


THE FIELD OF DIDACTICS

O CAMPO DA DIDÁTICA

EL CAMPO DE LA DIDÁCTICA

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ABSTRACT

Didactics concerns with teaching and learning strategies together. The strategies of teaching refer to the design, programming, elaboration and formulation of learning contents in a verbal or written form (W. Casasola, 2020). We present different didactic strategies related with teaching and learning processes. This work, offers a summary of the study and reflexion about different definitions of didactics that have appeared along the time. Describes a frame of basic knowledge about an issue that attempts to be an invitation for research, analysis, reflexion and applicability of didactics to a formative scope of any level. We present definitions for didactics from its beginning to the more recent approaches. The field of Didactics has evolved from Comenio, Classical Didactics, Critical Didactics, inside the Critical from Traditional, Cognotivist, New Dimension Didactics. Besides this we present the importance of Time in Teachable Moment, the Human Development, Didactical Research, Didactics and Curriculum, Applied Didactics, Constructivism, Modern Didactics, University Didactics, Contemporary Didactics and Competencies.

Keywords: Teaching. Learning. Didactics. Research. Epistemology. Competencies.

RESUMO

A didática se preocupa com estratégias de ensino e aprendizagem em conjunto. As estratégias de ensino referem-se ao design, programação, elaboração e formulação de conteúdos de aprendizagem em forma verbal ou escrita (W. Casasola, 2020). Apresentamos diferentes estratégias didáticas relacionadas aos processos de ensino e aprendizagem. Este trabalho oferece um resumo do estudo e reflexão sobre diferentes definições de didática que surgiram ao longo do tempo. Descreve um quadro de conhecimento básico sobre um tema que tenta ser um convite à pesquisa, análise, reflexão e aplicabilidade da didática a um escopo formativo de qualquer nível. Apresentamos definições para didática desde o seu início até as abordagens mais recentes. O campo da Didática evoluiu de Comenio, Didática Clássica, Didática Crítica, dentro da Crítica da Didática Tradicional, Cognotivista e da Nova Dimensão. Além disso, apresentamos a importância do Tempo no Momento Ensinável, o Desenvolvimento Humano, a Pesquisa Didática, a Didática e o Currículo, a Didática Aplicada, o Construtivismo, a Didática Moderna, a Didática Universitária, a Didática Contemporânea e as Competências.

Palavras-chave: Ensino. Aprendizagem. Didática. Pesquisa. Epistemologia. Competências.

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RESUMEN

La didáctica se ocupa de las estrategias de enseñanza y aprendizaje en conjunto. Las estrategias de enseñanza se refieren al diseño, programación, elaboración y formulación de contenidos de aprendizaje en forma verbal o escrita (W. Casasola, 2020). Presentamos diferentes estrategias didácticas relacionadas con los procesos de enseñanza y aprendizaje. Este trabajo ofrece un resumen del estudio y la reflexión sobre las diferentes definiciones de didáctica que han aparecido a lo largo del tiempo. Describe un marco de conocimiento básico sobre un tema que pretende ser una invitación a la investigación, el análisis, la reflexión y la aplicabilidad de la didáctica a un ámbito formativo de cualquier nivel. Presentamos definiciones de didáctica desde sus inicios hasta los enfoques más recientes. El campo de la didáctica ha evolucionado desde Comenio, la didáctica clásica, la didáctica crítica, dentro de la didáctica crítica de la tradicional, la cognitivista y la didáctica de nueva dimensión. Además de esto presentamos la importancia del Tiempo en el Momento Enseñable, el Desarrollo Humano, la Investigación Didáctica, la Didáctica y el Currículo, la Didáctica Aplicada, el Constructivismo, la Didáctica Moderna, la Didáctica Universitaria, la Didáctica Contemporánea y las Competencias.

Palabras clave: Enseñanza. Aprendizaje. Didáctica. Investigación. Epistemología. Competencias.

1 INTRODUCTION

We begin with an approximation to didactics presented in the book of (Fiore & Leymonie, 2020).

Its objective is to share knowledge both theoretically and practically. They present didactic strategies applicable in their work as teachers. The axis of the book is focused in the different disciplines and their curriculums, that have their own territory in their planification, implementation, and evaluation. The point is to offer practical tools with theoretical fundamentation, to promote the innovation in teaching and improve students learning at different levels. As they say the matter is to establish significative learning in the students (particularly in students of faculty). Teaching can be learn and can be optimized. We base our work in different books (Camilloni, A., 2007, Fiore & Leymonie, 2020), plus different articles of general didactics (Camilloni, A., 2007, da Rosa, S., 2020). They refer to foundational topics of didactics, epistemology and learning. We add to this the evolution of the practice of didactics until the more recent basis of competential teaching and learning, formative research and use of artificial intelligences. We have different alternatives: to read different sources, to research teaching, to practice in class and to ask an artificial intelligence what something means. We can use the artificial intelligence to know the answer to one question and afterwards study from where comes the answer. Nevertheless we can compare what we find ourselves as researchers, to induce our students to research themselves and to verify if our results coincide with the answers of the artificial intelligence. Sometimes is necessary to ask different questions to the artificial intelligence to find the answers that we need. One possibility is to try to follow the path that the artificial intelligence has followed to get their answers or to search ourselves and learn the details that one needs to get the answer to a particular question.

