education and achieving meaningful learning outcomes. To this end, it is important to adapt these strategies to the specific needs of students and pedagogical didactic objectives.

Teaching skills for digital practice at a novice stage

Digital teaching practice at a novice stage requires a specific set of key skills to ensure a successful transition to online teaching. Today's learners, rather than teaching new subjects, need to equip their students with skills, abilities and knowledge that enable them to construct new knowledge, thus requiring professionals skilled in the use of technology, communication skills, digital content design, and management of digital environments.

In essence, the teacher must feel comfortable using essential technological tools for the achievement of cognitive independence, which in turn demands new roles among participants. Given these premises, the demands materialise in the development of new tools for teaching and learning, tutoring and attention to individual differences, among other competences that novice teachers in the 21st century must develop (Espinoza, 2018).

Thus, the teacher also needs to be a manager of active participation in virtual environments through discussions, collaborations and projects in order to maintain engaged learning. At the same time, they must create, manage and promote environments of empathy and willingness to exchange ideas and group social growth, seeking to develop self-reflection and continuous improvement skills (Espinoza, 2020). In this regard, teachers need to be able to reflect on their digital practice, learn from feedback and seek out new learning opportunities. These skills can be developed through training and continuous practice.

Online teaching can be challenging, but with time and experience, the novice teacher can become an expert in digital teaching practice.

Tools that promote praxis in digital modalities

Praxis refers to the active application of theoretical knowledge in practice or action. In the context of digital modalities education, praxis refers to the effective integration of theory and learning in online teaching. Hence, one of the effective tools for this teaching practice in digital modalities is the use of learning management platforms (LMS) such as Moodle, Canvas or Blackboard that allow the teacher to create online courses, host resources, communicate with students and evaluate their progress (Vargas-Murillo, 2021).

Similarly, another digital resource is the multimedia content creation system (Camtasia, Adobe Spark or Screencast) to generate videos, presentations and other multimedia content that allow the teacher to collect, provide feedback and monitor student learning.

On the other hand, there are also technological resources such as social learning platforms, Edmodo networks, Schoology, blogs, wikis, online social networks (Twitter, Facebook or LinkedIn) that encourage interaction and collaboration between students and teachers, promoting a more social approach to learning and resource sharing. Another example is the online portfolios Mahara or Google Sites that allow students to create and maintain digital evidence to show their work and progress.
Simulation and virtual reality tools (SimScale or virtual labs) that naturally stimulate participants' immersion in the virtual environment through realism, engagement and interactivity (Michaelis and Michaelis, 2020; Sousa and Rodrigues, 2021).

These tools can help teachers create an effective online learning environment that promotes praxis, allowing students to apply their knowledge in authentic situations. However, it is important to remember that the choice of tools must be aligned with the learning objectives and the specific needs of the students.

Methodology

The enquiry assumed a quantitative perspective with a descriptive and cross-sectional scope. As the main empirical procedure, a Likert-type questionnaire was used to determine the perceptions of novice teachers in relation to the virtual mode and to identify the platforms that are useful in this mode.

With regard to data collection, the questionnaire was administered at a single point in time at the end of the 2023 course.

The sample consisted of 20 novice teachers with similar characteristics: first time teaching an online course, recent graduates of the Bachelor’s Degree in English Language Teaching, and aged between 23 and 30 years old.

For the data analysis, three dimensions extracted from the questionnaire will be taken into account, namely: educational modalities, teaching attributes and platforms used to teach their classes.

Results

![Graph 1](image)

Graph 1 New students' perception of the virtual modality

Source: Own Elaboration

The graph shows a preference for the virtual mode. In fact, 11 (55%) new teachers say that the virtual modality is ideal for post-contingency work. This is due to its advantages such as progressive progress at the students' pace, ubiquitous learning and availability of content, avoiding time and space barriers, as pointed out by Pisani and Piotet (2009).

On the other hand, the sample points out a fundamental aspect that the virtual environment favours, which focuses on promoting active learning dynamics where the student is the protagonist of their process (Flores-González, 2022) and the new teacher can offer a variety of content according to the learning styles and level of science proficiency of their students through multi-formats, giving a personalised and punctual follow-up to each activity through personalised spaces on the platform.

Another element is the high percentage of participation observed in these environments, since being mediated by technology, the participation of the student community is interactive and asynchronous or synchronous.

In general, teachers point out that the virtual modality not only contributes to the process of teaching and learning content but also to the appropriation of digital skills, the development of autonomy, critical-reflective thinking, collaboration, evaluation and self-evaluation processes and, most importantly, sustainability.

