

The relevance of the instructional design in learning materials for web: report of a case study

Andreza Regina Lopes da Silva¹

Cristina Pfeiffer²

Elizabeth Soares Bastos³

Sandra Menezes de Vasconcellos⁴

ABSTRACT

Consolidated scientific studies in the area of distance education show the relevance of instructional design in the preparation of teaching materials. This is due mainly to the motivation and encouraging self-learning material can exert in stimulating students' autonomy in the form, which should be able to "build" their knowledge network. This fact was taken into consideration in the preparation and implementation of online courses that make up the area "Training via Web" from Board of Directors of the Extension Courses from Fundação Centro de Ciências e Educação Superior a Distância do Estado do Rio de Janeiro (CECIERJ). Since the second half of 2009, the courses, which are free and offered completely at distance, are directed to working teachers, from public and private schools. This article presents a case-study through a qualitative research carried out in the period of September/2009 to July/2012

with participants of one of these courses, entitled Continuing Education in Educational Technologies on the Web (FCTEWeb) – Modules 1 and 2. Of the 1,364 teachers who participated in the period mentioned, according to the results obtained by this research, with the 682 approved participants, the satisfaction and approval from participants regarding the instructional design model used was evident. According to them, this model not only facilitated the learning process regarding the use of some Web 2.0 tools, as well as the subsequent application in their teaching practice, the main proposal of the FCTEWeb course.

Keywords: Distance Education. Web 2.0. Instructional Design. Teaching practice.

¹ Federal University of Santa Catarina. E-mail: andreza.lopes@ufsc.br/andrezalopes.ead@gmail.com

² Fundação CECIERJ. E-mail: pfeiffer@cederj.rj.gov.br

³ Fundação CECIERJ. E-mail: bethbastos@cecierj.edu.br

⁴ State Education Department of Rio de Janeiro. E-mail: sandrasconcellos@prof.educacao.rj.gov.br

RESUMEN

Estudios científicos consolidados en el área de educación a distancia muestran la relevancia del *design* instruccional en la elaboración de material didáctico. Esto se debe, principalmente, a la motivación y al incentivo del autoaprendizaje que el material puede ejercer en el estímulo de la autonomía de los estudiantes en la modalidad en que deben ser capaces de “construir” su red de conocimiento. Este hecho fue tomado en consideración en la elaboración e implementación de los cursos *online* que componen el área “Formación vía Web” de la Dirección de Extensión de la Fundación Centro de Ciencias y Educación Superior a Distancia del Estado de Rio de Janeiro (CECIERJ). Desde el segundo semestre de 2009, los cursos, que son gratuitos y ofrecidos totalmente a distancia, son direccionados a profesores, en actividad, de escuelas públicas y privadas. En este artículo, se presenta un estudio de caso por medio de una investigación cualitativa realizada en el período septiembre/2009 a julio/2012 con los participantes de uno de estos cursos, titulado Formación Continua en Tecnologías Educativas en la Web (FCTEWeb) – Módulos 1 y 2. De los 1.364 profesores cursantes atendidos en el período citado, de acuerdo con los resultados obtenidos en esta investigación, con los 682 cursantes aprobados, se evidenció la satisfacción y la aprobación de los cursantes con relación al modelo de *design* instruccional utilizado. Según ellos, este modelo no solo facilitó el proceso de aprendizaje en lo que respecta a la utilización de algunas herramientas Web 2.0, así como la posterior aplicación en su práctica docente, propuesta principal del curso FCTEWeb.

Palabras clave: Educación a Distancia. Web 2.0. *Design* Instruccional. Práctica docente.

RESUMO

Estudios científicos consolidados na área de educação a distância mostram a relevância do *design* instrucional na elaboração de material didático. Isto se deve, principalmente, à motivação e ao incentivo à autoaprendizagem que o material pode exercer no estímulo da autonomia dos estudantes na modalidade em que devem ser capazes de “construir” sua rede de conhecimento. Este fato foi levado em consideração na elaboração e implementação dos cursos *on-line* que compõem a área “Formação via Web” da Diretoria de Extensão da Fundação Centro de Ciências e Educação Superior a Distância do Estado do Rio de Janeiro (CECIERJ). Desde o segundo semestre de 2009, os cursos, que são gratuitos e oferecidos totalmente a distância, são direcionados a professores, em atividade, de escolas públicas e privadas. Neste artigo, é apresentado um estudo de caso por meio de uma pesquisa qualitativa realizada no período setembro/2009 a julho/2012 com os participantes de um destes cursos, intitulado Formação Continuada em Tecnologias Educacionais na Web (FCTEWeb) - Módulos 1 e 2. Dos 1.364 professores cursistas atendidos no período citado, de acordo com os resultados obtidos nesta pesquisa, com os 682 cursistas aprovados, ficaram evidenciadas a satisfação e a aprovação dos cursistas em relação ao modelo de *design* instrucional utilizado. Segundo eles, este modelo não só facilitou o processo de aprendizagem no que diz respeito à utilização de algumas ferramentas Web 2.0, bem como