To consult a particular question to an artificial intelligence is more fast and more easy than to find the answer to a question oneself. To research one has to read and to write. To consult and relate different bibliography, different authors, to invent. The students acquire knowledge imagining, understanding, reflecting, creating, taking decisions, thinking. We expect our students to get empathy with ourselves and between themselves. There are different ways of evaluation: diagnostic, sumative, formative, constructive (Leymonié, J., 2008). The students learn a subject while being evaluated.

2 AN APROXIMATION TO DIDACTICS

Fiore & Leymonie, 2020, studies classical didactics and critical didactics. They reflect about the contributions of the field of the epistemology to the contemporary didactics. Is presented the didactical system, their components, the role of the students, the cultural knowledge and the role of the teachers, the levels of development of the educational contract (Brecko, D., 2004) and the didactic transposition (Achiam M., 2014). The proposal of the book of Fiore & Leymonie 2020, pretends to collaborate to the construction of the idea of didactics as a guide for teachers action, in the understood that it occupies the analysis and interpretation of teaching situations (Brousseau,G., 2007) . To know and comprehend the contributions of sociology, psychology and pedagogy to the field of didactics allows to comprehend the complexity of the area that it addresses.

The development of science and technology have induced social changes, political, economical and cultural that have transformed our conceptions of the world. These changes impact in our perspective about teaching and the answers to the basic questions about didactics: what and how to teach. In the actual century, to teach presents challenges not produced before. Teachers must accompany these challenges and develop new forms to comprehend the classroom in all its complexity (Fiore & Leymonie 2020). We present topics, traditional and controversial that can help to reflect about everyday practices. Beginnig from the conviction that teachers are the responsables of constructing didactical proposals adapting them to their own contexts we propose to contribute to a deep reflexion about them. Didactics is conceived as a discipline that results from professional processes concerned with a methodological and ideological point of view. Answers the conception of education in a particular society, and its depends on the historical moment in which we live. Each society, in each historical moment develops its educative process, with teachers being professionals of teaching practices that develop their practices acting and reflecting about them (Fiore & Leymonie 2020). (Camilloni, 2007) reflects about the central theoretical problems of the didactics, which is defined as a teaching theory, and that is conceived as a social science. The problems that has experimented along its development, bound to the variety of situations socio-historical that have framed the construction of the didactic theory along many centuries of its formal existence as discipline, as well as the different practical problems that should solve have contributed in some way to blur its applicability. However has endured along the time and has deployed its interest through the elaboration of renewed proposals destined to better the education. Along the time, the field of the didactics was diversifying until the

normative didactic was composed of a variety of theoretical focus. Then the work of professors is not only to interpret, traduce and accommodate a proposal to specific contexts but to make elections, discard options, decide combinations (Camilloni, 2007).

3 THE FIELD OF DIDACTICS AND ITS JUSTIFICATION

(Fiore, E. & Leymonie, J.,2020) situate the didactics in a point of confrontation between the state of scientist and social knowledge in the considered moment, the social practices of students and their relationship with knowledge, actors and interlocutors, cognitive development, conceptions and previous knowledge of students. Feldman (1999) published an article in the book *Handbook of Creativity* of R. J. Stetnberg, 2014 titled "The development of creativity". In this article Feldman presents empirical data about the characteristics of creativity that use the *intelligent* students in comparison with *normal* students. Says that didactics is a discipline turn over in different ways to the practice of teaching or other dimensions in it that produces a variety of knowledge and encompasses theorical principles, comprensive models, practical rules, methods and strategies articulated in different ways. Didactics refers to the science of teaching, in relation to aims, subject matter, methods and frameworks within a specific field. Is based on multiple theories of teaching, and in a wider sense, theory and the practical application of teaching and learning methods.

