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CiCe
Institute for Policy Studies in Education
London Metropolitan University
166 – 220 Holloway Road
London N7 8DB
UK

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How cognition could help us to want "To-Be-Together": How can we teach concepts?

Iveta Kovalčíková and Ivan Ropovik
University of Presov (Slovak Republic)

Abstract

The contribution will be focused on Basic Conceptual System (M. Nyborg) *as prerequisite for learning of different school subjects. Training on analytical coding, which underlies the learning and involves the child performing analyses of and comparing the different objects as well as the values is highly important in current school settings. Selective Association, Selective Discrimination and Selective Generalization as phases of learning act. In order to consider – what is wrong, what is right act, to understand the "metanatural", internal forces (interest), external forces (attraction or fear of punishment, power, and government) – Basic Conceptual Systems should be taught.*

Introduction

> "The values of being rest mainly in a way of how ardently we are able to immerse and experience them" (Josef Čapek).
>
> "Whole life is a mutual relation. We are all captured in the net of interrelatedness, from which there is no escape. Whatever influences a man directly indirectly has an impact on all" (Martin Luther King).
>
> "Thoughts without content are empty, intuitions without concepts are blind" (Immanuel Kant).

The above-mentioned quotations highlight three basic thematic terms, which are in the focus of this article:
1. *The living (experience)*;
2. *The relation* (as a social phenomenon, a basis of cooperation and a cooperation as the basis of 'being together');
3. *The concept* (as a mental map of the configuration of relations in physical and social sphere).

These terms are the pillars of the authorial didactic system, which is presented under the name *Learning Combination Arc.* This structure was developed throughout reflecting of how to make the teaching of social science more effective. The article presents a reflective analysis of two approaches in education: experiential approach and cognitive approach. It is presumed that a proper combination of the two approaches may create an effective Learning Combination Arc, which will bring into the citizenship education the following:
1. The conceptualization of the knowledge through the Conceptual teaching

(representing cognitive theories of education); and concurrently;
2. Personal and social dimension of learning based on experience one one's own social encounter (representing experiential learning and Drama in Education).

1. Experiential learning

> "There are two ways how to explain to a child who is a blind person. We can either say: A blind person is the one who cannot see. Or we can say: close your eyes and try to find out a way out of this room" (B. Way).

Experience is "the fact of being consciously the subject of a state or condition; of being consciously affected by the event; a state or condition viewed subjectively; an event by which one is affected; knowledge, resulting from actual observation or from one has undergone" (Oxford Dictionary, In Beard, Wilson, 2007). Experience may underpin all learning but does not always result in learning. We have to engage with the experience and reflect on what happened, how it happened and why. Without this, the experience will tend to merge with the background of all the stimulants that assail our senses every day.

Experiential learning (EL) is the sense-making process of active engagement between the inner world of the person and the outer world of environment (Beard, Wilson, 2007). We can trace the development of understanding about experiential learning in philosophical thoughts. According to Beard – Wilson (2006) numerous writers draw upon this heritage, including Dewey, Lewin, Colb and others. *Active engagement* is one of the basic principles of EL, which involves the "whole person" through thoughts, feelings and physical activity. "Whole person" approach means (Heron, 2000) that people are engaging in a form of action enquiry throughout their personal life. This consciousness-in-action involves, intentionally, both participatory and individuating functions: feeling and emotion, intuition and imagery, reflection and discrimination, intention and action. EL stimulates the senses and so stimulates deeper thinking and learning. Learning activities and techniques include *mood setting, drama, creative writing, art, meditation, environmental modification, routine rituals.* In the process of experiential learning we can observe connection of the action and the sensing or thinking about the action. Experiencing something is a linking process between action and thought. According to Dewey (1916) … thinking ...is the intentional endeavour to discover specific conditions between something which we do and the consequences which result, so that the two become continuous. In experiential learning we use our previous knowledge (itself build from experience) to bring new meanings to an interaction.

