Iran : Trust to children for abstract thinking.

The possibility of philosophizing in children relying on cognitive developmental approach

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There is no surprise that many individuals and even experts of children cognitive development find it impractical or even deny it when facing the subject of philosophy application of teaching philosophizing to children because as Piaget believed children don't have any abilities to understand abstract subjects before adolescence and they haven't grown enough to conceive the ideas and thoughts of great philosophers. There is another group which goes further and states that most of adults are not philosophers and they are not interested in philosophy, is it necessary to enter children in such a widespread scale-indicating the integration of philosophy into children's curriculum?

That is unfortunate to mention that traditionally philosophical subjects have always been so complicated that there is a limited number of adults who can understand them and work on them and children are not allowed to enter such subjects due to their specialty and complexity. However, many of philosophical questions are raised from children's questioning mind or from an adult with a challenging childish mind. The complexity of philosophical discussions-not the subject- might have happened by adults since philosophers have always tried to distinguish this subject from others so that they have made it so complicated that they are much farther than an adults' capability to perceive them let alone children. The other reason for this complexity is due to the fact that there is no definite answer to the questions and this happens so as to make contemplation more and indicate the importance of philosophy. Undoubtedly, a child acquires a habit faster and it is more stable and constant than adulthood education.

Despite all these facts, Bruner believes that philosophical issues can be perceived by children at any age and situation. Children may not be able to understand some complex terms such as libertarian and determinism or they may have problems understanding despotism and democratic politics, but they are able to conceive simpler terms of libertarian concepts and cause-effect relationships (Golding, 2009, p.26). Therefore, it seems that children can comprehend relevant philosophical questions loaned from our own child questioning mind if these complicated terms are not in the labyrinth of technical words and terms and they are presented to them with simple and tangible words so that their challenging and creative mind can research them and understand them.

Although Piaget conducted some intricate experiments on children in which inexperienced children were left unassisted and he divided the conceiving mind of children into some stages in which children were unable to understand their analytical problems, despite education and environmental

assistance, before the age of adolescence, many researchers have found it a superficial experiment and they have proven that even adults would make the same mistakes as children, despite their mind growth, if they are inexperienced in one subject. If we are honest to ourselves, don't you think that we adults are continuing this method of presenting a huge volume of knowledge directly to children- although there are many theories indicating the growth of children's mind- in order to show and boast our knowledge?

The assumption that a child is not capable to have a logical and regular behavior and s/he is not able to perceive and analyze abstract items before a pre-determined growth prevents us to view a child as a moral creature and some important years which should be spent on forming their personality and learning logical life principals that are mostly abstract issues are wasted.

Indeed, Piaget himself didn't believe that knowledge is imposed to children. As his cognitive developmental theory stated children would create knowledge by changing and investigating their own environment and their cognitive development happened in different stages (Berk, 2001, p.32). Likewise, Lipman believes that children's temptation to investigate their surrounding should be used as the means to enhance their efficiency. Piaget's cognitive growth approach convinced this field that children are active learners whose minds possess strong knowledge structures. This approach has helped a revolution in philosophy of education and curriculum to emphasize the discovery learning and direct contact with the environment; however, despite such triumphant in this field, Piaget's ideas have recently been challenged. Researches show that he has underestimated pre-school children. When these children are assigned some homework which are ranged based on difficulty to do, their understanding will be much closer to adults than what Piaget believed (Berk, 2001, p.34).

Information Process researchers have found that when concepts, technical terms, models ad other data sound familiar to an individual, they need a shorter time and energy to process them. It has been proven that having a lot of knowledge and experiences in one filed leaves both negative and positive effects on the quality of an individual's cognitive application in that specified field. Unlike a novice, the expert is cognizant of all the precise specifications and characteristics of that subject and tries to memorize them (sufficient decoding), chooses the best approaches and practices them correctly. In general, the expert practices the analytical actions which are more logical. In short, when experts are occupied in their specialty, they are more intelligent and grown-up (Felavell, 1988, p.144).

