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Process as Content in Education of Exceptional Children

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Thoughts without content are empty. Intuitions without concepts are blind.

Kant, 1958, p. 61

Introduction

If we consider the great changes that are happening, as if by rapid mutations, in many dimensions of human conditions, concern with the nature of education and the curriculum to prepare children for confronting the future era is legitimate. The new culture requires continual adaptation for survival. The need to produce changes in the curriculum, by creating new educational approaches, requires an analysis of the changes that must be addressed to plan the modern educational and instructional endeavor. Understanding the special

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nature of changes with which humans may be faced may better enable us to look for ways of preparing the young generation for their encounter with the new era. In this chapter, we conceptualize the types of expected changes that will require a typology of adaptational responses.

When we look at the past developments and the evolution of the interaction between human organisms and their environment, we are constantly confronted with the process of mutual impact between the partners of this interaction. Human beings change the environment, creating new components, structures, and modalities of action. Thereafter, to benefit or sometimes survive these changes, humans subsequently have to change themselves in whatever dimensions are required.

The transformation from a culture of gatherers and hunters to one of laborers and producers was accompanied by many changes in the dependence-independence dimension between individual and group. While gatherers depended on limitations of the existent food available, laborers produced the food. The greatest marker in this shift, however, was the new greater distance at which this interaction took place. For gatherers, the distance between the individuals and the food was almost zero. Food production created a new distance between the need expressed by hunger and its gratification in satiation. This new distance was accompanied by processes that affect the mental functioning of the human organism: from direct, immediate recognition of the food to be gathered in response to hunger, to the representation of the food as a future, often delayed answer to the need expressed by hunger. Between the need (hunger) and the goal (food), a chain of means to reach the goal has to be inserted in an established given order. This order may even be accompanied with delays in gratification, such as not eating the grains that will be used as seeds, despite the immediacy of the sense of hunger. Thus, human beings had to learn to increase the distance at which they interact with their world.

In his monumental presentation *Urdistanz und Beziehung* (Primary Distance and Relationship), Martin Buber (1960) defines the difference between animals and humans by their different interactions with their environment. While animals' interactions are with a realm (*umwelt Bereich* in Buber's terminology) that includes only those parts of the outer world that are relevant to their immediate needs, human beings have a world whose existence is recognized, experienced, elaborated, organized, grouped, and categorized, irrespective of the immediacy or the remoteness (or distance) from their needs.

This distance between human beings and the world, in contrast to the lack of distance between animals and their realm, is, notably, the dualistic nature of the human-world interaction compared with the adualistic nature of animal-realm interaction, which creates a relationship. Relationship is the direct product of distance. Only when distance is created by the distinctiveness and the mental, logical differentiation of individuals from the environment will the relationship become more complex, richer, and multidirectional.

The concept of distance encompasses the dimensions of time, space, internality, externality, and the distances produced by the mental processes. These processes are manifest in the production of substitutes of reality through the process of encoding this reality into signs, symbols, and traces, which then need to be decoded. Classification of dimensions of reality that differ in many aspects

but have in common one conventionally chosen dimension entails a distant perspective, one from which differences are not perceived or volitionally ignored in favor of the common trait used for establishing inclusion in the conceptual group. The processes of classification, of categorization, and of establishing relationships are all modes of action performed at distances that only the dualistic mode of interaction between human beings and the world permits. Piaget (1966) described the passage from an adualistic to a dualistic mode of interaction with the world as a developmental, stage-related process.

The establishment of such a dualistic relationship, however, is made possible by a process-oriented activity of the human mind. The content-oriented approach confines activity to the immediacy of the concretely perceived object or event on which humans operate. Limiting learners to the acquisition of content knowledge is acting like gatherers and hunters, who gratified their needs by the adualistic immediacy of their realm and the immediate presence of the gratifying object. In contrast, orienting learners to the process involved in the production and generation of knowledge is acting like the laborers who have to plan ahead to reach goals that are remote from the immediately accessible reality. Thus, human beings have to form internal mental images of future reality and insert the chain of actions necessary to reach the goals that they have constructed mentally.

