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The Aristotelian Challenge to Teacher Education¹

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Today, teacher education (TE) is in an age of uncertainty. In addition to *external* uncertainties linked to questions of budget and the status of education in the national agenda, there are some *internal* problems stemming from considerable uncertainty concerning the definition of the profession and the substance of the knowledge a teacher requires. Although this issue has been of concern to teacher education since the very beginning, it has become more and more critical in an age of lack of certainty regarding the essence of human knowledge and its moral validity and practical consequences, for since Foucault, we are aware of the interrelations between knowledge and power. If teacher education is supposed to ensure that the prospective teacher possess appropriate professional knowledge, it cannot ignore the question of the nature of that “appropriate professional knowledge.”

In general, TE programs set out with the assumption that this knowledge falls into two categories: “theoretical” knowledge of (a) the subject(s) being taught in school; and of (b) the so-called educational sciences, and “practical” knowledge of the techniques, expertise, and actions that characterize the skilled practitioner. The theoretical knowledge in the subject matter comes from the science that investigates that certain field (and so it is generally necessary for the student to attain a level of knowledge equivalent to that of an undergraduate degree in the subjects being taught in the school). The theoretical knowledge in the educational sciences comes from the fields of philosophy, psychology, sociology, or anthropology, accompanied by an understanding of statistics and research methods.

According to this concept, the knowledge that guides performance is an application of theoretical knowledge of a specific academic field. In this regard, the teaching profession resembles others, such as medicine, agriculture, or engineering. The applied knowledge unique to teaching focuses on didactics (general and disciplinary), class management, pedagogy, evaluation, and so on. While the theoretical knowledge is usually studied in academic courses of various types (from lectures to seminars), the practical side is generally acquired in workshops, the preparation of “projects,” and through supervised “practical experience.” Therefore, every TE program includes a component of practical experience that allows the students to reflect about their actions and learn from the experience gained.

This description of a teacher’s professional knowledge raises the question of the linkage between its constituents and the mutual influence each has on the others. For example, it is not infrequently claimed that TE programs are irrelevant to what is happening in “the field.” In these programs, both in the universities and in the colleges, many courses in “education sciences” are taught, but it is doubtful if these classes help teachers to become more efficient. In the research literature, it is common to find a gap between the theory studied by student-teachers and their activities in the field. Often, we hear assertions such as, “there’s no difference between those who were prepared and those who weren’t,” “it’s good only in theory,” or “it doesn’t

work in practice.” In another direction, the complaint is voiced that “even when the students know *what* they need to do, they don’t know *how* to do it.” Knowledge of a theory does not necessarily lead to its application and the prospective teachers are unable to apply the knowledge they have gained in their “education sciences” courses to their actual teaching.

This situation demands a rethinking of the connection between theory and practice in education in general, and in teacher education in particular. It may be that the problem is not one of method but one of substance. Perhaps the divorce between theory and practice is caused by our view that teaching is an “applied” rather than a “practical” science. The present paper is devoted to an exposition of these terms, “applied science” and “practical science,” from an Aristotelian viewpoint (see: Aristotle, 1984, especially “The Nicomachian Ethics,” book vi, 1797-1808). Our starting point will be the Aristotelian distinction between that practical knowledge which is called “Techne,” and that which is called “Phronesis.” Aristotle’s theory of Phronesis (practical wisdom) has enjoyed a revival in recent years. In modern philosophy, it supplies a possible basis for postmodern criticism of technological society and its limitations. The term “Phronesis” turns up more and more often in TE programs. Not a few professionals view it as offering an answer to the question of sound teacher education. In the concept of practical wisdom, they see the type of knowledge essential to the teacher in his or her work (e.g., Kurthagen et al. 2001). Thus, we are witness to the assertion that if only we could equip the student with practical wisdom, we would be creating better teachers with knowledge relevant to their profession.

In order to evaluate the validity of this claim, we need to acquaint ourselves with the Aristotelian point of view on which it is based. Aristotle distinguishes between theoretical and practical knowledge. The theory answers the question “what exists” in an attempt to discover natural laws that are eternal and absolute (the laws of nature do not change) and that can be defined in a systematic and organized framework of principles. This framework, termed “theory,” should explain events and phenomena in a particular field. It needs to be “true,” must stand the test of logical validity, and it needs to be consistent and complete. Aristotle calls this theoretical knowledge “episteme” (knowledge) when it refers to the various fields of information, and “sophia” (wisdom) when it refers to the basic sciences (e.g., logic, mathematics, metaphysics). A person attains theoretical knowledge through the force of his senses and intellect. His senses supply information on the world in which he lives while his intellect gives him the ability to analyze and generalize, allowing him to form general statements about the world by following a process of induction. In addition, Aristotle believes we have another mental power which he terms “Nus” (or mental intuition). Nus grants to man conceptual perception. It works when we try to generalize and leads us to feel that the generalization we have reached is true. It is a kind of “eye in the soul” that is impervious to error—for example our feeling when we are faced with the mathematical assertion that $2 + 2 = 4$.

