Chapter 19
Chaos in Education as an Intelligent Complex Adaptive System

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ABSTRACT
The chapter aims to open the present somewhat chaotic and uncertain situation of education to a discussion. The chapter can help the reader think about the chaos everywhere and in education and educational institutions as intelligent organizations. Educational institutions have to be intelligent to cope with the sudden and fast changes around themselves and they are complex adaptive systems that can adapt the environment and the changes in or out of the organizations. As education is a dynamic system, people should discuss it as dynamic, chaotic, and complex in present times and the future.

INTRODUCTION
Chaos is everywhere and anywhere. It sometimes seems to be unpredictable or vague but it is possible to see, evaluate and perceive its cues and manage the chaos with intelligence of the human factor and the organizations.

Education is a dynamic complex system. Educational organizations as complex adaptive systems consist of various self-organizing components to facilitate the objectives of the organization. While reaching the goals and operating in accordance with the rules and to the context of relationships with all the other parts and the external world, namely, the environment. Educational institutions are adaptive to their environments and intelligent because they have the human factor. Empowered human factor adapts, learns and continue being more and more adaptive and intelligent. Both the stability and instability are possible for the intelligent adaptive complex systems.

It is intended to discuss about the chaos, chaos in education, organizational intelligence and complex adaptive systems. It is aimed for the educational organizations to get equipped with the speed to act and react, adaptation for the chang-
ing environment and the conditions, flexibility to operate as well as power to survive in an intelligent complex adaptive system.

FROM A CHAOTIC SCENE OF EDUCATION SYSTEM TO A BRILLIANT FUTURE IS POSSIBLE, ISN’T IT?

It is a need to use a common and understandable language which is not non-linear or of physics to discuss about relation between the chaos and education. It is of both educational and chaotic. As open-systems are likely to get chaotic or at the edge of chaos, we can say that the education, as an open system, is complex, chaotic and adaptive. It has to be clarified that education in general but educational institutions with the human factor in particular are intended to be examined.

There are the possibilities but not the certainties in education where it consists of human factor which makes the education intelligent, adaptive and complex. It is like the play chess with simple rules but complex moves. The moves are not in a rational line but a reaction to the other player’s move. There are a large number of strategies and moves like having the potential to be innovated and more creative (Cunningham, 2001).

The chaos theory scrutinizes the non-linear systems where a little effect can cause big problems. It means that estimation of the situation is hard and chaotic systems are dependent to situations sensitively. In addition to this, on the way to order, every confusion has a function; shocks at random can arise attractiveness in the system and discloses the property of self-organizing in chaotic systems. That is why the properties of chaos theory is bound up with education (Bülbül & Erçetin, 2010).

Educational processes cannot be predicted or foreseen. It is full of new aspects and unpredictable situations with some variables of genetic, social, cultural, biological, cognitive and psychological as it is an open system. Educational theories have been considered to be consistent but not so in education in practice; on the contrary, it is changeable, unexpected in every society, group or even individual (Quiroga & Fernando, 2011).

The complexity theory itself is not so complex or poorly defined that the ideas and the theories of complexity compulsive for instance the terms “uncertainty” and “imprecision” are such those ideas. The uncertainty, multiplicity, specificity, continuing change discussions have been made so far this time. One the importance of initial conditions, history and time are mentioned, theories of complex adaptive systems are in a challenge with the Newtonian straightforward, easy to predict relational causes (Haggis, 2010).

Some studies show us the framework a model of leadership on complexity, this framework will help provide support to the leaders to create and sustain order out of complexity. Leaders have to have visions in order for the framework to be useful and present the situation itself is it is. Additional to traditional solutions, it offers directions and alternatives in a modern society and environment (Chadwick, 2010).

It is important the have a different perspective on seeing the chaos not problematic but see it the nature of change an open system. We should have a perspective on or new eyes that see the things in a chaos system and usual as well.

As the things are getting complex, we have to start thinking simpler and clearer to understand the chaos. We have to make a broad discussion to comprehend the complex system to produce effective and helpful ways to create and aim to consolidate learning both at organizational and individual learning (Sabelli, Lemke, Cheng, & Richey, 2008).

By summarizing Senge’s laws of the fifth discipline, dynamic discipline is somehow captured. It is not so easy to understand how a part affects the other part or the parts and outputs the system sometimes. The laws emphasize the dynamics as given;