a posterior aplicação em sua prática docente, proposta principal do curso FCTEWeb.

Palavras-chave: Educação a Distância. Web 2.0. Design Instrucional. Prática docente.

INTRODUCTION

Distance Learning (DL) in Brazil is experiencing a period of growth and organization in several existing methodologies (synchronous or asynchronous), academic and corporate (ABED, 2011). Nowadays, many successful projects involving distance learning are mediated by Information and Communication Technologies (ICTs), as these contribute significantly to overcome geographic and temporal barriers (SILVA; CASTRO, 2009). However, one cannot think DL without being concerned about the artifacts that this involves, as this mode of teaching and learning has been used as a means of expanding society access to education. According to the National Educational Bases and Guidelines Law (LDB, 1996),

[...] Distance Education (DE) is a pedagogical activity characterized by a process of teaching and learning held with the teaching mediation through the use of didactic resources systematically organized, presented in different information technology and communication media, which can be used in isolation or in combination, without the mandatory frequency of students and teachers (art. 47, § 3º).

In this mode of teaching/learning, it is important to provide motivational activities from the various available learning resources, which will require a large investment, especially during the planning and

implementation of the Instructional Design (ID) of this material in order to encourage students in the knowledge construction process so learning can occur. It is current mentioned, nowadays, the media convergence as a necessary element for the new practices that promotes learning. According Bielschowsky *et al.* (apud CAMPOS, 2007), "[...] course materials in Distance Education must provide a motivating content and stimulate self-learning, helping students to "construct" their networking knowledge and facilitating interactivity between students and between students and teacher".

Through this discussion, this article aims to present an innovative experience in the field of Training via Web of the Board of Directors of the Extension Courses at "*Fundação Centro de Ciências e Educação Superior a Distância do Estado do Rio de Janeiro (CECIERJ)*", by offering Continuing Education in Educational Technologies on the Web (FCTEWeb) online course – Modules 1 and 2 – with the intention of contributing to the research and researchers of this field. The course, free of charge, has been offered since the second semester of 2009, to active teachers from public and private schools, primarily in the State of Rio de Janeiro. With the philosophy of "learning-doing", this course proposes educational strategies to work with some Web 2.0 tools in teaching practice.

This article was organized into six sections; it is introduced by the research theme. In a second moment, it follows with conceptual aspects, based on a pre-selected literature that addresses the changing on educational paradigms due to the use of ICTs in Education (social interactionist

educational paradigm) and instructional design for distance education. Subsequently, the third section describes the methodology used to create this article. Then, on the fourth section, the object of study and its application is presented. On the fifth section, we present the results of a qualitative survey performed with course participants in three distinct periods when the course was offered: 3rd quarter of 2009 (pilot project); 3rd quarter of 2010 and 1st half of 2012. Finally, we present the final remarks from all the planning, execution and analysis of the study object.

1. CONCEPTUAL ASPECTS

In items below, we describe the theoretical concepts that support the case study presented in this article.

1.1. *Social Interactionist Educational Paradigm*

In the "banking" approach of education, "knowing" is a donation of who judge themselves wise to think that they know nothing. Donation that is based on an instrumental manifestations of the ideology of oppression (FREIRE, 2002). This statement characterizes a behaviorist educational paradigm, conditional, that is still present in most Brazilian educational environments in which classroom situations are still present and which the individual is a result of contingencies through the educational paradigm. However, according to Moraes (2001), emerges in the Knowledge Society, an educational paradigm called "Social Interactionist", related to knowledge short cycle times, that learning must be continuous, so that access and

opportunities for learning should be available to anyone, anywhere and anytime. According to Toffler (apud ROSENBERG, 2002, p. 3), "The illiterate of the twenty-first century will not be those who cannot read and write but those who cannot learn, unlearn, and relearn." The learning process can be considered a descent spiral that goes from construction to reconstruction of knowledge from creation to re-creation of the new. That is, we moved from a disciplinary paradigm for multidisciplinary, interdisciplinary paradigm aiming transdisciplinarity.