If there is an inexperienced child, and an expert older child or an adult are used in one specific field, what will the outcome be? It will be likely that there is a revolutionary transition from childhood to post-childhood time. It might seem that the inexperienced child and the expert one are in different stages of mind growth and we have encountered with two different machines. However, some points can delay this judgment for instance, when older individuals are assigned to do something in the filed they have no expertise, they are less grown up and their logic sounds immature.

In fact, if the cognitive difference between younger and older children is derived from their cognition, different qualitative "stages" of cognitive development can't be mentioned. That is because first of

all, a difference in cognition is mostly a quantitative concept rather than a qualitative one. In other words, there is a unit in mind which possess two different cognition scales, but not two minds which are fundamentally different. It also points out two mind functions which are totally different i.e. it is not the function of the mind of an infant, a child and an adult.

On the other hand, younger and older children can't ever be consistently and completely be categorized in "the same" stage. It means that their cognitive application is not limited to one specified stage in a general and superficial sense (Felavell, 1982). Both of these groups perform higher than their level if they have significant knowledge in their own fields; and in case of having less knowledge, their performance is weaker. Neither of them is similar to its own group nor very different from the other one in that they are assumed to belong to two different "stages". The current trend has been devoted to the cognitive merits of younger children, adults' lack of cognition and disharmony of cognition in both groups so that childhood tends to move to middle childhood effectively and these differences fade (Siegler, 1979).

Recent years have witnessed that the concept of stage in general and Piaget's stages in particular have been questioned (Berniard, 1978a, 1978b, Felavell, 1971c, 1972b). Felavell believes that Piaget's cognitive development can be concluded as that children and teenagers' thinking ability in terms of theoretical descriptions is to some extent unclear, incorrect and incomplete:

Regarding straightforwardness mind structures specified for each stage have not been defined vividly and they don't match the internal structure, and what he calls children's cognitive abilities and activities are unclear and vague. In terms of correctness, Piaget's homework- such as mental preserving issues-is not necessarily formed by Piaget's structure. In the sense of "completeness", it is likely that mind-logical activities play a more limited role in children's mind life than what the theory assumes. It means that Piaget's project might not be, as the theory claims, basic, general, influential and essential qualifications of a child's thinking. As cognitive field has developed, cognitive theorists have been able to identify new structures of knowledge, processes, and approaches in the fields of social relationship, comprehension, and awareness and consideration. In total, it can be expected that as the new achievements continue, Piaget's mind accomplishments determine a "a smaller distribution" of the world of a child's mind (Felavell, 1982,p p2-3).

Piaget believed that elementary school children could solve problems better that before, but they could think logically and regularly when they dealt with concrete issues. Piaget didn't believe in abstract thinking ability of elementary school children. However, his ideas have been criticized severely and it shows that a child could have acquired this complex logical thinking ability much earlier than what Piaget thought of (Solso, 1995). Moreover, a number of researches indicate that children's functions in Piaget's problems can be improved through learning. These findings bring up some questions related to his hypothesis-independent discovery learning, not teaching adults, is the best method for instinctive discovery learning (Berk, 2001, p.34). Lipman believes that children entering school are thirsty to discover and learn-i.e. their intention to instinctive discovery learning-,

but they gradually lose this enthusiasm to learn and know. He continues that children come to school to discover something and they look for a place to present their own analyses and thoughts.

Lipman totally disagrees with the assumption that children can't deal with abstract issues. Put it in better words, children don't like to study some technical, hard and abstract terms. However, these children can make sense of some abstract words such as goodness, badness, happiness, fairness, hope, law and etc (Lipman, interviewed by Mehr News Agency, 1383). In fact, it is thought that children show eager to learn the abstract words which directly influence their lives and it can be evident that understanding these abstract terms that an individual has no experience or knowledge about can be unfavorable and confusing. The findings in the recent decades have shown that Piaget's problems include confusing, unfamiliar elements or very detailed information that children can't process at one time. Therefore, children's responses can't demonstrate their actual ability. In the meantime, many significant children's analyses either in pre-school time to middle childhood have been ignored. Many researches (Golman, 1977; O'sidel, Ralinz, 1993; Rozine and Rozine 1993) have proven that when children are assigned to do some simple tasks related to their ordinary life, they will have a much better performance than what Piaget believed. Regretfully, Piaget described a pre-school child in terms of what s/he couldn't perceive rather than what s/he could. This occurred due to an ongoing comparison between children at any age with older and more skillful ones.

