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Pillars of a Pedagogical Process for Educating Professionals of Action

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Introduction

When teaching a science, we tend to stress those concepts that will be transmitted through the educational process. The teaching method to be used is developed by considering the motivation and capability of those being taught, in order to determine not only "what to teach", but also "how to teach it". In most cases, "what to teach", that is to say, the specification of the concepts to transmit, constitutes the substantive part of the course design process in the teaching of any science. However, the tendency at the moment seems to be the opposite: to focus fundamentally on the teaching method according to who the participants are, their objectives and their motivation for participating in the educational process at hand. Vast recent development in the area of educational science has probably influenced this tendency change. In fact, in the past, the design of an educational process, especially one conceived according to the needs and circumstances of those receiving the education, depended on the "art" or "wisdom" of the teacher.

This note belongs fundamentally to the type of works that approach the question from the point of view of the needs and interests of those being trained. It seeks, therefore, to set forth a method to teach economics, for example, to executives. We will show that a profound analysis of the teaching method throws a lot of light on which concepts to transmit in a given training course or program.

I. An Example: Teaching Economics to Economists and Non-Economists

What are the differences between teaching economics to future economists and teaching the same subject to non-specialists? The question is by no means trivial. The most frequent answer might be the following: it is evident that, in both cases, the same things must be taught; but a future economist must learn more things and in a more rigorous way. It is not reasonable to expect non-specialists to master the topics in the same depth; rather, we should teach them the most

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important items and in the simplest possible way. This answer seems acceptable for the case of economics or any other science. But in our opinion, it is not sufficient; it is not surprising that, if this is the starting point, difficulties appear when transmitting knowledge about economic reality.

We can look for the answer by classifying what we understand by an "economist". In other words: what do we need to teach to an economist? I think the whole education process that a future economist undergoes should teach him/her to "see" reality from an economic point of view, that is to say, to contemplate reality as the expression of certain economic laws.

An economist, like any scientist, considers reality by abstracting some aspects of it in order to better explain others that in fact constitute the formal object of the science at hand. Thus, a physicist, for example, is a person for whom reality is made up of a group of masses, speeds, accelerations, forces, spatial positions, etc. that maintain perfectly defined relationships to each other, in such a way that, with fixed values attached to some of them, one can determine values for those remaining. It matters little to a physicist whether those masses are materialized in apples or in persons, for example. This distinction is irrelevant to physical phenomena.

An economist must be a person whose concern is to explain human actions in relation to a concrete end: the obtaining of what we might call "wealth". Naturally, some human actions can be explained this way, but not all; the economist is therefore not interested in actions that relate to ends other than those which are the object of study of economic science.

It seems appropriate at this point to make two fundamental points. One is that an economist may choose to consider issues that transcend those analyzed by economic science; but not because he/she is an economist, rather because he/she is a person with knowledge and interests that transcend the content of economic science. The second point concerns the scope of economic science compared with the whole of reality. If we maintained that human actions were completely explained by their relation to obtaining wealth, there would be nothing to consider in the world besides economic analysis. Such a radical posture –the posture adopted by marxism– does not itself derive from economic science, but rather constitutes a metaphysical hypothesis.

Therefore, teaching an economist is geared toward a series of items belonging to one aspect of reality, while leaving aside other aspects of that same reality. According to recently popular terminology, it is a "knowledge-oriented" process. The objective is to impart profound knowledge of a certain abstract model that represents aspects of the real world. An example of such a process is the one that is habitually used to train specialists in pure economics or in theoretical economics. The "knowledge-oriented" approach is opposed to the one traditionally called "problem-oriented". A "problem-oriented" educational process seeks to qualify a person to solve a certain type of real and practical problems.

Let us suppose that we are to prepare experts in, for example, "economic development". Such experts, when trying to solve problems in economic development, will face sub-problems that have little or nothing to do with what is traditionally considered "economics" in the strictest sense. The real solution to a problem of economic development for any given community includes cultural, sociological, historical, geographical and other values that are basic variables along the road that leads to the solution of this problem. An "expert" in economic development must use knowledge belonging to areas as diverse as economics, sociology, psychology, biology, geography and even mathematics or philosophy. It would not be strange, and it has often been the case, that the main person responsible for a project is a distinguished political or executive figure, while those who contribute all the economic knowledge are considered advisors. An expert in "economic development" is not characterized by an expertise related to a particular science; rather this expert might stand out for his/her ability to understand the extent to which each one of the particular sciences can help solve the problem, and for his/her ability to manage certain factors for which there is no science at all. If there is any educational process that can be useful to prepare this kind of expert, it is the one we have called “problem-oriented”.

II. Scientific Training Versus Professional Training

The question we face is the following one: what are the differences between the educational process geared toward training scientists and that geared toward training professionals of action? The main difference lies in what we expect scientists and professionals of action to be able to do. Let us then identify the skills that must be developed in each case.

1. Relevant Skills for Scientists and for Professionals of Action

A scientist, in any one of the areas of human knowledge, is characterized by a deep understanding of the aspect of reality that is the object of study of the particular science in which he/she is an expert. All science offers an “image” or “model” of the real world which excludes some aspects of reality and centers its analysis in the relationships that exist between those aspects that constitute its scientific object. Any science is composed of a group of abstract “variables” that represent aspects of reality, and of a group of “relationships” that establish the connections among these variables. Scientists are those persons whose activities allow them to:

a) identify real situations in terms of the “state of the variables” that the particular science deals with.

b) predict the state of some variables and, ultimately, of the real-world aspects they represent, based on observation of the state of others.

That is to say, on one hand scientists must be able to observe reality with a certain “observation schema” and, on the other, they must be able to anticipate changes by means of this schema.

Professionals of action, in contrast, are characterized by their ability to solve real problems. Different “types of problems” serve to identify different professions. Thus, for example, we give the name architects to those persons who have a superior ability than others to solve man’s needs for occupying indoor spaces. In fact, professionals need to possess habits or operative qualities that allow them to:

a) define or diagnose the concrete problem at hand, inside the general type of problems for which they are experts.

b) carry out actions upon a given situation in such way that the problem is resolved.

Contrary to possible appearances, such an immediate distinction as the one just presented between scientists and professionals of action is not always kept in mind when designing educational processes for each. This is due partly to the fact that there is some knowledge in specific sciences that is so necessary for certain professions that it is easy to confuse the possession of this knowledge with the possession of the practical abilities that are relevant to the profession. For example, knowing the law is so necessary for the legal profession that it is not surprising that, on many occasions, lawyers’ training consists of the pure acquisition of knowledge of legal science.