A didactic method is a teaching method that follows a consistent scientific approach or educational style to present information to students. The didactic method of instruction is often contrasted with dialectics and the Socratic method; the term can also be used to refer to a specific didactic method as for instance constructivist didactics (Wikipedia, Didactic Method). It matters to deepen about the discipline of didactics and to consider that the origins of any discipline is in the possibility of formulating questions about it. One of the fundamental questions of didactics presented by Comenio was: how to teach all to everybody. This question has given origin to varied didactical currents that were fed from the context in which was developed, just because didactics is characterized for giving answers to historical and political questions. To the effect of organizing the diverse kind of answers, are conceived different moments in the development of didactics. Education has assumed many forms according to the ends that encourage it, depending in concepts of society, of culture, of the (wo)men that sustains it. It is in this way that when we study different educative systems (along the history) we find that many of them are sustained over different forms of persuasion and many adopt indoctrination. Didactics is a discipline that talks of teaching and by this

reason occupies the study and design of the curriculum, the teaching strategies, the teaching programation, the problems to put it in practice and the evaluation of learning and teaching (Camillony, A., 2007).

(R. Anijovich, 2024) shares issues related to teaching planification. According to her, the way in which traditionally we planify and teach is a logical sequence that can be explained as "first I explain and after they apply" and this does not necessarily results in learning. For Anijovich there is a time for planification, for reflection and for anticipation. This changes the sequence. If we want to think the relation with another sequence a possibility is: the planification is the opening, the teaching of the course is the development and the evaluation is the closing. There is a moment to think the course in the planification. The development can be seen as an application of problem based learning where students learn about a subject by working in groups to solve an open-ended problem, the problem in what drives the motivation and the learning (CTI, 2024). In the planification write an initial problem statement. Include information on what you are to teach. Make sure you are proceeding to state the *real* problem as opposed to the *perceived* problem. For this: find out where the problem came from. Explore the problem. Use the statement-restatement technique. Apply problem analysis. Problem resolution is the final part of the most broad process that includes identification and determination of the problem.

4 CLASSICAL DIDACTICS

The integral work of a teacher, is to try to make the student comprehend what means to accept. This with what the individual is in agreement is what he accepts. If he fixes his attention in something, he accepts this. Is to be identified with this, be bad or good. When the mind accepts or is in agreement with something or condition, the individual decree this in its world. What one thinks or meditate is accepted, identifying with this by virtue of his attention (Saint Germain, 2016).

The first answers can be inside what we have denominated classical didactics. Was developed by Juan A. Comenio. Comenio had placed the emphasis in the curriculums and in the protagonism of the teacher. Was a cosmopolitan and universal man, born in the actual Czech, convinced of the important role of education in human development.(Comenio, Wikipedia).

Comenio was theologian, philosopher and pedagogue. The work that has given fame to him was Didactica Magna. Was interested in the study of languages. Is known as the father

of didactics. Comenio puts the emphasis in his phrase "teach all to everybody". In that we all have the possibility to learn because educability is in human nature (Comenio, Wikipedia; Fiore & Leymonie 2020).

Education should be universal, have method and be pleasant. The student must be the center of attention. To teach must be a disposition of time, object and method. Have contributed educative ideas based in three methods: comprehend, retain and practice, to the end of improving teaching. He bowed to the capacity of sensitivity of the professor to the student as well as to the interaction as a way to interact and guarantee the success of learning. Comenio is known by his contributions to teaching tecnics. A second time of classical didactics and centuries after the development of didactical thinking gives rise to other kind of answers to the same original question. At the end of the XIX century begins to emerge in Europe, as reaction to tradicional teaching and in the frame of a new historical and social context, a movement called "New School". In Europe, Progresive Education (P.E.), took the form of the "New Education Movement" (also called New School).

New School provides helpfull resources for teaching to the new instructors as well as to the experienced teachers serving as a knowledge base of best practices and as guide to various pedagogical techniques and strategies (N.S.). This movement, consolidated during the first years of XX century has proposed an educative philosophy that attends the needs of the new social classes that appear as a product of scientifical and technological development, initiated from the first industrial revolution. As is said in Fiore & Leymonie 2020, between the principal european impulsors of the ideas of the New School there are: J.J.Rousseau (1712-1778), J. Pestalozzi (1746-1827), F. Froebel (1782-1849), J.F. Herbart (1782-1852), M.Montessori (1870-1952), O. Decroly (1871-1932). We highlight the proposal of Froebel who has the merit of rescue the work of Comenio. Froebel takes the ideas of Rousseau about rights and the possibilities of the persons to develop themselves in freedom as well as the ideas of Pestalozzi from his emphasis in practical experience and his conceptions of education at the service of society transformation. The educative proposal of Froebel has as articular axis the integral conception (can be said interdisciplinary) of scholar contents. Arts (music, painting, sculpture) have had an important rol in the educative approach of Froebel (Fiore & Leymonie 2020). Matters the work of Herbart, whose scientific approach, based in philosophy and psychology provide the first theorical and substantial elements that have contributed to the construction of the disciplinar field of the didactics. In paralell, in United States was generated the Progresist Schools, whose principal ideologist

