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NEW INFLUENCES AND HIGHLIGHTS IN INSTRUCTIONAL DESIGN

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Abstract

The theory of instructional design has progressively developed, marking the transition from a traditional prescriptive, normative meaning to a modern one, based on various approaches that are opposed to unique recipes and rigid specifications. The knowledge technology which is strictly applied, the rigorous control of the learning stages are no longer the center of attention today, but the way and level of involvement in building knowledge, collaborating through the use of the new information technologies. Technology shapes the way we teach, learn, evaluate, as well as the way we plan and design these activities. As technology does not make teaching better or worse, simpler or more complex, but entirely changes it, teachers are sometimes confused in choosing an adequate instructional planning. During the process of identifying the new tendencies in the field of didactic planning, we focused on the instructional design models that encourage teachers to be creative. We started from some of the explanatory models of technology-based instruction and, in the second part of the study, we designed a didactic activity. The design method is based on the Learning Designer tool, developed by a team led by D. Laurillard. This is a tool that supports the design process, whether learning is mixed or fully online. The tool is web-based and allows designing and sharing learning experiences, supporting the integration of technology in the instructional process.

Keywords: design, learning, models, technology.

Rezumat

Teoria proiectării instruirii s-a dezvoltat progresiv, marcând trecerea de la sensul

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prescriptiv, normativ, tradiţional, la cel modern, bazat pe diverse abordări care se opun reţetelor unice şi specificaţiilor rigide. Tehnologia cunoaşterii aplicată cu stricteţe, controlul riguros al etapelor de învăţare nu mai sunt astăzi în centrul atenţiei, ci modul şi nivelul de implicare în construirea cunoştinţelor, colaborarea prin utilizarea noilor tehnologii informaţionale. Tehnologia modelează modul în care predăm, învăţăm şi evaluăm, precum şi modul în care planificăm şi proiectăm aceste activităţi. Deoarece tehnologia nu face predarea mai bună sau mai rea, mai simplă sau mai complexă, ci o schimbă complet, profesorii sunt uneori confuzi în alegerea unui model de proiectare. În demersul de identificare a tendinţelor noi în domeniul proiectării didactice, ne-am concentrat pe modelele de proiectare a instruirii care încurajează creativitatea profesorilor. Am pornit de la unele dintre modelele explicative ale învăţării bazate pe tehnologie şi, în a doua parte a studiului, am proiectat o activitate didactică. Metoda de proiectare se bazează pe instrumentul Learning Designer, dezvoltat de o echipă condusă de D. Laurillard. Acesta este un instrument care sprijină procesul de proiectare, fie că este vorba de învăţare mixtă sau integral online. Instrumentul este bazat pe web şi permite crearea şi împărtăşirea experienţelor de învăţare, sprijinind integrarea tehnologiei în procesul de învăţământ.

***Cuvinte-cheie**: proiectare, învăţare, modele, tehnologie.*

1. Introduction

The term instructional design refers to the process of systematic planning. In essence, "designing requires a balance of reason and intuition, an impetus to act, and an ability to reflect on actions taken" (Rowland, 1993, p. 80). Opposing the disorder and the accident, the pedagogical design is an anticipated construction, which is continuously reconstructed, in relation to the evolution of the situations, the development of the technology, the expectations of the students and the experience of the teacher. Defined as "a technology for the development of learning experiences and environments which promote the acquisition of specific knowledge and skill by students" (Merrill et al., 1966, p. 2), instructional design involves a systematic development of learning and teaching specifications, by relating to the needs and requirements of the educables.

An *overview of the instructional design models* highlights the following:

- They allow testing the theory on which it was built (Adair & Foster, 1972).

- The models of instructional design have descriptive, prescriptive, predictive, and/ or explanatory elements in varying degrees (Andrews & Goodson, 1980).
- They involve a combination of rational and creative thought processes (some opt for the rational perspective and describe the instructional design as a technical process based on known rules, principles and procedures, while others prefer the creative perspective, which is based on intuition) (Rowland, 1993).
- They are based on the following components: inputs, the process(es) of transforming the inputs into outputs or product, the outputs of the processing, and feedback mechanisms and the environments in which they operate (Beck & Schornack, 2005).
- All instructional design processes consist of at least five major activities: (1) Analysis of the setting and learner needs; (2) Design of a set of specifications for an effective, efficient, and relevant learner environment; (3) Development of all learner and management materials; (4) Implementation of instructional strategies; (5) Evaluation of the results of the development both formatively and summatively (Branch & Kopcha, 2014).