1. 2 Drama in education as a form of experiential learning

Pragmatic pedagogy, a significant stream within the reforming movement in the beginning of last centaury, highlights the social role of the education, understanding it as a phenomenon which does not lie in … *"the accustoming of an individual to the society or the outer world, nor in achieving some permanent values of the good, beauty and truth, but, on the contrary, it is a constant reconstruction of the experience" (Singule, 1991, p. 37.).* In pragmatic pedagogy, the education is life itself, not just a preparation

for it. Therefore, schools should use the situations from everyday life and should not work only with a constructed teaching material. School should be a place where a child learns to live reasonably and critically. A student should be introduced to learning situation which fits his/her age and should be directed towards the problems he/she will probably encounter in adulthood. Pragmatic pedagogy emphasises that learning based on storing the knowledge in memory should be replaced by the learning aiming for the solution of problems. *"If the knowledge is supposed to have any meaning, we must be able to work with it. Therefore, it must be gained actively and in connection to experience"(Singule, 1991, p.37).* Or otherwise - *"A student can understand the laws of natural sciences only in a laboratory, meanwhile to understand social life, it is necessary that a class becomes a living experiment, so that students learn about the life in society through solving their own problems and conflicts"(Ibid, p. 39).* Pragmatism leads towards searching for practical gaining of knowledge in situational connections. Experience and experiment are therefore the central terms and educational methods in pragmatic pedagogy. Any skill and its development depends on a practical activity. The skill to live is also dependent on the practice, and the aim of Drama in Education (see more below) is to bring this practice into life – that means to practice life. Everybody needs this skill and thus, each child should be given a chance to *learn to live*.

Essence of Drama in Education

Drama in Education is a para-theatrical structure influencing the development of personality. Valenta (1996, p. 158), puts: "Drama in Education is an improvisational form of drama, not meant to be performed, but used for the process of internal work, within which the participants are lead by a head (teacher) to imagine, play and reflect human experience… It is a dynamic process leading towards the development of the communication of images, ideas, terms and feelings through a dramatic act." O´Neill and Lambert (1990) emphasise that Drama in Education is primarily the way of learning, at which an active identification with imagined roles and situations enables students to research on conflicting questions, events and relations. The most important way of learning within Drama in Education is the development of perceptions and understanding of human behaviour, of oneself and of the world in which we live. This development of understanding integrates the changes of embedded ways of thinking and feeling. The knowledge of man, society and world and one's own place within complicated structural relations in the above mentioned particles is the most general aim of Drama in Education.

Methods of Drama in education

From many methods used within Drama in Education, several have been selected to illustrate some methods that could be utilized within citizenship education or ethic education.

A) Simulation Game as a Method of Drama

Simulation games make use a simulated performance of a student in a particular social role, with the main aim to practice specific skills – decision making, acting, or problem solving. The work is based on the modelling of particular situations and it is

characterised by the variability of the terms: leading games, strategic games, economic games, management games *(Tuma, 1987; Petlák, 1997; Petty, 1996.)*. From the point of view of acting within these roles, this method is usually not based on accepting the role of somebody else, but it pursues the idea of adopting one's own possible role. The player adopts a *function*, but he/she performs himself/herself.

B) Socio-drama as a Method of Drama

This method is based on "*acting in the roles in the situations which include the norms of two or more groups or cultures with the aim to understand them, to perceive them, and to conceive them*" *(Petrusek, 1969, p. 232)*. Socio-drama, which was developed by Moreno, can be oriented towards present-day problems, past problems, as well as towards hypothetical-perspective problems. The basis of this technique is the knowledge of the input facts on both poles participating on socio-drama – on groups, layers and classes. If the aim of socio-drama is to gain sociological information, it can have a strong value, attitude and ethical content and it can be designated as axiodrama. The participants do not really act particular persons; on the contrary, they rather act the types or principles framing the functioning of certain society.

C) Alteration

Considering the effectiveness of learning in the process of Drama in Education, the alteration approach is mainly used. Alteration is such type of role game, in which a different person is modelled. The role is designated as a function or a profession (teacher, shop assistant), within biological attributes (older teacher), or as one of the basic existential roles (mother, daughter). Within these roles, the focus is put on the attitudes and motives of the person's performance. The task of the alteration is to picture more or less general characteristics of a particular type, function, or social role.