This is a challenge for academic and corporate institutions to rethink their pedagogic models, educational systems as a whole. Through the web, it is possible perform interactive activities with the students, helping them to find new relationships patterns through cooperative work. Besides that, the Virtual Learning Environments (VLEs) and its communication resources, like electronic mail, chat, forum, provide an autonomous learning. These environments also provide the development of critical individuals, key feature in contemporary society, a society based on knowledge. Moreover, the new teacher must have the ability to encourage sharing of discoveries, mobilize and integrate community members, "translating" their knowledge and learn from the students. According to Lévy (2000, p. 171), "[...] teacher is encouraged to become an animator of the group collective intelligence, rather than a direct provider of knowledge".

1.2. Instructional Design in Distance Education

There are different instructional design models, but, according to Filatro (2008), ADDIE model is the most widespread, and it covers five distinct phases: analysis, design, development, implementation and evaluation. For those who are used to plan lessons, this model is very similar to what is called educational planning, saving the proportions of time, space, resources etc. One can think of a course, a learning action or more specifically, a learning object, but in any of these actions that use ADDIE model, "planning" is the key step.

Filatro (2004) and Silva (2003) highlight instructional design as being a systematic and educational action that involve planning, development and use of methods, techniques, activities, artifacts and educational materials in teaching situations in order to motivate and engage the learner, increasing knowledge construction. That is to say, it is important to consider all the variables necessary for the student's formation in order to adapt the learning system to students, and not vice versa (MURANI, 1997). Based on the ADDIE model, Filatro (2008) highlights three models of instructional design for e-learning: instructional fixed or closed design (fixed ID), open instructional design (open ID) and contextualized instructional design (CID).

The literature also highlights the participation of multidisciplinary teams in this elaboration, ranging from content-teacher, web designer, proofreaders, VLE developers, managers as well as the figure of the instructional designer – also known as an educational designer – defined as the

professional responsible for supporting and actively participate in the planning, design, evaluation and adjustment process required to obtain a proposed solution to an educational problem (MENDONÇA *et al*, 2010). A professional with multidisciplinary background and interdisciplinary training, which must have their actions and practices targeted by the "community", always focusing on the student as the center of the educational process (SILVA, 2013).

All this interaction occurs in the broader institutional context since, as pointed out by Moore and Kearsley (2008), the content by itself does not make the student learn. Nowadays it is available digital technologies that need to be worked in teams, so that, in the planning process, the ideas of the writers and of other actors involved in the teaching and learning process are grouped and proposed to obtain the desired educational solution while running the course.

Broadening the discussion, Romiszowski (2006) suggests that an educational project based on ten distinct steps; they are: 1) planning the overall structure of the project; 2) curriculum planning; 3) educational planning; 4) development and production of artifacts; 5) components evaluation and improvement; 6) prototype of the final product; 7) evaluation and improvement; 8) quantity production of the final product; 9) install and use the final product; 10) evaluation and long-term maintenance. The author complements his discussion by stating that Step 3, called Educational Planning (understood here as instructional design), must be aligned with the educational course project.

Moran (2010) points out that, in order to have quality in Distance Education, it is necessary to constantly engage the learner in the learning process, and this process is possible by the seriousness and coherency of the educational project, in this study, called instructional design.

2. RESEARCH METHODOLOGY

The methodology used for the research, that supports the discussion of this article, is an interdisciplinary science because it involves different knowledge areas such as management, education, communication, with the goal of increasing knowledge. The case study research strategy was used to facilitate to the researchers, active participants in the project, the deep research on a particular object, as proposed by Creswell (2010). On the collecting data phase, the following research methods were applied: literature analysis, documentary analysis and as well as the participant observation. Finally, the data analysis phase, a qualitative approach based on the nature of the research project and the experience of the researchers was used.

According to Oliveira (2007), in qualitative research approach, all the facts and phenomena must be considered significant and relevant, since focused on the object of study that needs to be developed in line with the definition of objectives and hypotheses that allow us to explain a particular problem. For the author, qualitative research can be characterized as an attempt to explain the meaning and characteristics of the obtained information results through interviews or open-ended questions without quantitative measurement of characteristics or behavior.