We find that in recent years, interest in e-learning has opened up new opportunities for instructional designers. Being a constructive approach, design uses new technologies, and teachers can use them successfully to assert their creativity. For this, teachers need more information and various opportunities to use technology in the design of specific activities.

A study by D. W. Govender and I. Govender (2014) illustrates that teachers with digital skills and access to technology do not often incorporate technology into their teaching. Therefore, "teachers should be able to see the value of technology, feel comfortable and confident using it with their students, and experience the positive effects of technology integration" (An, 2021, p. 13). The lack of ideas and the limited instructional time can be factors that influence this aspect: "the teachers emphasized that they need and want ideas for what web-based resources to use and how to make them work efficiently and effectively in their classrooms. They also emphasized a need for time to review web sites that may be useful in their classrooms" (Hill et al., 2003, p. 18). Instead, technology is often used to perform non-instructional tasks, such as monitoring, attendance, and grading.

2. Explanatory models of technology-based learning

Modern planning capitalizes on a number of influences of explanatory learning models. Although the new models of learning theories are sometimes an equivocal mix of principles and applications, there are a number of models of technology-based learning that can support teachers in their design work.

The community of inquiry/ research model (Garrison, Anderson & Archer, 2010) was created to fit the online or blended learning environments and comprises three dimensions: cognitive presence, social presence, and educational presence. Borrowing the term "community of inquiry" from Lipman (1991), the authors of this model devise a conceptual framework that provides order, heuristic understanding, and a methodology for studying the potential and effectiveness of computer conferencing. Thus, "the framework attempted to outline not only the core elements (social, cognitive and teaching presence), but also the dynamics of an online educational experience" (Garrison et al., 2010, p. 6). The cognitive presence is operationalized through practical inquiry, through encouraging critical and divergent thinking. Social presence starts from the dimension of the affective expression, which is joined by open communication, both stimulated at the level of online media. The didactic/ educational presence refers to the design and direction of the cognitive and social processes, which favour the efficiency of learning.

The transformative learning model (Mezirow, 1990) involves the transformation of the perspective, the critical reflection of hypotheses that can arise either in group interaction or independently. Originally conceived as a model of adult education, it is applicable to digital education and can be a benchmark in didactic planning. Because "transformation theory calls for a reassessment of educational goals and objectives, needs assessment, instructional methods and forms of evaluation" (Mezirow, 1990, p. 146), the anticipatory approach, materialized in the planning process, is significant.

Placing learning theories in the digital age implies the inclusion of technology and the use of connections, as learning activities. *The connectivist theory* (Siemens, 2005) focuses on the idea that learning is no longer an internal, individualistic activity, and "how people work and function is altered when new tools are utilized" (Siemens, 2005, p. 7).

The model of online collaborative learning (Harasim, 2012) has also influenced the way learning is organized. It is about "a new theory of learning that focuses on collaborative learning, knowledge building, and Internet use as a means to reshape formal, non-formal, and informal education for the Knowledge Age" (Harasim, 2012, p. 81). Considering the constructivist theory as an umbrella term that represents several perspectives on learning, L. Harasim emphasizes the role of collaboration, along with that of situational and active learning, learning by doing, problem-based learning and investigative learning. In addition, e-learning, based on a constructivist approach, should be an active process.

Collaborative online learning involves the existence of three stages (Harasim, 2012, pp. 121-124): the generation of ideas (the brainstorming stage), the organization of ideas (the stage during which the participants interact with each other) and the intellectual convergence (the stage of synthesis, during which the participants formulate their own position, accept different opinions and try to reach a consensus).

Trying to answer the question, "Can We Build a Common Integrated Theory of Online Education?", A. G. Picciano (2017, p. 176) refers to T. Anderson, who developed a model of online learning in which he distinguished the community/ collaborative models from self-paced learning models. The proposed *multimodal model* for online education includes the essential features of other theories and models of online learning and education: "For example, behaviourists will find elements of self-study and independent learning in adaptive software. Cognitivists might appreciate reflection and dialectic questioning as important elements of the model. Social constructivists will welcome the emphasis on community and interaction throughout the model. Connectivists might value the collaboration and the possibility of student-generated content" (Picciano, 2017, p. 186).

