



## Editorial: Whitehead and Education

The twentieth century witnessed the emergence of philosophy of education as a branch of philosophy. Philosophy of education, however, is not as distinct as the established branches of philosophy, such as epistemology and ethics. Philosophy of education is an 'applied' philosophy, drawing insights from the traditional fields of philosophy and its approaches, in order to address questions regarding the aims, nature, process and ideals of education. The multiple ways of conceiving education, coupled with different fields and approaches of philosophy, make philosophy of education not only a diverse field but also one that is not easily defined. It was observed that there has been no agreement among the theorists about the aims and means of education. They have, by no means, agreed about the things to be taught, nor about the nature of education, whether education should be concerned more with intellectual motifs or with moral virtues. Very often the aims of education are correlative to ideals of life; (Percy Nunn, *Education*, 1963, 2) and if the ideals of life differ, then naturally the educational aims too will fail to agree. The aims of education have been conceived and categorized variously by different scholars throughout the history of humanity.

Etymologically, "education" is derived from the Latin word *educatio*, which is developed from the verb *educare*. The Latin word *educare* is coined by combining the two words *ex* and *ducere*, which literally mean 'to draw out', 'to lead out', etc. In ancient Greece, Socrates believed that education was about drawing out what was already within the student. The Romans considered educating to be synonymous with drawing knowledge out of somebody or leading them out of regular thinking. According to the Canadian Philosopher John McMurtry, the true etymological root of the word "education" is not the Latin word *educere*, "to lead out," but rather *educare*, "to enable to grow." Education, defined as 'enabling to grow', resonates in the Encyclical of Pope Benedict XVI, *Caritas in Veritate*: "The term 'education' refers not only to classroom teaching and vocational training, [...] but to the complete development of the person" (*Caritas in Veritate*, 2009, 96).

The Webster's Dictionary defines 'education' and 'educate' as the process of educating or teaching, so as to develop the knowledge, skill, or character of students.

The Sophists, a group of itinerant teachers, tried to give students the necessary knowledge and skill to gain positions with the city-states. Socrates considered knowledge as 'the power by which things are done', and included not only the understanding how to do things, but the skill to apply that understanding.

According to Plato, the earliest important educational thinker, the most fundamental kind of education is training, not in particular arts and sciences, but in the master-art of living. "The primary object of education," says Plato in the *Laws* "is to make good men" (*The Collected Works of Plato*, 1973, 641 B). Plato's conception of the 'good life' pervades all the Dialogues, and includes fundamental laws pertaining to mental, spiritual as well as physical health. To learn and respect these laws, for Plato, is the only way to successful living. But, for Plato, "education in human excellence" should also make "a man long and crave to become a perfect citizen, able rightly to rule and to obey" (*The Collected Works of Plato*, 643 E).

Aristotle began the eighth book of *Politics* with a number of questions, such as 'What should be the character of public education? How should young persons be educated?' "Education," says Aristotle "is the creation of a sound mind in a sound body" (*The Complete Works of Aristotle*, 1984, 642). Education for Aristotle should encompass in itself the all round development of an individual. At the end of the book Aristotle concluded that education should be based on three principles: the golden mean, the possible and the becoming.

John Dewey and Alfred North Whitehead are two of the most important philosophers of the twentieth century, who have developed a philosophy of education. Dewey is by far the dominant figure in the field of general education, especially through his proposals for the reforms of education. Dewey was a relentless campaigner for the reforms of education, pointing out that the authoritarian, strict, pre-ordained knowledge approach of traditional education was too concerned with delivering knowledge, and not enough with understanding students' actual experiences. Education, according to Dewey, is an indispensable social process, a means for the ongoing progress of human society. Accordingly, Dewey defined education as "the process of the reconstruction or reconstitution of experiences, giving it a more socialized value through the medium of increased individual efficiency" (*The School and Society*, 1949, 145).

Growth, for Dewey, is the real function of education. He stresses more on the role of the child in the process of education, than on the book, subject or the teacher. He regards the child as a potential creator of values; and puts forward a fourfold analysis of the natural interests of the child: the interests in conversation, inquiry, construction and artistic expression. According to Dewey these are "the natural

resources, the uninvested capital, upon the exercise of which depends the active growth of the child" (*The School and Society*, 1949, 147). As a pragmatic educationist, he believed that education is not an external application of ready-made ideas to a system of practice; [...] it is an explicit formulation of the problems of the formation of right mental and moral habitudes in respect to the difficulties of contemporary social life" (*Democracy and Education*, 1916, 386). Given this understanding of education, the worth of an educational experience is measured by the degree to which it functions in meeting the actual life needs of the individual and society.