was J. Dewey (1859-1952), Wikipedia. Was one of the principal pragmatic philosopher of the first half of XX century, whose progresist ideas, totally current were captured in approaches to the curriculum as well as in teaching practices of the time: active methods, globalized curricula, links to the life of students, "to learn doing", addressing aspects that go beyond the purely instructional. In Uruguay, P. Figari (1861-1938) and C. Vaz Ferreira (1872-1958) were representant of thinking that have had a great paralelism to Dewey proposals and that has influenced strongly in educative proposals of uruguayan school. Figari contributions from his humanistic position, were directed to educative proyects being a referent of "education for life". By the other side, Vaz Ferreira was directly linked to education from management, teaching and theory from educative philosophy that propose two interesting ideas to think the curricular organization. The first idea: *penetrability* in the

sense of these knowledge that must be teached along enough time to deepen his comprehension. The second idea: *staggering* knowledge must be teached gradually, considering sequences and hierarchy of the involved disciplines. So much as the european New School as the American Progresist Schools recognize the rol of the student as active subject of teaching giving to education an important rol in society transformations through the development of the individuals applying guidelines that are constructed in function of the interest emerging in the classrooms. These strategies are based in experience, observation and resolution of problems, treating that the students adopt an active actitude in front to the teaching proposals involving also the families. To much of these aspects have been preserved in actual didactical postures, although around the actual second half of the century, educative thinking was confronted to the technical perspective in function of new neccesities, social and cultural to find didactical answers, always to the same question. Is the third time of classical didactics, in which matters the racionalization of resources and the time, the notions of efectiveness and efficiency and the tasks planification. In this social and economical frame arise principally in the anglosajon world, the programmed instruction movements where the didactical focus promote teaching by "learning objectives". The didactical models that were generated in this theorical conception puts its emphasis in behavior observation. From this philosophic position, didactics is conceived as "instrumental-normative" where the question to answer is focused in: how to teach?, which are the techniques more effective to achieve learning in the students?

5 CRITICAL DIDACTICS

Actually, the technical rationality coexist with alternative didactical approaches that began to emerge in the last two decades of the XX century, producing a second paradigmatic change in the didactic field and marking the limits of critical didactics. Again the philosophy realizes their inputs in the critical theory dimension, represented by the Frankfurt School (E.F., Wikipedia) being the most influential philosopher J. Habermas (1981, Wikipedia) . His specific work lies in a change of look around the comprehension of reality from a science conception that tries to find the meaning of the facts, not only to describe them but to interpret also. The implication of this philosophical position in the construction of the actual field of didactics is crucial. The classroom is not conceived anymore as a homogeneous and foreseeable space but is a place where people find themselves around their particular interests, in permanent change and influenced by their own contexts that contribute their own interpretations of reality. The teacher, at the time to teach, can not do other thing that attend these meanings and these interpretations (Fiore, Leymonie, 2020). Is used to mention critical didactic as a current that conceives teaching as a political process, taking contributions from diverse human knowledges (education, culture, social studies) and rejecting the traditional idea of teaching as objective activity. The actors involved with educative institutions are from this point of view not only students and teachers. Critical didactics considers that the act of teaching besides being a political act elapses in a social scene, economical and cultural, where coexist the family, the school, and the environment around topics as the democracy and social justice (Fiore, Leymonie, 2020).

Critical didactics as such is a field in construction where diverse authors contribute from their own contexts what is consistent with their own philosophical fundamentals. In latin america the input of Paulo Freire was decisive to think didactic from the critical theory in our countries. Freire proposes a pedagogic transformation that creates, criticizes and liberates, an awareness that allow to go beyond of the fear to freedom (Freire, P. 1970). Although didactical approachs are diverse, there are common aspects between the stand out to promote the intentionality of foster critical thinking in students and also in professors. We must reflect about conceptions and values promoted by the society in which we are immersed. This capacity will allow to opt and take decisions at the moment of act. This reflexive capacity is a fundamental goal of the critical teaching one of whose finalities is social transformation through education. In this sense is impulsed the possibility to live with more freedom of thinking based in ideas whose validity was though individual and collectively with

shared goals (Fiore, Leymonie, 2020). Authors like J.M. Alvarez Méndez (2001) say that didactics consists in to know how to decide between different and intelligent options, generated from their epistemological structures that guarantee teaching as a reflexive and moral practice. What didactics teaches from this perspective is to ensure and better the processes of educative learning.