In contrast, 9 (45%) teachers point to the face-to-face modality as a possibility to carry out their praxis, expressing their preference because it is a face-to-face process that allows them to control and monitor learning appropriately, avoiding situations that occur in virtual environments such as concentration difficulties, social isolation, connectivity problems, commitment and responsibility for learning and autonomy. Some of the most valued characteristics of this modality are the development of social and emotional skills. However, they also mentioned that the virtual modality can be a suitable complement to the virtual modality and serve as a support to reinforce knowledge in independent and personalised spaces.
The sample considers that in order to work in a virtual modality it is necessary for the new teacher to possess basic characteristics that allow them to embed their praxis in a digital space. In this sense, they identified the following attributes:

a) Application of ICT (30%). Pedagogical training in the use of ICT as learning and knowledge technologies and not merely instrumental is inevitable; otherwise, the teacher will design activities with the use of technology for informative rather than formative purposes. In fact, ICTs were perceived as a trigger for educational cultural change that requires teachers to:

- Updating of knowledge and continuous digital competences (Tobón and Salazar, 2018) that allow the use of tools and applications for the construction and deconstruction of new knowledge.
- Reconceptualisation of the teaching process where the role of the teacher is that of designer, monitor, creator and curator of content, in addition to those assigned in traditional education.
- Implementation of a pedagogical culture that favours evaluation, assessment and self-assessment through the use of new technologies.

b) Design of virtual courses (28%). Novice teachers suggest them as the second most important element for working in virtual environments, given that the success of the learning process depends on the organisation of the course and its interactivity in order to trigger significant learning situations. It is important to point out that technology and ICT by themselves do not contribute in an ideal way to the learning process although they are considered innovative resources, since it is the design, creation or curation of contents and the experience and professional profile of the teacher what makes the virtual modality an ad hoc space for student-centred education in a socio-technological and multicultural context.

c) Content curation (18%). The creation of content is a crucial element in virtual environments and is also perceived as complicated by teachers. However, it is necessary to bear in mind that the technical-pedagogical design of a virtual course does not necessarily have to be created from scratch. On the contrary, teachers can take up content already created and hosted in different applications or other sources to adapt them to the requirements of their subject and the needs of their students (Guallar et al., 2020) through the phases of searching for resources, selecting content, creating new products from the content retrieved and disseminating the new material.

d) Use of active methodologies (24%). These were perceived as the third most important principle for digital praxis due to the fact that the virtual modality demands active student participation. In view of this, an appropriate method is active methodologies that encourages collaborative work and autonomy (Peralta and Guamán, 2020), contributing directly to student commitment, responsibility and participation, avoiding rote learning through problem solving and reflective and creative critical thinking.
In fact, teachers perceived that this methodology fostered collaborative networks between students and teachers that in turn fostered student competences, transforming empirical practice into innovative virtual experiences as pointed out by Gómez-Hurtado et al. (2020).

Platforms

<table>
<thead>
<tr>
<th>Platforms</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Moodle</td>
<td>63%</td>
</tr>
<tr>
<td>Blackboard</td>
<td>15%</td>
</tr>
<tr>
<td>Schoology</td>
<td>12%</td>
</tr>
<tr>
<td>Others</td>
<td>10%</td>
</tr>
</tbody>
</table>

Graph 3 Platforms to mediate their praxis
Source: Own Elaboration

When working in virtual environments, novice teachers confirm that there are different platforms to embed their praxis. However, from their perception, the most used platform was Moodle (63%) followed by Blackboard (15%), Schoology (12%), Google classroom and Dokeos (12%).

The reasons for platform choice depended on the advantages they offered for the research context, which are described in the following lines.

- Moodle. In this case the perception is high and positive due to the characteristics of this platform such as its interaction environment, learning promotion, information flow and flexibility for the teaching-learning process in terms of time and space.

In addition, its learning management system allows to design, manage, monitor, evaluate and report the students' process through structured reports. Moreover, as it is a free platform, it can be linked to other applications or tools, contributing to a more dynamic, innovative and gamified course.

Regarding knowledge management, it enables the storage and retrieval of information from the students' activities and interrelationships between teacher and students.

- Blackboard. Novice teachers state that it is a user-friendly platform that focuses on promoting communication between students and teacher through the interactions of applications such as discussion forum, diaries, announcements and chats. While it is true that this platform favours the flow of activities, teachers perceive it as a platform that demands knowledge of HTML code for integration.

- Schoology. The study sample considers it to be an appropriate medium for working on educational content and above all useful for revision, correction of exams, homework and projects. However, its use was limited due to the cost per student taking into account the large groups.

- Google classroom and Dokeos. For the former, teachers recognise its usefulness for the implementation of blended learning projects, promoting communication and collaborative work, which integrated with its suite favours the socialisation of information without limitations through its functions such as Google Forms, Drive, Google Sheets and YouTube, although its perception is low, as it is not possible to structure contents in sequence and it is incompatible with scorm contents.

In the case of Dokeos, it provides several techniques and tools for the design of classes and multi-format content with a user-friendly interface. At the same time, it stimulates collaborative work and participation among the virtual community, making it possible to include face-to-face classes. Despite these advantages, teachers used it less frequently because of the availability of applications, technological dependence and limited compatibility that it implies.

Conclusions

In short, nowadays digital praxis is inevitable due to the disruptions that education contemplates. This leads to an urgent need to update teachers in order to meet the educational demands based on their plans, programmes and study objectives.
In this sense, it is concluded that the virtual modality is on the increase. Furthermore, there are essential qualities for teachers who work in these environments that have a direct impact on their practice and the teaching-learning process, as they allow the application of technologies for learning and knowledge, content curation, the design of virtual courses with the use of active methodologies. All of the above embedded in platforms such as Moodle, Blackboard, Schoology, Google classroom and Dokeos.

Finally, it should be noted that this study contributes to the field of language teaching as it points out the indispensable elements for working in such environments in an appropriate manner.

References


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