Whitehead's thoughts on education resemble much in the philosophy of John Dewey. In the philosophy of higher education, however, Whitehead is probably the most important figure since John Henry Cardinal Newman. His work in educational philosophy is marked by singular qualities of imagination, profound analysis, and personal commitment. In the 'Preface' of *The Aims of Education*, Whitehead states the general purpose of education as 'to stimulate and guide the self development of the students, who are alive'.

"Education is the acquisition of the art of the utilization of knowledge" (*The Aims of Education*, 1929, 4). This simple sentence of Whitehead epitomizes one of his central themes, viz. the correlation between the theoretical ideas and its important applications. Whitehead's synthesis of knowledge and its application contrasts with educational theories that recommend mental training exclusively. Whitehead rejects, on the one hand, the theory of mind that maintains that it is a kind of tool, needing honing and sharpening; and on the other, the theory that mind is a kind of repository for "inert" ideas, stored up in neatly categorized bundles. 'Inert ideas', for Whitehead, are "ideas that are merely received into mind without being utilized, or tested, or thrown into fresh combinations" (*The Aims of Education*, 1). In Whiteheadian conception, education, which is radically engaged with 'inert ideas', is not only useless, but also harmful. Keeping knowledge alive and preventing it from being 'inert' would, therefore, become the central task of education that is *process-oriented*. Whitehead's philosophy of organism, which is popularly called "process philosophy," stands in continuity with his educational thought, both as a general theoretical backdrop for this educational position and as the primary application of his fundamental educational themes.

For Whitehead, education is a temporal, growth-oriented process, and its success essentially depends "on the character of the pupils and the genius of the teacher" (*The Aims of Education*, 9). Growth involves the development of physical and mental qualities, with a strong element of style understood as a central driving motif. Whitehead's concept of the nature and aims of education has as its corollary

a conception of the rhythm of education. This rhythm is a sequence of three stages which effective learning and teaching should include in a definite order. The three stages in this process, which Whitehead calls, are "the stage of romance, the stage of precision, and the stage of generalization" (*The Aims of Education*, 17). Although he distinguishes three stages in the rhythm of education, Whitehead does not draw a strict line between the three stages of a cycle: "Of course, I mean throughout a distinction of emphasis, of pervasive quality – romance, precision, generalization, are all present throughout" (*The Aims of Education*, 28).

The stage of romance, says Whitehead, "is the stage of first apprehension." This primary acquisition of knowledge involves freshness, enthusiasm, and enjoyment of learning, for it is characterized by the freedom of the student in 'a process of discovery, a process of becoming, that is both natural and of absorbing interest' (*The Aims of Education*, 32). Romance is perhaps the most important of the stages, since it allows the students to pursue their own interests, unconstrained by the demands of others. The stage of 'precision' concerns itself with the "exactness of formulation," rather than the immediacy and breadth of relations involved in the romantic phase. Precision is self-discipline required to master the various languages and grammars of discrete subject matters, particularly science and technical subjects. In isolation from the romantic stage of education, precision can be barren, cold, and unfulfilling, and useless in the personal development of students. 'Generalization' is the application of the specific conceptual ideas and classifications learned in the stage of precision to actual life situations. It is the moment of educational completeness and fruition, in which general ideas, or certain philosophical outlook, both integrate the feelings and thoughts of the earlier moments of growth, and prepare the way for fresh experiences of excitement and romance, signaling a new beginning to the educational process.

Generalization, for Whitehead, is the main goal of university education, for the function of university is "to enable [one] to shed details in favour of principles." This does not, however, mean a divorce of abstract ideas and principles from the concrete facts, but that the concrete facts should be studied as illustrating the scope of general ideas. The justification for a university, argues Whitehead, "is that it preserves the connection between knowledge and the zest of life, by uniting the young and the old in the imaginative consideration of learning" (*The Aims of Education*, 93). This community of young and old is a further extension of the organic nature of learning. The place of imagination in university life illustrates Whitehead's insistence on the aesthetic element in education. Universities are not merely institutions of analytic and intellectual skills, but of their imaginative integration into life. There is a creative element to all university activity, a creativity necessary to the survival of life in a world of adventurous change.

## Part II

Most of the articles in this volume present central issues in the educational philosophy of Alfred North Whitehead, with which the general public and academia may not be very familiar, in the hope of stimulating further study and research of them.

Dr. Robert Regnier, in his paper on "Education for Sustainable Development through Learning as Valuing," takes up Morito's insight and Whitehead's cosmology to formulate how learning conceptualized as the process of valuing can provide a basis for education for sustainable development. In Morito's view, all valuations and valuers, being consequences of evolutionary and ecological processes nested within different levels of organization of valuational activity, are parts of a valuational network such that it becomes impossible to separate the valuer from this network. Alfred North Whitehead's cosmology, where the universe is 'value-existence', 'actuality is the enjoyment of value', and 'self value is the unit fact which emerges', elaborates process cosmological foundations of value. These notions of valuing stand in direct contradiction to liberal views that values are externally bestowed by human beings or gods, or that values are determined by human assigning of essential intrinsic worth.