By other side, Angel Diaz Barriga et. al. (1998) contributes with the idea of didactics as being structured to attend teaching problems in a situation of classroom didactic action. "Didactics pretends to guide the teaching processes, but it turns technician when rejects to analyze the conceptual fundamentals to these proposals". The french J.P. Astolfi signals that didactics addresses the problems that have the students at the time to comprehend the different knowledges that is pretended to teach. The author distinguish three didactics generations where the third generation has a consistent approach with the mentioned difficulties being able to locate them into the critical currents of didactics.

There are three generations of didactics :

- Traditional didactics: is considered teaching and learning in a unique process. The preset objectives are legitimate, the didact is an scholar, the contents are conceptual, the methodology is conductist, the logics of this traditional didactics is the application of the sciences to pedagogy.
- Cognitivist didactics: continues the predominance of the contents to teach. Are recognized separately the processes of teaching and learning, being teaching stated as a resolution of problems or as a cognitive task that faces the student. As in the first generation, is not considered the social and historical situation of teaching. The specific disciplines seem to realize less mechanical contributions.
- Didactics of new dimension: uses some of the specific and disciplinary teaching to analyze the didactical action and elaborate new strategies of action. It is to choose about the numerous scientific descriptions accepted by the community the one that adapts better to the defined didactic objectives.

6 TEACHABLE MOMENT

We introduce to didactics the concept of teachable moment, this is the time at which learning a particular topic or idea becomes possible and easiest. The concept was popularized by Havighurst 1953 book in the context of education theory. He explained: "a developmental task is a task that is learned at a specific point and which makes achievement

of succeeding tasks possible". When the timing is right the ability to learn a particular task will be possible. This is referred to as a *teachable moment*. It is important to keep in mind that unless the time is right, learning will not occur. Hence, it is important to repeat important points whenever possible so that when a student's teachable moment occurs, (s)he can benefit from the knowledge".

7 HUMAN DEVELOPMENT

Broadly, human development is the exploration of the factors that play a role in influencing how a person becomes who he or she is. With this in mind, the goal is to study these factors through sociology, psychology, biology, religion, genealogy, and more. Human development and education work together (Pacifico, 2020).

Human development focuses on assisting students so they can have a better educational experience. Being able to have a rich and safe education is a human right. This can be difficult for students and so, human development specialist become a resource for students to achieve their goals and learn skills to beat factors that may stand in the way of their education.

The Human Development, Learning, and Culture (HDLC) program at advance research and practice in education, through the application of theoretical models and concepts, to real world educational issues. Investigations of learning and developing, including the unique contributions of culture to these processes, are applied widely to classroom, afterschool, work, and digital contexts. This work is interpreted through a variety of theoretical lenses (e.g., sociocultural, social and emotional, cognitive). Coursework emphasizes three primary areas: a) learning and developing, b) culture and diversity, and c) research methods. HDLC graduates have found careers in a variety of settings including university teaching and research, social policy analysis, curriculum and program evaluation, schools and community organizations, and corporate learning communities.

(JSED editors, 2023) questions: what research is important today in human development, learning and education? What are some important research questions, problems or challenges that scholars in your field of specialization should address in the coming years? What types of studies should be conducted to move your field further?

Learning Sciences and Human Development is a graduate study option that focuses on the nature and interaction of learning, development, and culture in a variety of settings

(EDU, 2024). Learning and development is studied where it happens: families, communities, workplaces, schools, college.

8 DIDACTICAL RESEARCH

The educative approach emerged in the 80 and 90 fundamentally in anglosajon scopes, produced movements that pointed to the entailment between the theoretical elaboration in development and curricular innovation with the didactical research and the training of teachers. This relationships consolidate, deepen and expand with the time. Today we can affirm that resulted very productive to tackle teaching problems from practical proposals whose characteristic are similar to the ones that face the problems refered to didactical practice and are supported in epistemological and psychological problems.

From the perspective of didactical research the proposal is to abord in depth events and interactions that are produced in the classroom giving maximal importance to teachers, students and the context in which the classroom is inserted. (Fiore & Leymonie, 2020)

9 DIDACTICS AND CURRICULUM

We present the definitions of Didactics of years ago when there were characteristics that were repeated: scientific, technical and artistic characteristics, one or another to a greater extent according to ideologic, interpretational and different interes (Alvarez, J., 2001).

