From Ancient Greeks to Modern Teaching

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Back during my time at the Universidad Tecnológica de La Habana "Jose Antonio Echeverría", CUJAE I assist with a workshop on the Problem Base Learning (PBL) approach to teaching. Little did I know about the serious science behind the development of innovative Learning and Teaching approaches. Even less on how far in our history, it is possible to track our "modern" problems and solutions! In the present contribution I share with the readers some of these findings. I will particularly focus on those corresponding to the Hellenistic times of the classical Greco-Roman philosophy, and hopefully, just hopefully, I will be able to transmit how modern these "ancient thoughts" look like.[b]

The concept of education denotes the methods by which a society maintains its knowledge, culture and values, and how it affects the physical, mental, emotional, moral and social aspects of the person.

The development of pedagogical thought took place in the classic Greco-Roman period (from the 7th century BC) with outstanding figures, such as Democritus, Quintilian, Socrates, Aristotle and Plato. The latter appears in history as the thinker who came to possess a true philosophy of education.

Today, different experiences have developed in a large number of countries and universities, which have been reported in the bibliography. They have tried to overcome the deficiencies of the traditional teaching system, by introducing new pedagogical models. They base their success on the use of cognitive processes, inherent in the human beings, in favor for the learning process by the student.

The significant increase in enrollment within universities, the heterogeneity of new admissions, the increasingly deficient general preparation of undergraduates, and the professional skills that industry demands from alumni, are some of the factors that motivate and demand a change in the educational system.

This work tries to show how the fundamental bases of some of the "new" and successful educational models, can be found from the first philosophical ideas developed by the great Greek thinkers, and maintained during the later history.

For example, the dialectic, developed by Zeno of Elea (495-430 BC) as member of the pre-Socratic Eleatic school, where the results of the abstract argumentation were given more importance than the testimonies of the senses (epistemological rationalism).

Socrates (470-399 BC) tried to make from philosophy a science. For this, he defended the inductive method and condemned the deductive method of the pre-Socratics. He didn't accept the universal truth as the ground that support every knowledge. But, rather he would experimentally observe the concrete reality and, in any case, induce, from here, laws or general principles [1].

Socrates develops a practical method based on the dialogue, on the conversation: "Dialectics", in which through inductive reasoning one could hope to achieve the universal definition of the terms under investigation. This method consisted of two phases: irony and maieutic. In the first phase, the fundamental objective is, through the practical analysis of concrete definitions, to recognize our ignorance on the definition we are looking for. Only with our ignorance recognized we are in the position to seek the truth. The second phase aims to bring a person's latent ideas into clear consciousness, by eliciting new ideas from another [2]. The Socratic dialectic progressed from more incomplete or less adequate definitions to more complete or more adequate definitions until reaching the universal definition [3]. Although he did not write any work, his thinking has exerted an influence that still lasts. Immediately after his death, his disciples founded various schools. And while all of them recognized Socrates as initiator, each interpreted the master's teachings in a different way, sometimes even giving rise to incompatible ideas.

Plato (427-347 BC) appropriately perceived that there is a need to know what it is that one wants to teach and what one wants to prepare others for [4]. That, it cannot be assumed that someone already has the knowledge to be taught. Therefore, more knowledge is usually needed and, needed to be created. The really different in Plato's concept is the union between teaching with research, or between the professional skills standards with the principles of scientific knowledge. This is the originality of his theory for "Higher Education" set forth in The Republic. Thus, we are strongly tempted to believe that it was the attempt to achieve that, which led him to undertake the founding of The Academy.

Without a doubt, Plato's main disciple was Aristotle (384-322 BC), who argues that the natural quality of the intellect is not knowledge itself, but merely the faculty of acquiring knowledge.

For him, science was the result of building more complex reasoning systems. As has been pointed out in his logic, Aristotle distinguished between dialectic and analytic. For him, the dialectic only checks opinions for

their logical consistency. Analytics, on the other hand, works deductively based on principles that rest on experience and precise observation [4].

It was the Arabs, with exponents such as Al-Kindi (801-873), Al-Farabi (872-950) and Avicenna (980-1037) who rediscovered Aristotle and passed on to the scholastic philosophy that dominated teaching in the medieval universities in Europe from about 1100 to 1700. Later, during the European Renaissance of the 15th and 16th centuries his philosophy was overshadowed by new scientific concepts, but its influence, although no longer in physics, continued to be valid in philosophical thought in the strict sense in all the great thinkers such as in Leibniz, Hegel, etc.

In classic Rome, the moral, civil and religious education has a history of its own, while school instruction in a technical sense, especially with regard to Arts and Letters, is almost entirely Greek. The teaching at school was obsessive and repetitive, the "tamer" teacher spoke and the students repeated: most of the teaching was based on a memory logic [1].

In Rome, the birth of a critical conscience about school and education [1] was formed.

- Encolpius (The Satyricon, Petronious, 27 – 66 AD) said: "the boys at school become cretins, because they don't see any of the things they practice in life".

- Seneca (4 BC – 65 AD) observed that: "the necessary things are not learned by virtue of learning the useless ones".

Back to "modern times", in traditional universities, science is not always taught in a way that helps the student appropriate physical concepts and develop cognitive skills. The classical lecture method, assumes that the student must clearly accept the knowledge taught by the teacher [5]. Traditional education offers very little inductive reasoning and opportunities to help activate the processes of abstraction and generalization [6].

We have seen since the end of the 19th century (Sarmiento: 1811-1888, Spencer: 1820-1903, Tolstoi: 1828-1910) emerging theories that enhance the learning process, based on cognitive learning processes, increasing the participation of the student as an active subject in their own education. The idea also arises that young people should not only be trained as a competent professional, enhancing skills according to the requirements of the profession. We also have a social duty, by forming a critical attitude that allows a global vision, it is recognized that in the process of education, the relationships between educator-educator are political, so we are also forming their position on life [7].

Notes

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