It is possible to make an effective use of simulation games, socio-drama, alteration and other methods of Drama in Education in teaching classes on citizenship education or global education. What makes the methods of Drama in Education specific is the use of the principles of theatre – especially through acting in roles, which serves, both in theatre and in Drama in Education, as an approach towards the *mirroring of life*. Various particular forms of human existence are practised in the form of situations, however, they are not conducted as real but as a form of a theatrical performance – as a model, as a game.

2 Concept teaching model

The evolution of human mind reached its turning point when it became intentionally social. The primary vehicle of this change turned out to be the language, but not in the meaning of sounds as such. Language is bigger than that. It goes far beyond the transmission of oral sounds, since it must have been something else that has made it the most powerful *mechanism of evolutionary adaptation* (Pinker, 1999). Whether verbal or nonverbal, language in general represents in fact the abstraction that makes communication possible by turning specific and personal sensory inputs or ideas into some code that helps afterwards mentally recreate the input by the others. The society, as

we know it today, would without this abstraction hardly exist. We usually regard the ability of brain to abstract or review one's own work as something common and fail to recognize, that this is what gave us the upper hand over the other species. The selectiveness and organisation of perception, intentionality of thinking and the ability to turn the brain outputs into abstract signs are elements making society an effective entity. All these three elements can be developed. We may be dangerously tempted to think that the development of higher cognitive processes is man's second nature, like growing of arms or legs. Luckily, the usually inevitable social interaction makes it so, but still, it is of vital importance to recognize that the existence of other people constitute the "raison d'être" of high-order thinking and especially, abstraction. If alone in the world, nobody would need the language of abstraction.

Essence of concept formation

The aim of this article is to propose a way how to develop the ability of this abstraction by teaching to form concepts. The approach put forth is not new in the way what it does, but in the way how it does. It aims at making the social act of concept creation systematic and organised, turning mind-maps into conceptual maps, perplexity into systems. Concepts are mental representations (i.e. categories) like, let's say, colour, animal, force or cooperation. Without some content, every one of these terms would be just an empty pale. It is the nature of the content elements as well as the nature of relationship among them that fills some bunch of letters like "shape" with a meaning. In conceptual teaching approach, learning a superordinate term like "colour, shape or flower", as said by Vygotskij, is just the beginning of the process, not its end (Vygotskij, 2004). For example, the concept word colour, for a child, means nothing until you give it meaning by teaching the system that e.g. blue and red and brown buttons on clothing have some quality that they differ in, etc. Conceptual teaching thus always goes from single sub-concepts that are linked by a mental super-representation. Since concepts are exclusively of social origin, a child has to be introduced to this system by means of other people (parents, teachers). Concepts do not appear in children's heads just out of blue. The idea of the following approach is based on the premise that the earlier we start to systematically develop the formation of these structures, the more we give rise to a structural change. This character of structural development means not that the aim of the approach is to teach e.g. green-colour or dog-animal. It is to internalize the techniques of perceptual organisation, usage of precise and sensible language and the principles underlying concept formation (association, differentiation and generalization).

A way of system

We were inspired by the Concept teaching model devised by Magne Nyborg. It is based on the premise that by learning to organize environmental stimuli into a system, the child gets a better grasp of the world, which would otherwise be a huge mess, unpredictable and unknown. As put by Andreas Hansen, teacher in CTM shows how analytical thinking makes the perception clearer and guides the children to think that way until the children internalize it (Hansen 2003). Original CTM works with concepts like colour, shape, size, number, time, temperature etc. The primary, yet implicit goal of the approach is to develop the intentionality of thinking. The learning process should make the child aware that by thinking in an organized way and with a goal in mind, one can