In the program of P4C, the subject could be abstract i.e. they are not evaluable and measurable, but they don't look weird and intangible to make experts be worried about their understandings. That is due to the fact that the aim of this program is not to teach children something more entitled the philosophical knowledge, but the main purpose is to develop thinking ability as a fundamental means and for this purpose, the most tangible devices such as the relevant stories to a child's real life are used. These are the issues that, if we either accept or decline, challenge a child's mind, but the child hasn't obtained a tested measurement to answer the questions. In fact, as Bruner believes the material should be cited in a child language in order to make sense out of it. Therefore, Lipman has tried to answer the questions which have occupied the philosophers' mind throughout the history by the means of philosophical contexts which are perceivable for children.

David Page, like the thinkers of Information Process, processing and following Bruner, states that the thinking method of all human beings are similar at any age, but the difference is that children think faster, more creatively and actively. He adds that children are faster learners than adults if the material is understandable. In order to make a material understandable for children, the teacher or trainer should conceive the material well at first. The other point is that nothing should be thought of as difficult for one specific stage. Every thing should be presented in a way that is perceivable for the listener. A child can be directed to ask unimportant questions if the material is very detailed and easy, and the same child can ask difficult questions, but what is beneficial for the children is that they should be led to higher stages by asking and interacting (cited in Bruner, 1960, p.53).

If we accept what Piaget believed in that a child's cognitive development stage determines the nature of his/her learning and education can't be of a help to take the child beyond his/her cognitive development stage in that learning happens, we have rejected the nature of increasing the quality of education and training. If environmental changes have no effects on the development of cognitive development of children of the last century and the present ones, families and education systems have been wasting time in the era of wisdom and information. Vygotsky helps the education systems in families, societies and schools. He believes that growth and evolution processes happen following the learning process. In Vygotsky's cognitive developmental theory, interaction between the learner and the social environment is of a great importance. In fact, he points out to an element which has made his theory practicable. As Woolfolk (1995) mentions "while Piaget describes a child as small scientist who makes up the universe and understands it on his own, Vygotsky believes that children's cognitive development mainly depends on the people who live in their world. Knowledge, thoughts, views and individual values develop in the interaction with each other" (p.47), so that Vygosky thinks of thinking growth of a child and Berk (2001) confirms that nearly all experts and specialists have agreed with what Vygotsky believed rather than Piaget's idea (p.260).

Unlike Piaget who assumes that learners' cognitive preparations are their abilities to understand logical operations, Bruner cites that preparation means that the subject which is supposed to be taught should be readied for the learner. Therefore, as Bruner states the effects of education and training on cognitive development are more optimistic than Piaget's idea. Since Bruner claimed that "the main purpose of education and learning is to move beyond information" (1986), thinking has attracted education and training specialists including critical thinking experts as an approach to organize the existing information and move in the realm of vague situations which consist of new information. Lipman has presented P4C program to help children use their contemplation and thinking power in different encounters of life.

Bruner (1960) believes that any subject can be thought to children at any stages of development in an honest and beneficial manner (p.23). Therefore, a teacher should try to teach in a way that it both matches children's thinking mode and makes them think more. Bruner has shown that a child at any stage of growth looks at his/her environment in a special way and the world has a specific meaning to that child. Therefore, education of children needs to match the way a child views the surrounding world and the world should be taught in a specific way that the child thinks of. In fact, our responsibility is to interpret the subject into the thinking language of children at their developmental stage (Bruner, 1960, p.45).

Bruner believes that children's cognitive development doesn't work like a clock in a special order and predetermined, but it is affected by the environment, especially school. Therefore, teaching different lessons should not necessarily follow some special disciplines for the stages of children's cognitive development at primary school. However, it can be opportunity making for children to strengthen their thinking growth and direct that. Researches have shown that if a child faces some issues which make him/her move to a higher stage, that issue is effective (Bruner, 1960, p.52).