As a form of activity, learning is an essential aspect that is taken into account in pedagogical planning. Being designed to enhance the learning experience, digital learning is accompanied by technology or instructional practice that uses technology effectively. Referring to the review of B. Bloom's taxonomy of educational goals, made by M. Fisher ("Bloom's Digital Taxonomy"), Z. Zhang, J. Zhang and M. Cai consider that "The Padagogy Wheel as a teaching

model that categorizes digital learning tools using the conceptual framework of Bloom's Digital Taxonomy is of particular interest in academia" (2018, p. 88).

A. Carrington proposed *The Padagogy Wheel*, trying to combine iPad applications with educational goals in an integrated environment. The Padagogy Wheel is a model based on interconnected indications, such as mechanical gears in which a decision in one area often affects decisions in other areas. The five grids are: (1) Graduate Attributes and Capabilities; (2) Motivation; (3) Bloom's Taxonomy; (4) Technology Enhancement; (5) The SAMR Model (Carrington, 2016). Because students have different personality types and learning styles, needs, interests, and learning experiences and come from a variety of socio-cultural backgrounds, curriculum designers need to provide flexible, adapted, and personalized models. This partly explains the diversity of the instructional design models. Depending on the objectives pursued, the characteristics of the educational disciplines, the age and the specifics of the educational policy, instructional design can incorporate the new technologies and can convert them into opportunities for teachers and students.

3. Instructional design models

Starting from the distinction between "instructional system design" and "instructional design", we find that: "Instructional System Design (ISD) models differ from Instructional Design (ID) models in that ISD models have a broad scope and typically divide the instruction design process into five phases (Analysis, Design, Development, Implementation, and Evaluation)" (Jiang, 2012, p. 1912). Among the best known models is the *ADDIE Model*, based on an iterative process used by instructional designers to take into account all the elements that lead to the best result. Originally created by the Center for Educational Technology at Florida State University in 1975, the model consists of five steps, and "the incorporation of a variety of successful teaching and learning theories allows the ADDIE process to be interdependent, synergistic, dynamic, cybernetic, systematic, and systemic" (Branch, 2009, p. 4).

In *Unified Modeling Language* (UML), diagrams are proposed to describe the static or dynamic structure of an ISD. The beginning of UML dates back to 1994, when Booch and Rumbaugh (both at Rational Software Corporation at the time) began combining object-oriented development methods into a single approach, called the Unified Method. In 1995, Jacobson joined them and integrated his Object-Oriented Software Engineering (OOSE), which was based on his development process (*Objectoty*), renamed the Unified Software Development Process (Zschocke, 2002, pp. 83-84).

Consistent with the ADDIE model process, *the Educational Software Unified Process Model* (ESUMP), which clearly reflects the unified development process of educational software, includes: Educational Requirements analysis phase, Educational Design phase, Educational Implementation phase, Educational Evaluation phase and Educational Maintenance phase. The specificity of this model must be understood from the perspective of the relationship between instruction, technology and management: "Educational software is not only an ordinary computer software, but also must be software products with the education content and strategies that adapt to the modern education system and teaching mode, it is computer software or software products that provide services (including learning, management, evaluation, tools, etc.) for the educational process, different from courseware and CAI" (Haiguang, Min & Jing, 2011, p. 1280).

It is appreciated that "in instructional design, scientific and technological theories are equally important: a scientific theory represents the necessary fundament for a technology, which on its part is nothing else than the transformation of a scientific theory into practice" (Seel et al., 2017, p. 7). Regarding the instructional design models, they provide procedural frameworks for the systematic implementation of instruction. By conceptualizing the representations of the educational reality and by incorporating the fundamental elements of the educational process, the models can be used in different educational contexts, having a descriptive and prescriptive role.

The effectiveness of a model depends largely on the context in which it is applied, and the design methods are usually situational. From the teacher's perspective, as a designer of the instructional activities, it is necessary to

include the Web in the design. In addition to the creative use of various e-learning applications, it must respond to an increasing number of requests and, therefore, have alternatives in the teaching design process. Starting from the pedagogical models that capitalize on technology, we consider that an implementation by integrating the common elements is a starting point in the elaboration of the didactic activity design.