Corroborating the discussion, Preti (2010) also points out that "researching" is not to accumulate data and quantify them, but analyze causes and effects, contextualizing them in time and space, within a systemic design. Therefore, (PRETI, 2010, p. 590) it brings a forceful statement about the joint analysis of quantitative and qualitative data: "[...] these data are considered richer, global and real".

Finally, it is important to highlight that the data survey does not attempt to limit nor restrict the attributes that can be found in the different perspectives of the actions and practices of instructional design, but since it is a specific reality, the impossibility of generalizing the result restricts the study. However, despite the probable limitations, the method adopted was considered the most appropriate to achieve the research objective, which is to present an example of an innovative experience in training through the Web.

2.1. Describing the Study Object

The Continuing Education course in Educational Technologies on the Web (FCTEWeb) course is a free online currently offered in two modules, each one offered in a six-month period, with a 30 hours workload. The course belongs to the area "Training Web Based" from the Board of Directors of the Extension Courses at "Fundação CECIERJ" and it is target at teachers of all segments of education, who are active and working, preferably in public schools of the State of Rio de Janeiro. To participate in the course, teachers must register at Extension homepage (<http://www.cederj.edu.br/extensao/>), in Module 1, and if approved,

are automatically enrolled in Module 2. Using the philosophy of "doing and learning", the aim of the course is to propose to the participant teachers some teaching strategies based on the use of some free Web 2.0 tools for them to use in their teaching practice. In the course, teachers learn to use Google Docs, Twitter, Blog and Facebook; among participants, is also promoted reflection, discussion and evaluation of the use of these tools in the educational field (PFEIFFER *et al.*, 2011-2012).

The main objective from Module 1, with six steps, is to introduce students in a discussion and reflection on Web 2.0 tools, especially the last three steps, namely: Step 4, when students prepare individually, an educational activity using some Web 2.0 tools, and it should be available in Google Docs to be shared with colleagues. Students should also promote their activity with small posts after they have created an account on Twitter; in Step 5, it is promoted a discussion about the use of Blogs in teaching practice; finally, in Step 6, students complete a self-assessment and complete an online Google Docs form to course evaluation. Since the pilot project until now, various improvements in Module 1, based on these feedbacks have already been made. This is mainly due to the facility for implementing changes in the open ID model used in the course FCTEWeb.

Students approved in Module 1 (final average equal to or greater than 6.0) are automatically enrolled in Module 2, which consists of five steps, distributed as follows: Step 1 – the moment in which students create a Blog, which will host the educational activity developed in Step 4 of Module 1;

Step 2 – phase in which is created a space on Facebook; Step 3 – When a group project is developed and after it's done, it should be available on Slideshare and Facebook; Step 4 – considered to be a closure of Modules 1 and 2 of FCTEWeb course, it is when participants reflect on the process of teaching and learning in courses that use Web 2.0 tools; Finally, Step 5 is dedicated to self-evaluation and final evaluation of Module 2.

2.2. ID model of the teaching material

The development of the course FCTEWeb pilot project was based on the ADDIE model; with the participation of a multidisciplinary team, involving the coordinator teacher of the course and also the writer of the material, an AVA developer, a graphic designer, an instructional designer and a proofreader. The course was developed in August / September 2009 period, following the phases of this model, as described below:

Analysis: the coordinator teacher noted that, at the time, many of the other coordinators teachers from other extension courses offered by the Board of Directors of the Extension Courses were unaware of Web 2.0 tools. Aiming to spread the pedagogical use of these resources, a pilot project was planned, selecting some tools that would be more useful in the teaching practice.

Design: the development of the instructional design of course material followed the model of open ID considered relevant when a course is offered through a VLE, which in this case was Moodle platform, in a collaborative proposal for construction of knowledge. We opted for this model by offering more freedom in the reconfiguration of

pre-configured options from the feedback of the participants, such as inclusion or exclusion of forums, tasks, wikis etc. Additionally, VLEs, being less structured, allows the incorporation of links, routing the external references such as web pages; educational software; Web 2.0 tools like Youtube, Facebook etc.