The incorporation of the curricular discourse accentuate the work of Alvarez, J. just in the coincidence, in the critics of some of them, as in the bet for conceptions that discard some alternatives in favour of others. According to (Alvarez, J., 2001) the last modifications in the didactics conception of Klafki, 1995 which we can take as reflex of the alive dynamics of thinking are ilustrative to this respect and serves as base to know what has been the didactics from the perspective and the interpretation of the Curriculum. In some cases, the coincidence between Didactics and Curriculum is total, while in other cases, the diferences are of hue. There will be cases where the understanding is not possible because there are different cultures that manage different expressions that allude similar concepts, going from one to the other without confusing the ideas. All will depend of what one understand by Didactics and Curriculum, and of the uses more or less restricted, more or less wide that is done of them. Depends also of the optics that we adopt and of the ideological positions in which one situates. Included but less relevant intellectually, will depend of styles and peculiar ways of being, favorable to make restricted places of rights less explicit. Nevertheless, there is a

growing tendency to the approximation between both fields that include didactics and curriculum. Now we can perceive a movement that describes the common will to move closer the studies of one and other place, opening the sight to the space of the didactics and approximating the interest of the curriculum to the educative practice. Alvarez, 2001 says Bolivar A., 1993, alludes to the lost paradigm in the United States to refer to the poor attention that traditionally was borrowed to the "didactics of contents", equivalent to the area that includes Applied Didactics. According to him is necessary to recover this space of reflexion and work. Insofar as this proposal prosper, both traditions, curricular and didactics will approximate their perspective creating a common culture and a field of shared work. Alvarez, 2001, says that according to Skilbeck, 1990, curriculum has more to be with contents and didactics with its transmission. In this interrelation both tone down mutually. Says that there are three classes of knowledge of the contents:

- knowledge of the subject matter
- pedagogical or didactical knowledge
- curricular knowledge

If the knowledge of the subject matter attends to the "comprehension of the theme proper of an specialist in the field", didactical knowledge refers to "the comprehension of how determinated themes, principles and strategies in some matters, are comprehended right or wrong, are learn or tend to forget. Curricular knowledge refers to "the familiarity with the forms of organizing and dividing the knowledge for teaching in: texts, programs, mediums, ejercicios books, other ways of practice, etc". (Shulman, 1989). In the explanations of (Klafki, 1995), this knowledge corresponds to the preparation of the lessons, who is by this author, one of the tasks that encompasses the basic problems of the school and in whom is concrete the interrelation between the theory and the practice, between the experience and the reflexion.

The similitudes between the conceptions of didactical reasoning and the knowledge of the content of teaching are, by Shulman 1989, the base over which can be constructed the approximation to both traditions: curriculum and didactics.

10 APPLIED DIDACTICS

Englund, T., 1995, distinguish different forms of analyzing the concept of educative content, tightly related with the basic structure of Applied Didactics and proposes the next hierarchical clasification:

- Epistemic contents of the schoolar matter: this aspect of contents derives of the

relation between the scholar matter and a subyacent scientific discipline. By example, considering physics, encompasses central concepts as gravity, power, proporcionality, electricity, etc.

- Contents of the schoolar matter: can be conceptualized in different forms, from the no problematic and given, following educative politic objectives, by means of different essencalist interpretations (the relation between the schoolar and the scientific discipline, a tradition of schoolar matter).
- Knowledge Contents: a relational área, theoretically demarcated that includes the epistemic and not epistemic dimentions, such as relations between individual and society, individual and nature, etc, which can be conceptualized in different ways, with different didactical implications.
- Socialization contents: matter the contexts with different meanings that exemplify the three educational conceptions that Englund describes: patriarchal (based in traditional values), rational-scientific (functionalist vision) and democratic participative.

11 CONSTRUCTIVISM

Constructive teaching is based in Constructive Philosophy of Education. It believes that learning occurs when students are actively involved in a process of knowledge construction instead

of passively receiving information. The people experiences the world and reflects upon those experiences, make their own representations and incorporate new information into previous knowledge. There are related the processes of assimilation and accommodation (UB).

- Assimilation is the process of taking new information and fitting it into existing one.
- Accommodation refers to using new information to revise and redevelop previous schemas.

Consequences of Constructivism are:

- students learn better when are involved in learning experiences instead of passively receiving information.
- learning is inherently a social process because is embedded within a social context where students and professors work together to build knowledge.
- the goal of teaching is to provide experiences that facilitate the construction of knowledge.

A Constructivist Didactics is based in problem solution. Encourages knowledge activation and consciousness to be taken progressively. The contents are presented as problematic situations that the students must solve. Didactic materials are internally organized and connected logically.

Is centered in student learning. The learning process is a meaningful construction. This process is not realized by the student that learns alone. Exists a biological structure in the human beings and a mechanism of development that allows to construct their knowledge. Culture is a fundamental part of development, collecting an actual state of scientific knowledge and cultural knowledge. Besides the subject that learns are the others, all the ones from the immediate environment: the educative center, the partners, the teachers, the texts authors and the history of the ideas and scientific thinking through their protagonist.