In his paper, "Educational Philosophies of Thomas Aquinas and Alfred North Whitehead," Dr. Joseph Murik analyses Whitehead's *The Aims of Education* in the light of the educational philosophy of Thomas Aquinas and its enduring impact on Christian Education. Dr. Murik begins with an examination of the Thomistic conceptualization of the teacher as an adult whose professional role offers the twin benefits of the active as well as the contemplative life. He then proceeds to explore Whitehead's process philosophy from the perspective of his teachings regarding the aims and practice of education, and compares them with the views of Aquinas on learning and teaching, particularly on the role of humility, motivation, commitment, effort in the acquisition of learning, and the relevance of these insights for educators in the twenty-first century.

In his paper "Translating Process Philosophy into Educational Practice for the Emerging Global Society," Dr. Pattabi S. Raman demonstrates the translation of the first principles of the Whiteheadian cosmology into a 'living and effective' universal model of education for the emerging global society. The paper focuses on (i) derivation of a comprehensive theory of human development that defines the nature of human potential and the processes underlying learning experience, (ii) classification of the environments, with which the learner interacts, based on the ontological levels of creation, (iii) role of ideals and Whitehead's 'subjective aim' as lures in processes of self-actualization and value formation, and (iv) process

approach to curriculum and pedagogy and its implications for empirical research in delivering new models of testing and evaluation.

Dr. Franz Riffert and others present in "Testing Whitehead's Theory of Learning Empirically" a pilot study which aims at taking first steps towards testing the efficiency of Whitehead's cyclic theory of learning and instruction empirically. A quasi-experimental research design, common to educational field research, was chosen in order to investigate whether Whitehead's cyclic learning approach has any positive impact on (i) the students' cognitive development and (ii) their interest in sciences (physics and chemistry). Cognitive advance was measured with the *Science Reasoning Tasks* as developed by Shayer and Wylam on the basis of Jean Piaget's clinical interviews; and the students' interest in sciences was measured by a scale developed at the University of Kiel (Germany). The results indicate that the cycle approach in science classes has a positive impact on the learners' cognitive advance as compared to the control group which was taught in a traditional, linear, non-phased way.

Prof. Zhao Heling and Prof. Xie Bangxiu, in their paper "Philosophical Foundation and Practice of the Reform in the Contemporary Curriculum and Instruction" explore the theoretical foundation of contemporary curriculum and instruction, by comparing and contrasting the merits and demerits of three philosophical thoughts/currents, which have influenced the theoretical research and the practical development and changes in the Republic of China: traditional philosophy, systems philosophy and process philosophy; and advocate the activity theory approach in learning and teaching, based on the writings of Jean Piaget, Alexei Leontiev and Alfred North Whitehead.

Prof. Jing Zhang, in his paper "Changes of Thinking Mode in Pedagogical Research" contents that changes of thinking mode in academic research are frequently accompanied by changes of philosophical thoughts. Based on Whitehead's process philosophy, Prof. Zhang dismisses conception of 'substance' philosophy through 'event' theory from the aspect of ontology, and dispels the opposition between subject and object through 'intakes' from the aspect of epistemology, and argues for a process thinking mode in educational study and research, marked by generation, inter-relationship and 'being itself' and 'to be' as objects of thinking.

In their paper "Harmony between Spiritual and the Real world," Prof. Lou Shi-zhou and Prof. Zhang Lizheng offer, on the one hand, a critique of the traditional epistemology, which highlights the social value of the teaching profession and neglects the embodiment of teachers' personal value. As a result, they argue, there arises a conflict between personal and social values, the spiritual and real world, causing a gap between the ideal image and the real experience of teachers' job, as

well as a dual character of teachers' personalities. On the other, they believe that through the process philosophical vision we could restore the human essence of a teacher and realize the becoming of teachers' professional development; and thus attain the harmonious relationship between the spiritual and real world in the process of teachers' professional development.

Let me conclude this editorial column with a reference to the UNESCO report on *Education in the Twenty-first Century* (<http://www.unesco.org/delors>). Considering the need for human and professional formation of the young generation in view of the global challenges, the programme promotes 'four pillars' of education: "learning to know," "learning to do," "learning to live together," and "learning to be." 'Learning to be' envisages human development as life-long process, based on self-knowledge and on relationship with other people, based on successful personal experience and interactive social experience. The UNESCO report seems to be an explicit affirmation and application of the process vision (viz. meaning, nature, process, aims and functions) of education, as propounded by Alfred North Whitehead in his writings, especially in his book, *The Aims of Education*.

## Reference

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