Analyzing the instructional design models from a historical perspective, R. M. Branch and T. J. Kopcha (2014) recall the contribution of L. C. Silvern from the 1950s and 1960s and the model developed by D. Hamreus in 1968 and revised by Twelker in 1972 (being among the best known in the USA between 1970 and 1980). Observing that in recent years there has been a shift in thinking about how instructional design can be practiced, Branch and Kopcha state that "instructional design models either old or new should accommodate contemporary and emerging theories about planned learning and the broad array of contexts in which instructional design is being applied" (Branch & Kopcha, 2014, p. 80).

If in the late 1960s, numerous models of instructional design alluded to Gagné, Glaser and Suppes, the second generation of instructional design models was based on the use of artificial intelligence, and the third generation on the cognitive-constructivist paradigm and the combination of research and development, as well as on the integration of creativity in the planning process (Seel et al., 2017). Modern planning capitalizes on a number of influences of explanatory learning models. Although the new models of learning theories are sometimes an equivocal mix of principles and applications, there are a number of models of technology-based learning that can support teachers in their design work.

Instructional design models come in a variety of types and variants and offer different design perspectives. K. Gustafson and R. Branch (2002) have suggested a useful categorization of instructional design models by distinguishing between (1) classroom oriented models, (2) product-oriented models, and (3) systems-oriented models. I. Visscher-Voerman and K. L. Gustafson proposed a conceptual framework consisting of the following four design paradigms: (1) Instrumental paradigm – planning-by-objectives; (2) Communicative paradigm – communication to reach

consensus; (3) Pragmatic paradigm – interactive and repeated try-out and revision; (4) Artistic paradigm – creation of products based on connoisseurship (Visscher-Voerman & Gustafson, 2004, p. 76).

The 5E instructional model, developed by R. W. Bybee in the 1980s, was specifically designed to provide a model that promotes a constructivist approach to science education, incorporating aspects of behaviorism and cognitivism. Model 5E (Engagement, Exploration, Explanation, Elaboration and Evaluation), developed in 1987 by the Study of the Biological Sciences Curriculum, promotes active, collaborative learning. There have been similar models before, this one being a direct descendant of the Atkin and Karplus learning cycle proposed in the early 1960s and used in the Study of Scientific Curriculum Improvement (SCIS: Exploration, Invention and Discovery) (Bybee et al., 2006).

In an attempt to find more effective ways to understand the influences on learning motivation, the *ARCS Model* (motivational model – Keller, 1987) contains a synthesis of variables grouped into four categories: "Expectancy-value theory assumes that people are motivated to engage in an activity if it is perceived to be linked to the satisfaction of personal needs (the value aspect), and if there is a positive expectancy for success (the expectancy aspect)" (Keller, 1987, p. 3). These two categories have been expanded to four: Attention, Relevance, Confidence and Satisfaction (ARCS).

It is observed that most current instructional design models are variations of the ADDIE process. In general, there is a formative assessment at the end of each part of an instructional design model, as well as a summative assessment of the whole process (Clark, 2010). These are generally divided into similar parts with the components of the ADDIE model, therefore some are only reformulations by other authors of the previous models, and others are not tested, experimentally validated. ID models have been described in a wide range of visual representations. Perhaps the most common is a linear row of boxes that describe the ID as a step-by-step procedure. Regardless of the instructional model we refer to, we find that the succession of stages or steps in design is essential. In response to traditional design models (too linear, too slow and inflexible), *rapid prototyping* (Tripp & Bichelmeyer, 1990) and the holistic approach to instructional design – *Holistic 4D Model* (Reigeluth & An, 2021) were proposed.

The Learning Designer model supports the design process, whether it is blended learning or online learning. The tool used focuses on the types of learning proposed by D. Laurillard (2012) in the "Conversational Framework" (a model of what the teacher must implement for students to learn): learning by acquisition, learning by inquiry, learning by practice, learning through production, learning through discussion, learning through collaboration. It also provides feedback on the proportion of each of the different types of learning, the way students are organized, the way they work (online, synchronous or asynchronous, and face-to-face) in the form of a pie chart, so you can see where adjustments may be required.

Lesson design templates, PERT diagrams or task analysis templates can be tools that operationalize the instructional design approach. It is stated that "the visuals associated with rectilinear portrayals of instructional design models often do not acknowledge the actual complexities associated with authentic instructional design practice" (Branch & Kopcha, 2014, p. 80). Linear, circular, nested, cascading or spiral, instructional design models are based on the creativity of the thinker, placing himself between reason and intuition, between science and art. Moreover, it is stated that while scientific thinking can be characterized as inductive and deductive reasoning, designers reason constructively or abductively (Kolko, 2010).