Development: a professional with extensive expertise on Moodle environment created the VLE based on instructional design previously planned, separating it in phases. Since the coordinator teacher had experience with online education, she was the material content-writer and she had the help a proofreader to review her text. Specific instructional materials for each phase gather a basic text with up to 10 pages and several supporting texts (mostly, PDF files) to assist the learning process of students. Graphic designer team prepared as opening for each

phase, a flash animation, associating it to the humanity evolution, associating playfully, to the evolution of the each participant learning process. On Phase 1, for example, that corresponds to the integration and greeting the participants phase, flash animation shows a teacher transformed into "cave man" using a blackboard and chalk, watching the student, who is typing on a laptop, being quite familiar with ICTs. Subsequent steps show progressive animations involving ancient Greece, the Middle Ages, Middle Ages – the Crusades, the Renaissance. On Phase 1 of Module 2, the opening animation is related to the Twentieth Century (The 50's – Age of Rock and Roll), showing the teacher interacting with the student; it presents the teacher familiarized, Twentieth Century (60's – Age of Peace and Love), and XXI Century (1990 onwards – Age of the Internet), as can be seen in Pictures 1 and 2 below.

Figure 1: Phase 1 (module 1) – Greeting – collaborative (Cave man)

Source: Primary Data

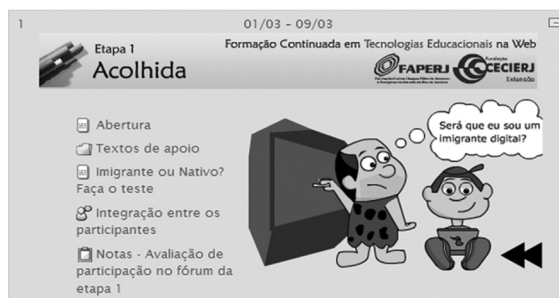
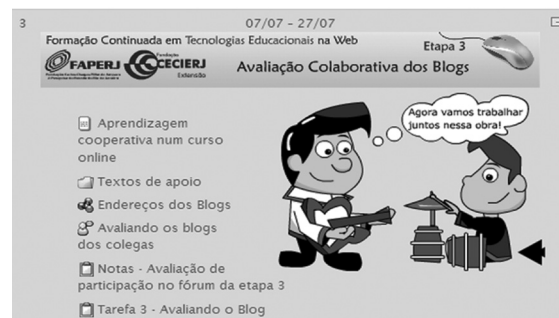


Figure 2: Phase 1 (module 2) – Blog colaborative (Cave man) evaluation – (Rock and Roll Age)

Source: Primary Data



Besides the opening animation, it was prepared for each base text, another flash animation with various illustrative images, according to the topic presented in each phase. This animation was named "comics" by the production team, as illustrated in Figure 3.

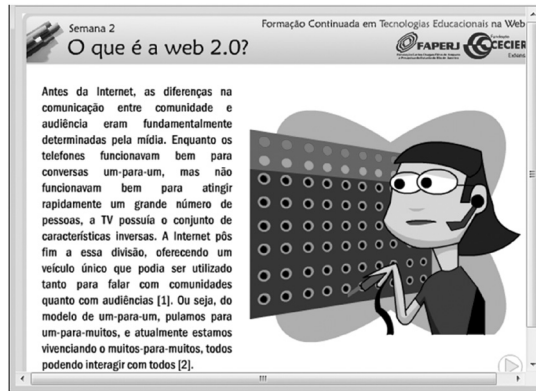


Figure 3: Base text Phase 2 (Module 1) – "Comics" – What is Web 2.0?

Source: Primary data

Implementation: the course is offered on Moodle platform through different tools: 1) forum - through frequent monitoring of distance tutors, forum is used to allow interactivity between participants about the topic in each phase; 2) task - link that lets people send files of the activities proposed in a few steps; 3) wiki - a tool that allows the information sharing, such as Google accounts, Twitter accounts, addresses Blogs built by the participating teachers; 4) Web pages to access YouTube videos; 5) links to Flash animations; 6) links to educational software; 7) online evaluation questionnaires, in Google Docs forms, that offer questions from which it is possible to know the participants opinion, especially in relation to the open ID model adopted for the Web FCTE course.

The first edition of the course, considered a pilot experiment was conducted in the period from October to December 2009, with a 60 hours workload, distributed in 2 months duration. The target audience was the coordinators teachers of the other courses from the Board of Directors of the Extension Courses. The evaluation took place at the end of the pilot project and item 3.5 – Search results –, in which are described the obtained results. Based on feedback from participating teachers, since 2010, the course is now offered in two modules, each with a 30 hour workload. Another important decision was that only students approved in Module1 would be automatically enrolled in Module 2.

