

# Chapter 16

## A Framework to Analyze Teaching–Learning Objects (T–LO): A Case Study of a Didactic Module

**Ingrid Kleist Clark Nunes**

*Santa Catarina Federal University, Brazil*

**Elena Maria Mallmann**

*Santa Maria Federal University (UFSM), Brazil*

### ABSTRACT

*The pedagogical mediation in Distance Education (DE) is sustained by hypermediatic didactic materials, which are marked by principles of autonomy, interaction, interactivity, motivation and cooperation. The main thought in this article is to know if the developed Teaching-Learning Objects (T-LO) are potentially meaningful answering these principles. The planning and elaboration of the T-LO are highlighted processes in Brazil. Therefore, the authors present the conceptual singularities of the T-LO; the Instructional Design (ID) processes and the importance of the Instructional Project (IP) elaboration to guarantee a meaningful potentiality of the T-LO. As a research result, the authors center attention on the contribution of a framework (called the T-LO List), which is used to analyze the T-LO developed, implemented, and evaluated in a specific context of a didactic module elaboration. In conclusion, it is important to realize that the usage of a framework to analyze the T-LO can orient theoretical methodological steps of planning, developing, implementing, observing, reflecting, and re-planning, all carried out by multidisciplinary teams.*

### ORGANIZATION BACKGROUND

The systematization of the analysis, descriptions and reflections in the presented case are results of researches that have been performed by the authors

during several years (Mallmann, 2008; Nunes, 2008). These researches have always been linked with the teacher, tutor and Instructional Design (ID) activities in multidisciplinary teams of Distance Education (DE) at the Santa Catarina Federal University, in Brazil. This is a public institution of learning, research and extension activities and, since 1960,

DOI: 10.4018/978-1-61520-909-5.ch016

which offers graduation and post-graduation courses. The organization also develops research and extension projects within the scope of international, national and regional scenarios.

In Brazil, the actual scenario of DE is marked by investments of public institutions of higher education in their course offers. The creation of the “Universidade Aberta do Brasil” (UAB) – Brazil Open University -, in 2006, is an important event in their political proposals (financial issues, organization of multidisciplinary teams, how to manage the institution, the academic and pedagogical issues). The UAB proposes innovation through the collaborative integration with federal, state and municipal systems, consolidating partnerships and strategies to offer demanding courses.

The expansion of the process of offering DE courses has caused innovations and urgencies in the elaboration processes and in the usage of hypermedia and printed didactic materials; between them we have the Teaching-Learning Objects (T-LO). In this scenario, focus of our research is the development of methodological strategies to analyze the meaningful potentiality of the T-LO in the pedagogical mediation at distance. The steps and results of the process of a framework for analyzing a specific didactic module are discussed in detail in the case description.

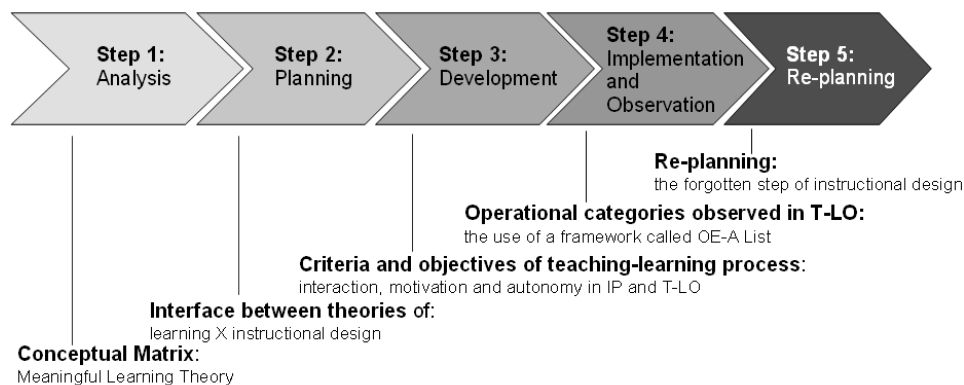
## SETTING THE STAGE

The principle of action-reflecting-action sustaining the teaching-research activities during the cyclic steps of planning, implementation, observation, evaluation and re-planning is shown in Figure 1 which makes a link with our functions like teachers, instructional designers and tutors in distance courses.

The organization of multidisciplinary teams to produce hypermedia and printed didactic materials is still a recent phenomenon in Brazil, especially in public and higher education. The insertion of Teaching-Learning Virtual Environments (T-LVE) and the T-LO in pedagogical mediation, to speed up autonomy, cooperation and interaction, has produced innovation in the teaching-learning process for universities.

Therefore, our teacher and research activities have been guided by the development of strategies, methodologies and technologies that can contribute in team management. This also can contribute to answer some challenges caused by course structure, financial issues, technological issues, epistemological and pedagogical principles, all related with the T-LO elaboration process for distance courses (Mallmann, 2008; Nunes, 2008).

Figure 1. Article structure. (© 2009, Ingrid Kleist Clark Nunes and Elena Maria Mallmann. Used with permission.)



18 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/framework-analyze-teaching-learning-objects/42543](http://www.igi-global.com/chapter/framework-analyze-teaching-learning-objects/42543)

## Related Content

---

### Data Mining in Security Applications

Aleksandar Lazarevic (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition* (pp. 479-485).

[www.irma-international.org/chapter/data-mining-security-applications/10863](http://www.irma-international.org/chapter/data-mining-security-applications/10863)

### Intelligent Query Answering

Zbigniew W. Ras and Agnieszka Dardzinska (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition* (pp. 1073-1078).

[www.irma-international.org/chapter/intelligent-query-answering/10954](http://www.irma-international.org/chapter/intelligent-query-answering/10954)

### Clustering Analysis of Data with High Dimensionality

Athman Bouguettaya and Qi Yu (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition* (pp. 237-245).

[www.irma-international.org/chapter/clustering-analysis-data-high-dimensionality/10827](http://www.irma-international.org/chapter/clustering-analysis-data-high-dimensionality/10827)

### Multiple Hypothesis Testing for Data Mining

Sach Mukherjee (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition* (pp. 1390-1395).

[www.irma-international.org/chapter/multiple-hypothesis-testing-data-mining/11003](http://www.irma-international.org/chapter/multiple-hypothesis-testing-data-mining/11003)

### Cluster Analysis for Outlier Detection

Frank Klawonn and Frank Rehm (2009). *Encyclopedia of Data Warehousing and Mining, Second Edition* (pp. 214-218).

[www.irma-international.org/chapter/cluster-analysis-outlier-detection/10823](http://www.irma-international.org/chapter/cluster-analysis-outlier-detection/10823)