4. Applications of the learning design tool proposed by D. Laurillard

Learning Designer is a web-based tool made to help create and share learning models (e.g., lesson plans) and support the integration of modern technology into learning: "For online and blended learning, this approach is able to show, not only what is happening when the teacher is with the learners, but also what learners should be doing when the teacher is absent and they are being supported by technology" (Laurillard et al., 2018, p. 1046).

The learning design is displayed as a sequence of activities created by the teacher, similar to a project/ lesson plan, and shows all its main properties (e.g., subject, number of students, goals, results, duration of learning time and type of learning involved). Because the tool is online, the teacher can

share learning models with colleagues, can view and adapt learning models that have been shared by others.

We further present the design of an instructive-educational activity that is addressed to the students who go through the psycho-pedagogical module (Master, year II, Course: Sociology of education). Using the same design tool, we uploaded the design of another activity (Topic: Teaching Styles; Mode of delivery: online only) on Padlet, within the UCL Knowledge Lab (Laurillard, 2021). As part of the instructional design, learning design is a student-centered approach for planning tasks or learning activities. Starting from the identification of certain ways to keep the previous contributions that are characteristic to instructional design, but also creatively integrate technology in this enterprise, we planned, through the aforementioned example, to use, in designing, the tool proposed by Laurillard's team. Once the students are back in the classrooms, it can be used to innovate the already existing design practices.

Learning Design for: *The Sociology of Education*
Context
Topic: Help and care for others
Total learning time: 4 hours and 30 minutes
The activities allotted for this topic are grouped for three days: day 1 (80 minutes) – activities 1 and 2; day 2 (110 minutes) – activities 3 and 4; day 3 (80 minutes) – activities 5 and 6.
Designed learning time: 2 hours
Size of class: 60
Description: Help given to those in difficulty, as well as relief or care for others are forms of prosocial behavior. The ability to act and provide help is a social skill that develops in interpersonal relationships.
Mode of delivery: Blended learning
Aims: Training the ability to help others
O_1: Understanding altruistic behavior
O_2: Explaining the forms of help
O_3: Identifying the determining factors
O_4: Involvement in actions or activities that require the help of others.

Outcomes

- Comprehension: prosocial behavior
- Evaluation: interpretation of forms of aid
- Analysis: analysis of determinants
- Application: involvement in actions or activities to help others.

Teaching-Learning activities

Activity 1: Acquisition for understanding

Table no. 1. *Acquisition for understanding*

Read Watch Listen	30 minutes	60 students	Teacher present	Face to face (not online)
Watch the PowerPoint presentation of the teacher about altruistic behaviour, as a subspecies of prosocial behaviour. - The content of the slides include: the factors involved (biological, psychological, relational, pedagogical, socio-cultural/ contextual), the theories and explanatory models (the biological perspective, the psychological perspective, and the sociological perspective), pro arguments (selfish and altruistic motivations, reference to the gender roles we socialize in) and counterarguments (the diffusion of responsibility, pluralistic ignorance, cost-benefit analysis).				

Activity 2: Investigation for understanding

Table no. 2. *Investigation for understanding*

Investigate	50 minutes	Each student	Teacher not present	Online
Look for links that address issues of helping people. - The students are guided to access Google Academic and identify two recent sources (over the last 5 years) which analyze the approached subject. It can also be recommended accessing YouTube for the selection of an audio-visual material that is relevant to the subject.				

Activity 3: Discussion for analysis

Table no. 3. *Discussion for analysis*

Discuss	30 minutes	60 students	Teacher present	Face to face (not online)
Based on the found information, name the determinants of prosocial behavior. - The students can determine the correspondence between the content aspects presented by the teacher during the first activity and the information discovered independently-individually by searching.				

Activity 4: Produce for analysis

Table no. 4. *Produce for analysis*

Produce	80 minutes	60 students	Teacher present	Online
Provide an example of supportive behavior and analyze the influence of determinants (e.g., biological, social) for each example. - They can use multimedia resources (e.g., poems, stories, photos, songs, etc.). Although the activity is led by a teacher, the students are the ones who find examples based on their searching on the Internet or their reference to previous experience.				