3. CASE STUDY SEARCH RESULTS

The main objective of this case study is to demonstrate an innovative experience of Web Based Training field of the Board of Directors of the Extension Courses at CECIERJ through a qualitative survey performed with the students in relation to the planned and executed instructional design and executed for two modules and about the level of applicability, for teaching practice, of Web 2.0 tools used on the course. Data were obtained on the basis of online questionnaires, always available at the end of each issue of each module. The results presented here were obtained from three selected closed questions relating to the topic under study, in order to allow the user to obtain objective responses of systematic data collection in this research field. Data was obtained based on online questionnaires, available at the end of each edition of each module. The results hereby

presented were obtained by three selected closed questions, related to the theme that was being studied, so user can give objective answers in order to obtain systematic data in this field research.

Obtained data was handled qualitatively, with the attempt to represent an interpretive approach, that is, the analysis was done to identify and characterize the theme, allowing an interpretation that might come to conclusions about its meaning and then suggesting more questions to be made. From this perspective, the figure of the researcher as a filter for collected data (Creswell, 2010) is found. In Table 1, we describe the outcomes identified in the questionnaires answered by the students who participated in the pilot project of the FCTEWeb course at the end of the third trimester of 2009, the results for students in the third trimester of 2010 and the results achieved in the first semester 2012.

Table 1: Field research results (Module 2 – 3rd trimester-2009, 3rd trimester 2010 e Module 1 – 1st semester 2012)

Research instruments questions (Questionnaire)		3rd trimester 2009	3rd trimester 2010	1st semester 2012
What did you think of the interface?	Well structured and organized	58%	58%	44%
	Excellent, attractive and easy to use	23%	34%	53%
What did you think of the content presentation form?	Very good, practical	19%	8%	3%
	Very good, well elucidated, excellent	90%	90%	92%
	Good and can be improved	10%	10%	8%
What did you think of the mediation?	Excellent	52%	70%	64%
	Contributing to active learning	42%	24%	25%
	Good and other considerations	6%	6%	7%

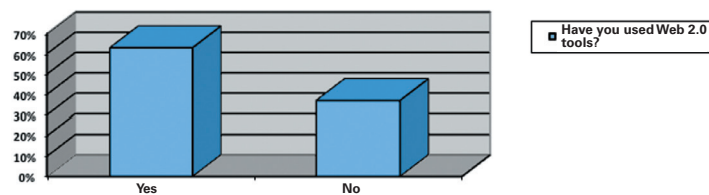
Source: Primary Data.

According to the results presented in Table 1, it is noticed that there is evidence of a significant approval of the participants in relation to Modules 1 and 2 interface from FCTEWeb course as well as the presentation of the course material. Another fact that has caught the attention was the opinion of students regarding attendance of distance tutors, showing that the mediation of course enhances the good use of it and, consequently, the process of knowledge construction.

In the edition held on the last quarter of 2010, three open questions were added to the questionnaire, listed below, aiming to investigate how teachers had become appropriate regarding their teaching practice of the used Web 2.0 tools during the course:

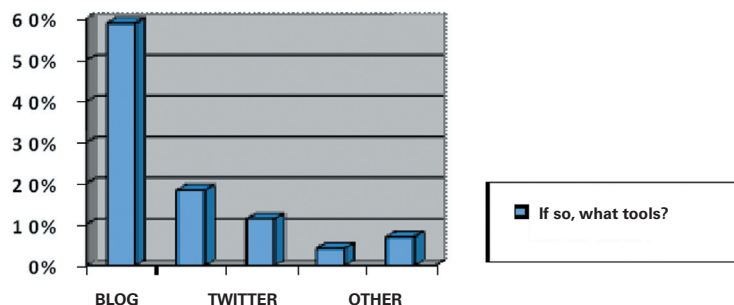
1) **Have you used in your teaching practice some of the Web 2.0 tools learned in the FCTE Web course?** From the respondents, 118 responses were valid, as shown below:

	YES	NO
Have you used Web 2.0 tools?	63%	37%



2) **If you used some of these tools, say which?** For this question, 71 responses has were valid, as illustrated below:

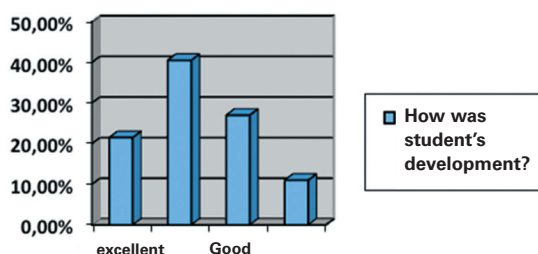
	BLOG	G.DOCS	TWITTER	WIKI	OTHERS
If so, what tools?	59%	18,4%	11,4%	4,2%	7%



3) If you have used some of Web 2.0 tools, would you be able to evaluate the performance of the students who participated in this experience? For this

question, we had the answers from 37 participants who were able to evaluate the performance of their students, as can be seen in the following representation:

	Excellent	Very Good	Good	Insufficient
How was student's development?	21,5%	40,5%	27%	11%



Complementing the analysis, in 2011 the study could go deeper, when it was observed by the reports, in editing Module 1 of this year, first semester, a very high dropout rate, around 63%. The reasons were identified from participants' feedback after completing the course, during the evaluation process and they are summarized below:

- changing the workload of extension courses from 30h to 60h, changing the frequency from quarterly to half-yearly, causing an increase in the interval between the phases of Module 1;
- difficulties to identify activities that use Web 2.0 tools; for example, many students select educational "games";
- according to the students, the task of Phase 4, which corresponds to the construction of an educational activity using Web 2.0 tools was undervalued, by assigning a low score compared to the other phases;

- tutorials for Web 2.0 tools used in Module 1 were already outdated.

Considering these facts, the area coordination of training via Web took the following decisions:

- tutors were accompanied daily, so they intensify students monitoring, trying to orient them to the research on educational activities on the Internet using Web 2.0 tools, besides starting scoring participation in the forum of each participant during Step 3;
- a wiki was created for sharing among the participants on the educational activities addresses that use Web 2.0 tools;
- deadline was extended for performing Step 4, so that students have more time to develop the educational activity;
- update of the tutorials for the use of Web 2.0 tools was provided.

Therefore, in 2012, in the first semester, it could have already been observed better results for the percentage of dropouts in Module 1, which was around 34% instead of 63%, showing a significant improvement. In Table 1, we describe the results of a qualitative survey of students in this edition.

FINAL CONSIDERATIONS

Since the pilot experience, carried out in the period from October to December 2009 up to July 2012, period used for the case study presented in this article, 1.364 teachers were attended, with 682 approved, 59 disapproved and 623 dropouts, which represents a 50% approval rate, 4% failure rate and 46% dropouts rate. As the results of qualitative research carried out with participants, over this period, showed a good acceptance of the ID model used in the course, in December 2010, was created a distinct area, Training Via Web in the Board of Directors of the Extension Courses at “Fundação CECIERJ” by offering two new courses, using the same ID model, named ID models for teaching materials: *Increasing the process of teaching and learning in distance education; Mediating Courses in Virtual Learning Environments*.

In 2011, the first semester was the moment in which we observed an increase in the number of dropouts and, facing this reality, the coordination has taken some steps to significantly minimized the situation, showing that, in addition to planning and implementing an ID model for learning success, the follow-up phase has extreme importance. However, with changes in public policies governing Fundação CECIERJ, and in light of new demands on the Extension

Board of Directors in the first half of 2012, the Training area offered only Via Web Training Module 1 of the FCTEWeb course. In the second semester, Module 2 was offered to the ones approved in Module 1 and based on the results shown in Table 1, it could also offer a new class for Module 1 in the second semester of 2012. Based on the results obtained by the area of Training via Web, in 2012, an authorization from the Board of Directors of the Extension Courses was obtained to offer one more course, ID models for course materials: *Increasing the process of teaching and learning in distance education*, in the first semester of 2013.

As a result of all this work (analysis, planning, design, implementation and evaluation), we observed the expansion of course offer's scenario. Later, in the first semester of 2013, the implementation and offer of a Lato Sensu postgraduate course offered by Fundação CECIERJ entitled "Material Production for Distance Education", with subjects in most, totally offered at distance. The new disciplines have been produced following the open ID model presented in this paper. In the second half of 2014, it will be offered by the Board of Directors of the Extension Courses a Tutoring Professional Qualification Course, that aims to offer a vocational-technical training, at distance modality, to professionals that work in the education field and who intend to work with tutoring distance or classroom modality The course *Mediating courses in Virtual Learning Environments* is one of the offered subjects.