The distance at which humans operate on the world, both externally and internally, will determine the nature of the process that they will have to employ in this operational interaction. If the spatial distance is such that the visually emitted message is not received, then a process of encoding the message in a way that the distance will not obstruct its transmission will have to be instituted. Reading written messages became the way by which temporal distances were overcome and information became transmissible. The operations that create interaction over distances are based on mental, cognitive processes that become more complex as the remoteness of the target increases.

We contend that characterizing the changes in the various dimensions of the world is a constant increase in the temporal and spatial distances at which humans have to operate. This makes content learning of little value unless it is accompanied with the processes that are necessary to transform the specific content into a source of generalization and to transform the generalization to the newly generated contents. Both transformations depend on process. Yet what is presently offered in educational and instructional systems is all too often reduced to an inventory of facts. This is true even when this inventory includes mathematical rules and quasi operations. Devoid of their underlying processes, these rules remain purely technical and limited to the immediate realm, rather than transferable also to the distant world.

Content Education

When we apply the question of content versus process to the instruction and education of exceptional children, we are confronted with a system of instructional methods, didactics, and teaching goals whose major aim is to keep individuals at zero distance from the object, events, and experiences on which

they operate. Lack of belief in the propensity of these individuals to modify their cognitive structures, irrespective of the type and quantity of intervention offered, makes their teachers extremely reluctant to establish distance from what is concrete, sensorially perceived, and directly experienced.

The sources of information are used as models of imitation, and reality is reproduced by the organisms perceiving it. The generation of new, previously untransmitted information is impossible because of the lack of the processes necessary for such production. Everything to be learned is kept in proximity, to the point that little is left over on which the mental processes might operate. When exceptional children are asked for the years in which they were born, the standard answer resembles, "I don't know. My father, mother, or somebody else knows. I never was told. I didn't study it. I am not suppose to know what was not told or taught to me." Often, however, the children know their ages and the current date and are even able to subtract. Missing is the process orientation that will make them use all the existent information as parts of the equation leading to the generation of new information.

The absence of process leaves the individuals in a passive state, acting as reproducers of gathered information with little, if any, readiness to act as generators of the needed information. Many of those who are introduced to knowledge and skills are not offered the necessary insights to operate on the reality with which they are confronted. An admittedly extreme example will give the paradigm of this strategy of teaching with a zero-distance approach.

During a description of the methodology applied to train adults with mental retardation to function in society, a lecturer pointed out that it was important for such individuals to learn how to use the supermarket. The first step for achieving this goal was to teach them how to enter the supermarket. From this came the need to teach the various ways of opening different styles of doors to supermarkets. We quote the lecturer's description of the proposed teaching solution: "We took a minibus and went from supermarket to supermarket and showed them the doors that are pulled, dragged, pushed, et cetera." The concept of "opening," which provides the guide to discovering and adapting to new forms of the same function, was not offered. Therefore, the students would have to remain at zero distance between them and the variations of opening—at a time when humans can open a valve in a satellite that is millions of miles away by pushing a button!

Much of the content-oriented approach has a similar modality of teaching. In general, the didactics applied in special education represent zero distance between the learner and the facts to be learned. Process becomes vital when the learned facts become distant enough to require a relationship to be established between them. Education, both in general and in particular of exceptional individuals, encourages the extensive use of all the senses in learning all aspects of the facts, stimuli, or events imparted. The integration of the various senses is considered to be the high peak of the teaching process. The uniqueness of the object is stressed, rather than its common traits that can be found in many other things. These commonalities, when educed through comparative behavior, become the source of the analogical, syllogistic thinking so vital in all daily and academic thinking activity. Their introduction becomes the way to establish the process of inference, important in anticipatory planning behavior.