Practical knowledge relates to man’s actions and behaviour, and answers the question, “what must I do?” The answer to this question should cause a person to act. It should lead one to an action that is personally “good” and so it is worthwhile performing. Aristotle divides such knowledge into two parts: “Techne” (proficiency, skill) and “Phronesis” (practical wisdom). The difference between them is substantial, but to understand it, one must see that they have a common denominator. Aristotle believes that every action and behaviour has a goal. The difference between Techne and Phronesis centers on the meaning of the link between the goal and the means needed to achieve it. While the technical skills help us to actualize goals that are *external* to the action itself, Phronetic knowledge helps us achieve goals that are *intrinsic* to the action itself. For example, when I bake a cake, the purpose of the action is the cake, not the baking itself. While the baking proceeds, the cake is not yet ready. When the cake is ready, baking is over. When a teacher teaches a lesson in mathematics, the purpose is not the process of instruction, but that the particular students acquire certain knowledge. The action ends when they have command of the material. And therefore, the distinction between the product (the students’ knowledge) and the process (teaching-learning) is clear and definite.

On the other hand, there are actions which are their own goal and as soon as they cease so does the achievement of the goal. Action and goal are indistinguishable. The action has no “product” external to it. I do not stop seeing and thereafter “see,” and as soon as I stop walking, my walk ends. The Aristotelian example typical of this is that of life itself. The fact of life is its purpose. Man does not live in order to accomplish goals external to him. As soon as life ceases, it has no further purpose. *Techne* provides the answer to the question, “how to do . . . in order to produce . . ., or effect . . . ?” It is knowledge in a certain definite area. *Phronetic* knowledge relates to the question, “how can I live my life so my life will be good and leads to my well-being?” We are speaking here of general knowledge that applies to human behaviour at all levels and in all aspects, since it relates to the problem of the nature of a man as “good.”

Aristotle defines teaching as *Techne*. He thus characterizes the process of teaching as having external goals. The knowledge behind all *Techne* comprises four parts: (a) “practical theory” in the specific subject field, (b) exercise of a process of deliberation, (c) “practical *Nus*,” and (d) proficiencies skills. Practical theory contains general principles regarding the link between goals and means in a certain area under discussion. According to Aristotle, we are not talking of the application of theoretical knowledge but of a type of independent knowledge learned inductively from practical professional experience. Such knowledge cannot be gained through reading alone, it cannot result from “pure” research, and someone who knows the theory is not necessarily equipped to be a professional.

The need for experience stems from the fact that the actual situations facing a professional are unique. Every event is “exceptional,” demanding thought and study. Under conditions of uncertainty and complex or convoluted situations, the professional must follow a process of “deliberation” in which he or she examines the appropriate means of achieving the goals in the specific parameters of the particular situation. To know if his or her conclusions are sound, a person is equipped with practical *Nus* which allows one intuitively to view a phenomenon as having certain non-visible features (e.g., that certain behaviour of a pupil indicates a state of boredom). It permits a person to sense directly (without the need for further thought) whether a certain idea for action will succeed or not. Such practical *Nus* develops with experience. A genuine professional can hear the sound of your car’s engine and know where the fault lies and can do so because of his considerable experience. However, all this knowledge will be useless if professionals do not know *how* to execute the required repairs. They must have competent skills and practical ability—they must be “masters” of their trade.

For practical wisdom, which deals with the totality of human life, *Techne* is insufficient on its own. To the question of efficiency which lies at the heart of *Techne*, is now added the question of ethics, for not everything that is efficient in a certain professional arena is also moral. And for *Phronesis*, too, theoretical knowledge of the substance of morals cannot be of great help. A person must want to be moral, his personality traits must allow him to be moral, and he has to act in a moral manner. Aristotle declares that the development of an ethical personality is a matter of education. The practical *Nus* of the owner of practical wisdom guides him to see the “good.” The good person “sees” at once that a particular action is good and another bad. But the practical *Nus* of the corrupt man is flawed, for since birth, he has been taught that bad deeds are permissible.