Activity 5: Collaboration for evaluation

Table no. 5. *Collaboration for evaluation*

Collaborate	50 minutes	20 students	Teacher present	Face to face (not online)
Interpret the most suggestive examples from the perspective of forms of help. - Calling on their collaborative work, the students give examples of casual helping, substantial personal helping, emotional helping.				

Activity 6: Applying what is learned in order to develop the ability to help

Table no. 6. *Applying what is learned in order to develop the ability to help*

Practice	30 minutes	Each student	Teacher not present	Online
Get involved in a concrete situation in your daily life in which to show your support for someone in need. - Each student identifies a specific situation, finds the best intervention method and applies it.				

Following the completion of the specific sections of this tool, the graphical representation is automatically generated by the computer, facilitating the effort of the teacher and giving him an overview of the learning experiences that students have.

In terms of instructional time, we paid attention to all the types of learning proposed by Laurillard, with a higher percentage of time being devoted to production based learning.

Table no. 7. *Allocation of training time in relation to the pursued types of learning*

Learning through	Minutes	%
Acquisition (Read, Watch, Listen)	30	11.11
Investigation	50	18.52
Discussion	30	11.11
Produce	80	29.63
Collaboration	50	18.52
Practice	30	11.11

The ability to help others is formed over time, and from this point of view important are the collaborative learning and the investigative learning, to which we have given additional attention in the projected activity on this topic (Figure no. 1).

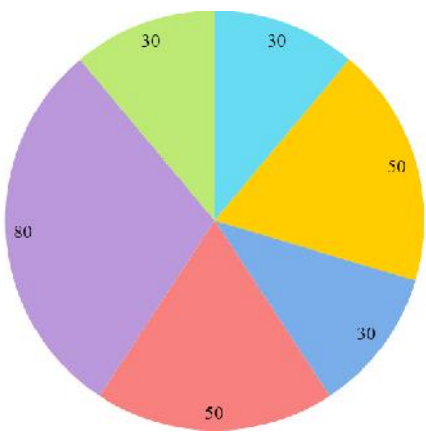

Figure no. 1. *Representations of the learning experience*

Time management can become more efficient when the teacher relates rationally to all the components of the educational process (purposes, contents, strategies, etc.). From the perspective of the forms of student organization, we allocated training time to all these forms (Table no. 8).

Table no. 8. *Time allocated to the forms of student organization*

Forms of organization	Minutes	%
Whole class	140	51.85
Group	50	18.52
Individual	80	29.63

In relation to the aims pursued, it is observed that the group and individual activities are well represented. In online activities, it matters how much students work in the presence or absence of the teacher.

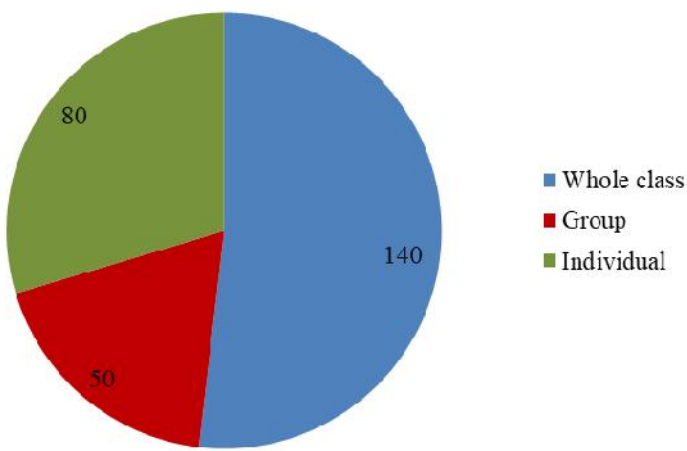

Figure no. 2. *Graphic representation of the training time allocated to the forms of organization*

Synchronous learning is characterized by achieving goals in real time, it is collective and collaborative and it takes place through direct didactic communication. This involves not only interaction with the learning resources, but also the social interaction of the students with their colleagues and teachers (e.g., chat, video and audio conferencing, pooling, whiteboard).

Asynchronous learning is beneficial for approaching complex topics, which require careful reading or deep reflections, impossible to achieve in a relatively short time provided by synchronous activities. Asynchronous e-learning solutions allow learners to connect to the learning environment at any time, using the resources provided at their own pace. We find that learning takes place at times convenient to each student, while the teacher can monitor progress at adjustable times.