Although Vygotsky, too, agrees with the role of environment in children's cognitive development, he emphasizes that subjects should neither be at the stage of children's cognitive development in that they can effortlessly answer the questions nor be that difficult that children are helpless in answering them even with the assistance of others. Burner calls this kind of assistance scaffolding. In scaffolding, the teacher or trainer takes more responsibility, but this is gradually assigned to the learner as the learning improves (Seif, 2009, p100). Vygotsky calls this support from the expert scaffolding too i.e. the technique to change the level of support. During the teaching session, the expert regulates the amount of assistance to fit the level of the child's current stage. When the assignment is a new learning of the student, the more skillful person may use a direct method and as the students' quality progresses, guidelines are lessened (Biabangard, 2006, p.52).

These psychological bases have been considered in the program of "philosophy for children" unlike other programs which are to teach philosophy. In this program, the ideas of some selected philosophers are not chosen because the abstractness in these ideas is high since these selected philosophers use some special abstract terms which belong to philosophy. As a result, these ideas can't be presented to children. However, in the program of "philosophy for children", it has been tried not to talk about some special philosophical ideas, but some particular philosophical thinking methods are accounted for. Furthermore, it is important that these subjects be interpretable to children's language. Assume that if in philosophical thinking, it is important that an individual finds a sympathizing ability, being able to view a problem from the other side, a philosophical ability is that people can search other views. This issue is a lower level is in the form of teaching children to discuss their friends' ideas and pay attention to them, or learn that any subject or problem brings up different viewpoints; this method is launching children on the path of developing philosophical thinking mode (Bailin and Siegel, 2003).

As it is evident form Vygotsky's general ideas and his proximal zone of development, he has more positive views towards children's cognitive development due to the effect of education. He thinks that human is ready to grow and develop. He utters that since social environment is a determining factor in the process of cognitive development, social environment should be improved to pave the path for the people who are being trained for their cognitive development. In other words, progress of each generation of one society causes the cognitive development of the next generation. Likewise, teachers play an important role in enhancing this cognitive development. Teachers should help and lead their students too their potential cognitive development ability rather than waiting for students to reach a better cognitive development stage and the start teaching (Seif, 2001, p.220).

If comparing the methods of Piaget and Vygotsky, we can mention that Piaget's method is based on an individual's discovery learning, but Vygotsky's method is a guided discovery method. Their both classes have a lot in common, both emphasize an active cooperation and acceptance of individual differences, but Vygotsky's classes move farther than independent discover learning. This kind of learning encourages assisted discovery. Teachers help their students with more explanations, exemplifications, and verbal descriptions and they fit their efforts with the zone of proximal

development carefully. Team works with other classmates facilitate this discovery learning and teachers encourage helpful learning experiences.

Lipman has emphasized contemplation thinking model in restructuring training process-one of his fundamental hypotheses and he mentions that education and training are the results of contribution in an investigative society to find and solve the surrounding problems. P4C classes are a community of inquiry or a researching community in which school children cooperate in all class discussions on philosophical issues. In these classes, children are introduced to "big questions" in order to improve their thinking method and strengthen to investigate such question. Teachers using this method encourage their students to think more deeply on ideas in their after school activities. Students are clapped to concentrate on their own skills and thoughts deeply and then they can improve these skills while investigating and strengthening their own ideas and others' to answer philosophical questions (Sproud, cited in Ghaedi, 2004).

Therefore, it is evident that the insistence on forming a class-society structure-as Lipman believes-has a great importance in encouraging thinking and this claim can't be ignored in cognitive or social psychology. Referring to the works of George Herbert Mead or Vygotsky as mentioned earlier, we can find a philosophical and psychological support in that thinking is to internalize discussions. Like Mead, Vygotsky knows a society-class structure as an inseparable part to motivate children to think and do their tasks better in the company of their teachers and classmates rather than doing these individually. Indeed, P4C program provides children with some logical, social, emotional tools necessary for thinking logically and reasonably by using philosophical stories and through discovery learning in the class, students are encouraged to behave with commitment and courage as they think, therefore, it is such a commitment and courage that increases students' self-esteem and makes much healthier interactions.