The teaching procedures operate favoring the reorganization of knowledge, their reconstruction and conceptual evolution (da Rosa, 2020; Chavarria 2006).

12 MODERN DIDACTICS IN CONTEMPORARY EDUCATION

Fast development of technologies of information and telecommunications have changed two very important social processes: access to information and communication, giving rise to globalization of economy, culture, education and other areas of social life. The most important, that increases the quality of life of individuals, from which follows the development of the others is education (Kedzierska & Wnek-Gozdek, 2015). Development of education and culture, of technologies, change the way we think and learn. Transformation become pervasive and concern almost all aspects of human life. Between the most important there is:

- Civilizational changes: there is a development of information processes that drives the development of civilization. The information sector, based in production processes, in the generation, collection, processing and publishing become dominant and increases national incomes. Without information there is no knowledge. So the priority development is played by key and vocational competencies acquired in the process of lifelong education. Information skills, between them the development of competencies have become fundamental for the development in the new conditions.
- Technological changes: digital information and communications technologies have offered free access to increased resources of timely, reliable, strategic, useful but also random, unreliable, false and harmful information. Safety and usefulness of the

obtained information depends on ourselves and our information competencies (MCN 2002, Peratto 2024).

Modern forms of social communication enable contact in the field of audio and video in every place and time. By the other side, the development of new technologies that offers reliable, strategic, useful, safety, private communication has better and more reliable professional consequences than the actual technologies. There are new professions and the known ones acquire new meaning. Professional competencies are crucial for career and professional satisfaction. This has not to affect the new, useful, reliable developments that does not decrease the security nor economy of their technological users.

- Transformation of social structures: autonomy of institutions and individuals, progressive individualization and progress as a personal project, changes in life style, need for professional stability and the continuous competence updating, asks for more time reducing family life. Nevertheless, to develop our own technologies while we use the actual, asks for time to study, to create, to define, with a strong practical components, where the emphasis of teaching is in students learning.
- Cultural changes: in a global world with new media and linguistic competence, modern man can contact each other, independently of geographic location and be part of any culture. This is not a problem to new developments, we can construct our own technology while we continue using the one that exists.

13 UNIVERSITY DIDACTICS

Why the instructors in higher education need to redesign their curriculums?. Collis B. 1998, says there are four compelling reasons for change in didactics: a review of principles of good teaching and learning, the increasing diversity of students characteristics and their needs, the strategic and educational rationales for different types of flexibility increase in our courses and the need for instructors in faculties of education. Competency orientation is essential in study programs and in designing university study and its objectives. University didactics is a theory and practice that focuses on teaching and learning in higher education. Involves the study of problems in higher education, to help students learn and the translation of knowledge into a form that students can understand. Consider the study carried in the Faculty of Education and Humanities of the National University of San Martin (Lopez-Novoa, 2021). In this context, implementing scientifically conceiving university didactics is

fundamental for professional transformation of teachers and the improvement of the training practice that they develop. As the authors say, one of the fundamental conditions for improving the quality of university teaching lies, in our view, in making possible a substantive change in the configuration of the professional identity of university teachers. In the light of these considerations, studies that provide theoretical modelling on investigative skills are insufficient since most theoretical and empirical results focus, specifically, on the training of a profession. A correlational descriptive study was conducted; theoretical methods of induction, analysis, synthesis, as well as empirical measurement methods were used.

14 CONTEMPORARY DIDACTICS

Contemporary Education (C.E.), is a framework for teaching and learning. Based on this framework, Contemporary Education offers curricula, institutes and a blog to reimagine education for the 21st century. The contemporary education mission is to transform education to empower students to make meaningful decisions in their lives. The vision is to transform schools into centers of meaningful reflection on which we respond to our human needs practically and theoretically, in the pursuit of healthier lives and more just peaceful and sustainable societies.

There are 5 principles of contemporary education: connect, care, critique, collaborate and create. The main values of contemporary education are: Health (Mental, Physical & Spiritual); Social Justice and Peace, and Environmental Sustainability.

The founder and primary contributor to Contemporary Education is Sarah O. Weiler (Weiler, S.), long-time educator in Global Education from the University of Illinois and in Social Sciences from the University of Chicago.

