

## Chapter 17

# Evaluation of the Case Method with an Emphasis in Energy Issues and its Applicability for European Higher Education

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### ABSTRACT

*Every professor is searching to improve teaching techniques in order to transform the students into agents of change. This chapter proposes the hypothesis that the use of the Case Method (CM) is an effective strategy for improving education. It is a breakthrough to demonstrate that undergraduate students in finance learned how to use their financial skills in solving a pollution issue in the Mexican swine farm-houses through biomass conversion to fuels, keeping their profitability criteria at the same time. This was achieved through the application of the CM. Europe is very advanced in renewable energy technologies. Thus, the way the CM was applied in Mexico could be replicated with great success in Europe, for example through the visit to solar, biomass, or wind farms. CM surges as a hope to enhance education in Europe, with a plausible way to replicate it in all European universities. This is explored in this chapter.*

*Do not imagine that the knowledge, which I so much recommend to you, is confined to books, pleasing, useful, and necessary as that knowledge is. In truth, they assist one another reciprocally, and no man will have either perfectly, who has not both. The knowledge of the world is only to be acquired*

*in the world....Books alone will never teach it to you, but they will suggest many things to your observation, which might otherwise escape you; and your own observations upon mankind, when compared with those which you will find in books, will help you to fix the true point. (Chesterfield, 1876, p. 435)*

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## INTRODUCTION

The world has experienced a financial turmoil since 2008. The challenge for educators of accounting and finance is to find the best academic strategy to promote an educational process that could teach *finance in service of humanity*. How could professors motivate their students to identify their ethical role in a world interested only in earning money and finding profitability? The objective of this chapter is to present the Case Method (CM) as an effective tool for a humanizing education which has been successful around the world.

Promoting the CM will trigger a healthy debate that could transform a classroom into a consulting center from which the students are encouraged to be creative and to generate proposals on behalf of humanity, based on ethics and sustainable growth without forgetting the profitability required in any business to succeed and keep going.

As Chesterfield (1838) would say to his son, “let the great book of the world be your serious study; read it over and over, get it by heart, adopt its style, and make it your own” (p. 352). That is the objective of this chapter, to show how the application of the CM in undergraduate courses at Tecnológico de Monterrey in Monterrey, Mexico (Monterrey Tech), has been successful in the transmission of knowledge, promotion of values and leadership, and planting the seed of love for the planet.

This accomplishment was obtained during an adventure into a swine farmhouse in the municipality of Morelos, in the State of Nuevo Leon in Mexico, where it was a real discovery to find out that well processed animal excrement is a potential source of wealth for the farm owner. This academic case presents the dilemmas for the construction of biodigesters that could help decrease environmental pollution through the trade of Carbon Bonds. Energy security, ethics, technological and environmental concerns are the cornerstones of Sustainable Growth in Mexico, applied to this specific case.

It was a breakthrough to demonstrate that undergraduate students in finance learned how to use their financial skills in solving a pollution issue in the Mexican swine farmhouses through biomass conversion to fuels, keeping their profitability at the same time. This was achieved through the application of the CM.

Europe is very advanced in renewable energy technologies. Thus, the way the CM was applied in Mexico, could be replicated with great success in Europe, for example through the visit to solar, biomass, or wind farms.

The proposed hypothesis of the chapter is to demonstrate that through the CM the education process is enhanced, and the students themselves perceive a better and transforming education. The CM surges as a hope to enhance education in Europe, with a plausible way to replicate it in all European universities.

In order to achieve the objective of testing the hypothesis, this chapter is structured as follows: a literature review is offered in order to get a fruitful insight of this teaching technique; a brief definition of the Case Method is presented to familiarize the reader with this didactic strategy; the characteristics of the specific case used to test the hypothesis in Tecnológico de Monterrey, Mexico, is described; the methodology used to test the hypothesis and the results are explained in order to arrive to the conclusions and recommendations presented at the end of the chapter.

## LITERATURE REVIEW

The existence of different approaches in education is good and inevitable. Each professor tells his own stories and experiences. In particular, Christensen et al. (1991) state that every person could learn the principles and techniques to be successful in group discussions, even though this is a complex task.

The human interaction – talk and listen – has an unimaginable power (Erskine et al., 1998). There

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