3 Theory Framework

# 3.1 Educational approach

## 3.1.1 Critical Realism and Case Study approach

Why a Case Study?

Case studies produce the type of context-related knowledge that is most valuable in learning scenarios

Case studies are well suited to understand behavior

Case studies are open to feedback loops

Case studies are ideal tools to identify problems, outliers and out of the norm behaviors in relation to the expectations and hypothesis proposed, which for the context of this research, is an equally valid and valuable result.

Related to this, a carefully selected case study creates an ideal scenario to test theories and proposals. Moreover, thematic and problem characterized as rich or complex are perfect subjects for case studies, which have a good set of tools to capture, organize and analyze extensive narratives, which value lays more on its density and richness rather than the factual data that can be summarized out of it.

(Seale, 2007, ch25 p.391-393.400)

## 3.1.2 Cooperative learning structure

## 3.1.3 Social constructivism

## 3.1.4 Andragogy and educational design

# 3.2 Technical approach

## 3.2.1 User-centered design

## 3.2.2 Software engineering process