This study allows us to highlight the relevance of instructional design as a model of planning, organization, coordination,

evaluation of the quality on courses in distance mode in order to, with the involvement and commitment of different actors involved in the process, promote and motivate the learner in the process of developing knowledge which is not transmitted nor learned. Knowledge is constructed and reconstructed by the individual.

REFERENCES

- ASSOCIAÇÃO BRASILEIRA DE EDUCAÇÃO A DISTÂNCIA. **CENSOead.BR**. São Paulo: Pearson Education do Brasil, 2011.
- BRASIL. Ministério de Educação e Cultura. Lei nº 9394/96, de 20 de dezembro de 1996. Estabelece as diretrizes e bases da Educação Nacional. Brasília: MEC, 1996.
- CAMPOS, F. C. A.; COSTA, R. M. E. C.; SANTOS, N. **Fundamentos da educação a distância, mídias e ambientes virtuais**. Juiz de Fora: Editar, 2007.
- CRESWELL, J. W. **Projeto de pesquisa: métodos qualitativo, quantitativo e misto**. 2. ed. Porto Alegre: Artmed, 2010.
- FILATRO, A. **Design instrucional na prática**. São Paulo: Pearson Prentice Hall, 2008.
- _____. **Design instrucional contextualizado: educação e tecnologia**. São Paulo: Senac, 2004.
- FREIRE, P. **Pedagogia do oprimido**. 32. ed. Rio de Janeiro: Paz e Terra, 2002.
- LÉVY, P. **Cibercultura**. 2. ed. São Paulo: Editora 34, 2000.
- MENDONÇA, B. de A. P. *et al.* **Designer instrucional: membro da polidocência na Educação a Distância**. IN: MILL, D.; RIBEIRO, L. R. de C.; OLIVEIRA, M. R. G. **Polidocência na educação a distância: múltiplos enfoques**. São Carlos: EdUFSCar, 2010.
- MOORE, M. G.; KEARSLEY, G. **Educação a distância: uma visão integrada**. Tradução de Roberto Galman. São Paulo: Thomson Learning, 2008.
- MORAES, M. C. **Fundamentos e práticas em educação a distância**. Campinas: Unicamp/Nied, 2001.
- MORAN, J. M. A gestão da educação a distância no Brasil. In: MILL, Daniel; PIMENTEL, N. (Org.). **Educação a distância: desafios contemporâneos**. São Carlos: EdUFSCar, 2010.
- MURANI, B. **Design e comunicação visual: contribuição para uma metodologia didática**. Tradução de Daniel Santana. São Paulo: Martins Fontes, 1997.
- OLIVEIRA, M. M. de. **Como fazer pesquisa qualitativa**. Petrópolis: Vozes, 2007.
- PFEIFFER, C. et al. Inovando a prática docente através do uso de ferramentas *web 2.0*. In: CONGRESSO INTERNACIONAL DE EDUCAÇÃO A DISTÂNCIA DA ABED, 17., 2011, Rio de Janeiro. **Anais...** Rio de Janeiro: Abed, 2011.
- _____. *et al.* Tutoria a distância: construindo o conhecimento em cursos on-line. **EaD em Foco**, Rio de Janeiro, v. 2, n. 1, p. 72-118, nov. 2012.
- PRETI, O. **Produção de material didático impresso: orientações técnicas e pedagógicas**. Cuiabá: UAB/UFMT, 2010.

ROMISZOWSKI, A. **Design instrucional: O que é? Quem faz? Como fazem?** Curso *on-line* de *design* instrucional. 2006. Disponível em: <<http://www.aquifolium.com.br/educacional/>>. Acesso em: 30 ago. 2006.

ROSENBERG, M. J. **e-Learning**. São Paulo: Makron Books, 2002.

SILVA, A. R. L. da. **Diretrizes de design instrucional para elaboração de material didático em EaD: uma abordagem centrada na construção do conhecimento**. 2013. 172 f. Dissertação (Mestrado em Engenharia e Gestão do Conhecimento)–Universidade Federal de Santa Catarina, Florianópolis, 2013.

SILVA, A. R. L. da; CASTRO, L. P. S. A relevância do design instrucional na elaboração de material didático impresso para cursos de graduação a distância. **Revista Intersaberes**, Curitiba, v. 4, n. 8, p. 136-149, jul./dez. 2009.