Against the background of this world of concepts, we can now analyze the process of teacher education and characterize its various components. Although teaching itself is *Techne*, it is unique in dealing with three types of knowledge. Disciplinary knowledge of the subjects to be taught belongs to the epistemological level. For example, a teacher must know physics in order to teach physics. Generally speaking, he or she must know the “what” of the subject, and more important, must also know the “why” and the “how we know” of each area of investigation. Aristotle considers such knowledge to be essential to teaching. Also, as a basis of all knowledge, one must understand logic, without which nothing can be taught since knowledge of causes assumes a logical ability.

The knowledge relating to the process of teaching itself belongs to the level of *Techne*. There is no meaning or significance merely to psychological, sociological, or anthropological theories beyond the fact that they widen the general knowledge of the student teacher. They will barely affect her worldview or functioning. Teaching needs practical knowledge based on what actually happens in the class and the school, on the professional knowledge of the teachers themselves rather than on “external” knowledge gathered by researchers who may never have worked in the profession. This knowledge is based on experience and grows from the bottom up (in the field) rather than that which reaches the field from academic theory (from the top down). There is no need to ignore theoretical knowledge in education sciences and it should be taken into account in formulating the practical theories, but only in so far as it is relevant to real hands-on teaching/educational activity. In contrast to the common notion (see, e.g., Darling-Hammond, Wise, and Klein 1999) that teaching is an applied profession mainly based of knowledge gathered in other fields, Aristotle, on the other hand, views teaching as unique with its own independent scholarship that must lean on knowledge accumulated by teaching professionals. Kurthagen et al. (2001) terms this knowledge as “theory with a small t,” but they erroneously relate it to *Phronesis*. In fact, they definitely refer to *Techne* as quintessential professional knowledge that relates to the connection between goals and means in a clearly defined area.

It is important to see that *Techne* has an ingredient that cannot be acquired by the student in class and that component is the element involving experience. Theoretical and even practical theory can be taught—one can learn a cookbook by heart—but real practical knowledge is acquired via experience (both direct and indirect). And one’s ability to learn from experience is itself learned from experience (these assertions apply to professional education in any field).

Knowledge relating to ethical and moral education belongs to the level of *Phronesis*. The educational system does not limit itself to the teaching of “subjects”: it also has to “educate.” And again, we are not here talking about a course in the philosophy of education or the theory of ethics. As Aristotle repeatedly emphasizes, ethics cannot be taught since we are talking about behavioural trends and personality traits. The *only* way to teach morality is to *be moral*. Educators have no option but to offer a personal example to their pupils who learn from their behaviour more than they learn from their words.

Is it today possible to maintain the Aristotelian line of thought? Critical discussion of the ideas presented above shows that the answer to this question is in the affirmative. The arguments in favour of the Aristotelian viewpoint are based on both philosophy and research. From the philosophical perspective, it is in line with hermeneutic thought, in the terms of Gadamer’s philosophy (e.g., 1975). In an age of uncertainty, there is no practical advantage; it is even, perhaps, ethically dangerous to transmit doubtful theories or rigid pedagogic technologies. It is essential to teach the TE students to create their own practical knowledge, knowledge that will have meaning for them and will help them to act successfully in confusing and perhaps dangerous situations. From research dealing with professional knowledge in general and that related to teaching in particular, it appears that the professional knowledge displayed by good teachers is, indeed, characterized by practical *Nus*, by the ability to make judgments, by skill in performance, and by the fact that they have a mastery of practical theory.

Adoption of the Aristotelian approach demands a change in teacher education methods and one can point to a number of TE programs that have attempted to do so. Kurthagen and his colleagues (2001) focus on the development of the reflective ability of the student teacher, as well as of practical (technical) *Nus*, following methodical and guided experience. The MT (Master of Teaching) program at University of Calgary (Alberta, Canada) centers on the development of the student’s practical wisdom resulting from the analysis of cases and instances from a wide interpretive-moral-social perspective that emphasizes the aspect of education. It ignores, almost deliberately, the technical aspects of professional teaching. In the TE program of Kaye College of Education in Israel, there is an attempt to develop both aspects of practical

Nus (Techne and Phronesis) as a result of the work of a team of teachers and students which collaboratively demonstrates how it is possible to view the same situation in different ways.

In light of the above discussion, it is necessary that the TE faculty of future teachers ask themselves what practical theory they hold regarding teacher education itself. On what practical knowledge do we base the various education programs? How do we define our goals, how do we justify them in an age of uncertainty, and how do we choose the means to their achievement?

Endnotes

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