15 COMPETENCIES

In Peratto 2024, were presented the competencies as were defined in Uruguay. Here we present the competences as where published in Cambridge in (Vitello et. al., 2021). There is presented an interpretation of competencies to support teaching, learning and assessment. As they say the concept of competencia has propagated in the education including vocational education and training, Includes education in primary, secondary and higher education and language learning. In recent years, attention on competencies has evolved, becoming a key for international debates on learning, curricula and evaluation within general education (European Commission, 2019; OECD, 2017; UNESCO, 2016). Developing

competencies is one of the main objectives of education, serving not only for students but for the economy and society. When a person is competente in a domain has the capability to use the skills of the domain to achieve tasks and goals beyond the educational program. Competente people contribute constructively in workplaces and social life; competencia is related to the notions of proficiency and mastery used in different fields (Council of Europe, 2001; Rycroft-Smith & Boylan, 2019). The concept of competencia is not interpreted in the same way by everyone. There are many different definitions and approaches to integrate competency with teaching, learning and assessment (Weinert, 2001). The term competencia can be used as a synonym of skills, outcome and behavior. The research report of Vitello et. al., 2021 has presented an interpretation of competencia appropriate to the diverse range of educational areas. Their definition is: "competencia is the ability to interpret and apply contextually- appropriate knowledge, skills and psychosocial factors (e.g. beliefs, attitudes, values and motivations to consistently perform successfully within a specified domain" . A competent person integrates and applies the contextually appropriate combinations of knowledge ,skills and psychosocial factors. Having a definition for competencia has its benefits, including:

- Encourages assessment, teaching and learning.
- Indicates how to break down competences appropriately giving rise to high quality teaching, assessment and certification.
- Assures that the fundamental features of competencia stays at the forefront of discussions

Next we present competencies as defined in Argentine (Kanobel M., 2023) in time of COVID-19. From 2020, education faces a historical moment where teaching practices are mediated by digital technologies and teaching roles takes central stage. This article describes teachers profiles of Superior Education in Argentine, analyzes the level of their digital competencies and compares them with their autoperception. The obtained results evidence that the professors participant in the research are perceived with greater digital competencies and that exist differences in competencial levels depending on gender and disciplinar area. Is observed that competencial level is correlated positively with antique in the inclusion of digital tools in teaching practices. Is also concluded that the area less valued is the one that promotes the development of digital competencies in the studentship. In consequence, related with the discovers of this study it would be propitious institutional actions that strengthen the diverse competencial areas of the professorship (Kanobel M, 2023). In

Argentina, in the context of mundial pandemic, the government degree to suspend presential activities in all the educative levels. In this way, all the educational institutions confront the challenge of gestate new strategies to guarante digital formative processes, attending aspects related to human, technological and social resources. This situation questioned the educative community that was not prepared for this challenge. Professorship in general and Superior Education in particular began to develop strategies to give continuity to pedagogical linkage , rethinking their practices, constructing over their own experience or the experience with others, learning how to learn in crisis time, incorporating digital dispositives to mediate teaching. After pandemic, education initiate presential, remote or mixed teaching, depending on the disposition of the different juridictions (Kanobel M., 2023). In this context, was evidenced an acceleration in the incorporation of digital technologies, in the formative processes and the needs of the professorship to develop its own digital alphabetization. In this sense, are configured the digital teaching competencies that is related with the habilities, attitudes and knowledge required by the teachers in a digitalized world.

By other side, the European framework for digital competencies of teachers, called DigCompEdu (DCE), is the one presented as the more adecuate to evaluate the teachers digital competencie and that gathers a set of competencial areas that must have the professorship to propitiate learning strategies mediated by digital tools that must be innovative, inclusive and effective (Kanobel M., 2023). DigCompEdu contemplates the following areas: professional, digital contents, commitment teaching and learning, evaluation and retroalimentation, empowerment of the students and development of digital competencies of the students. Besides this are established levels of progression in the development of digital competencies of the faculty. They are:

- Novel (A1): corresponds to this group the individuals that are conscious of the potential of the digital technology, but have had few contact with them and require orientation for its use.
- Explorer (A2): belongs to this level who use digital technology without a strategic approach and need to expand their competencies of stimulus and inspiration.
- Integrator (B1): belongs to this group who uses a variety of digital technology with confidence, in a creative and critic way with the goal of improving and extend their pedagogical practices.
- Lider (C1): we locate in this group who implement a vast repertory of flexible, complete and effective digital strategies, knowing how to choose the more adecuate for their

context, constituting in referents of colleagues.

- Pioneer (C2): this level is integrated by who experiment with complex digital technologies and develop innovating pedagogical approaches. They lead and question their actual pedagogical practices and are referents of the more young faculty.

In the levels A1 and A2 the professorship explores and develops basic practices. In the B1 and B2 integrate, enlarge and reflect about the educative job. In the C1 and C2 transfer knowledge and judge in a critical way the practice.

16 FURTHER WORK

We have studied competencies in the university of Cambridge and in Argentina. We plan to study the different competencies developed in Latin America and the European Union, to compare and redefine the competencies in Uruguay.

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