Table no. 9. *The presence of the teacher in the activity*

Presence/ absence of the teacher	Minutes	%
Teacher present	190	70.37
Teacher not present	80	29.63

Being a learning activity designed for Master's students, year II, it is mainly built on the activity of the students. Because activation refers to the knowledge gained through personal effort, we paid attention to their activity, but we did not neglect the activity in which the teacher is present (Figure no. 3).

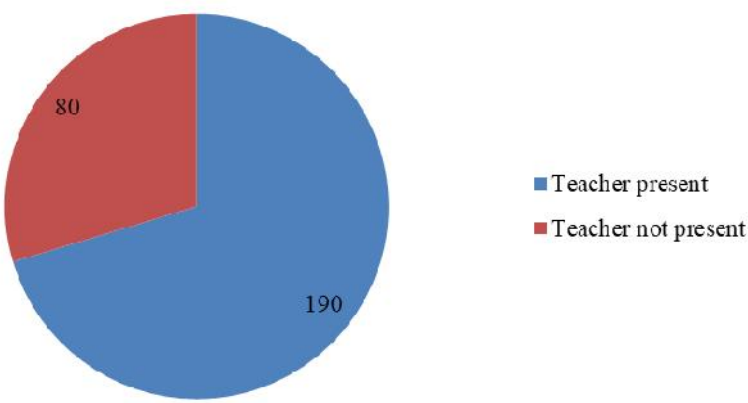

Figure no. 3*. Graphic representation of the time allocated to activities whether the teacher is present or not*

From a design perspective, a course based on mixed learning can have a very flexible structure, which varies between two extremes, depending on the type of sessions: from a traditional course with exclusive face-to-face sessions, to a fully organized distance course. In the activity we designed, the combination of these instructional environments can be found (Table no. 10).

Table no. 10. *Instructional environments used*

Instructional environment	Minutes	%
Face to face (not online)	110	40.74
Online	160	59.26

Based on the information previously mentioned, we consider the approach of instruction based on a nucleus of digital resources to be important, resources that are used under the guidance of teachers and filled in by the students' experiences.

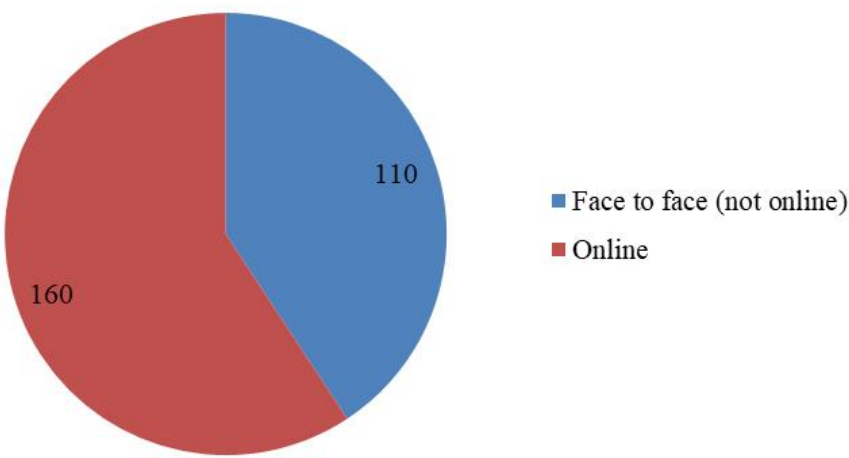

Figure no. 4. *Graphic representation of the environment in which instruction is designed*

Beyond its limitations (hardware and software components are very expensive, the teacher and students are not familiar with this tool, the school curriculum is very strict and does not allow enough time to be allocated to computer-assisted instruction), we applied this tool in instructional design activities and we consider it useful in the conditions of digitalization of education, especially in the activity with students.

5. Conclusions

The instructional design models serve as guides for professional practice. In this context, Learning Designer supports the efficient use of technology in teaching and learning (it can be shared and encourages discussions with other colleagues, it is an easy to navigate system that allows you to keep course models in one place, it maintains motivation, it accesses several types of learning, it provides immediate feedback, it uses active methods).
The instructional design process appropriate to the use of new technologies is now emerging as a process based on the teachers' awareness of the content resources they offer the students to explore, the learning tasks that incorporate cognitive strategies and sharing evidence on completing the learning tasks with the others. We notice the transition from the traditional, normative and prescriptive meaning of design, to its conception in methodological variants, in strategic alternatives. Approached in a constructivist way, modern design combines technology with art, the teacher using current computer media.

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