In fact, P4C intends to change children's potential abilities into practical ones so as to prepare them to have a more efficient thinking ability in the future. Vygotsky also agrees that this is the main goal of education i.e. to rely on potential abilities of children and fit the level of education with that and lock children's thinking level at that stage can't be the art of education, but helping children to discover their potential thinking abilities and activating them can be the purposes of one educational system. In the meantime, the aim is not to make children a philosopher or a decision maker, but assisting them to be better thinkers and contemplators, some individuals who can think more logically. The children who have been assisted to behave more reasonably not only do they know when to do an action, but they also know when not to do that action. These children are more rational and cautious in case of problems and they can make better decisions when they can't solve a problem. Therefore, one of the purposes of thinking skills should be improving judgments because judging is the connecting circle of thinking and practicing. Contemplating children make better judgments and these children may not have thoughtless behavior.

It is a wrong to think that children are not interested in philosophical concepts; they like to talk about unimportant subjects or learn the related knowledge without trying. Adults think that if a child asks a question, s/he intends to get the answer from that adult while most children are interested to challenge a subject when questioning. Lipman points out that adults waste a lot of time to teach children the difference between good and bad writing or correct and incorrect method to solve a mathematical problem, but we don't devote any time to teach them the difference between good and bad analysis. Disregarding this is not because children don't need to learn or can't learn that, but because we are ashamed that we are not familiar with logic (1980).

Mead states that children enter school with social intentions and they long for their developments. It is not like that a child is wild and s/he needs to turn into a sociable person. Children are sociable, but they require an environment in which they can perform their sociability. Therefore, quiet students in a class are not the ones who don't intend to talk, but they are the ones who are afraid if they say something, it will sound unimportant to others. If a class can form a mutual respective community, a place where such students can have the chance to talk and there are some people who listen to them, they will more probably put a side their reticence and embarrassment and they will participate in social discussions. Most often the quiet child is daydreaming how wonderful it would be if he could speak about an important subject in front of the class.

As mentioned earlier, the followers of Information process theory oppose Piaget's stage-based cognitive development, and they believe that mind programs to collect, store, retrieve and apply data to solve problems grow and develop gradually and constantly in childhood and adolescence. Therefore, it sounds unfair to accuse children of inability because they have no information or enough experience about one subject. It is more logical to find out the potential abilities of children using their instinct abilities based on their exploratory and investigative mind. Questioning abilities start at the age of four and it might be true that children have had questions from the birth, but due to their lack of verbal ability, they haven't posed any (that is what Vygotsky calls the pre-language thinking). The method of facing children's questions affects their personality and future (Mansour Nezhad, 2006). Children's curiosity is founded on children's needs to know. A questioning child is a healthy child, and the more the questions, the healthier the child. Children increase their understanding about their complex surrounding world through questioning, so they feel safer (Eskandari, Kiani, 2007). Psychoanalysts believe that Piaget has ignored the effects of motivation and emotion on the processes of thinking. We need to respect children's internal motivations to establish their logical world in which principles and values are based on some precise benchmarks and measurements. These are the indicators that children have obtained in their investigative society based on understanding various views and ideas of the members and generalizing them to their own society.

The principle of investigating and knowing has been confirmed by many theorists in that these approaches include the term discovery learning. Some believe that this field is limited and others try to extend this field. One program to expand philosophical thinking skills along with encouraging

children to question and present their mind ambiguities and criticize it precisely can persuade them towards an imaginary thinking. When children ask about the how of subjects, there will be an effort to understand how things can be in another shape.

It might not necessary to mention that the nowadays wise society doesn't accept one theory without studying about other theories. A comprehensive study on continuous psychological development (non stage) - having a stronger research backgrounds-change our perception of cognitive development and abilities of our children. Therefore, our thinkers and specialists are expected not to challenge P4C program anymore. This program has very strong theories-at least in the point of cognitive development-, this criticism can be due to incomplete familiarity with these approaches and new findings or they might be because of wrong understanding and misconception of the program of P4C.