solve problems with far greater ease and tackle problems that would otherwise be out of reach. It is like teaching to be a better manager of mental resources you have at hand. Development of the internal need to think when facing a problem to solve is the most crucial point. Conceptual teaching (among other cognitive education approaches) aspires exactly to do so. The Nyborg's model works in three stages (Hansen, 2009). At first, child learns to *associate* objects and their respective terms with, e.g., the concept „shape". Afterwards, it learns to *discriminate* within the class (e.g. to distinguish circles from triangles or squares). Leitmotif of the last, *generalization* phase is to find partial similarities of seemingly dissimilar objects, to see that they are similar in at least some conceptual aspects (like position, surface, shape...). These processes, or their fragments, do run in child's head even without any formal concept teaching, but in an intuitive, unorganised way. Concept teaching makes these processes conscious and organised. Children gradually learn that there is an underlying system in the world full of distinct stimuli. In very young age, or with some kind of learning disorder, children are not able to assess, categorize and interpret sensory inputs what makes their perception and comprehension of the world too far episodic. Nyborg's view is in concord with that of Feuerstein, that the teacher's role is to mediate these inputs and ensure that they are analyzed and sorted in proper manner (Feuerstein et al, 1980). Children are encouraged to cognitively elaborate on something that they otherwise wouldn't, since it may seem so natural. However, easy concepts are the best way to take firm possession of owns perception and to start intentionally use the brain in „cut-and-dry"setting of school or home. The approach makes children use precise and well thought out language, whether verbal or in any form of non-verbal expression (like gestures or drama). These techniques, a sort of methodology of learning, though on social level (teacher – child) at first, will slowly become internalized patterns of child's mental functioning. It is important to point out that the mentioned language is not just a tool that connects objects with respective super-ordinate concepts (i.e. just association). The aim is to take in the system of relationships among these objects or ideas, to discriminate and to be able to identify partial similarities. In every phase of Concept teaching model, children carry out various tasks, from the easiest ones, through more advanced to self-production tasks and every phase scaffolds the following one.

Possibilities beyond Nyborg's tradition

Tenets of concept teaching model offer vast possibilities. Although the conception explicitly employs mainly oral language, there is lots of room for divergent techniques. The key is to make the child active in the process of concept formation. The innovations may well spring from the realm of methodology (experiential techniques as a working language – as suggested above) or from the character of the conveyed concepts itself (active construction of exclusively social concepts like cooperation, freedom, responsibility or ecology). The fundamental difference between teaching "a sort concrete" (so called Basic conceptual systems) and social concepts lays in the character of relationships among concept defining words. Especially social concepts are complex cognitive structures with a strong emotional load what makes them hard to be penetrated using just conventional approaches aiming at either the domain of cognition or that of affect only. The teacher has to become aware that everything "social" has a deep multi-level structure and that it is a must to teach the students to intentionally act and elaborate on it. It is to be sensed that even if many social acts and relationships may seem a second

nature to us, intentional thinking and systemizing will make them a lot more efficient and operative. The empty pales like the term “cooperation” may be left to be filled with episodic and accidental experience very likely be affected by deeply rooted negative emotions, or there might be a way to fill the pale in a systematic and well designed way, so that the children or students get to know and feel of what elements, e.g., a successful cooperation consists.

Following illustration of a lesson exemplifies the “whole person” approach. Students engage in action, subsequently reflected in thoughts made explicit. All this is underpinned by arousal of emotions which is a must in concept formation of social constructs. Teaching to cooperate is impossible outside the social realm of interaction and systematic internalization of the concept is impossible without thought. As a logical consequence, the lesson merges these “ingredients”. The proposed lesson is a way not to be precisely followed, but rather to be inspired by.

3 Example of the structure of the lesson

I. Selective association phase

Background: Project To- Gather in order to be to TOGETHER

Activity – hidden letters in the room (11), everybody looks carefully, writes all the letters found in the room, puts them together and creates the word (cooperation)...

- (Poster on the wall) – everybody writes associations connected with concept word COOPERATION – puts them on the poster – “the group mind map of the concept COOPERATION”
- Think of one situation when you experienced cooperative/uncooperative behaviour in your past

II. Selective discrimination phase

Activity: Pair work: Share your experienced situations with a partner choose one positive and one negative situation with respect to cooperative/no cooperative behaviour, write it down and analyse the situation with respect to:

- Reasons, preconditions (WHY?)
- Process (HOW?)
- Results, outcomes (WHAT is the outcome)?

Drama:

Topic: Cooperative/no cooperative behaviour of a customer and shop assistant

- Selection of two groups/ observers – actors

Observers: focus

- Analysing behaviour of the acting person: nonverbal aspects, paralinguistic, verbal aspects

Actors: focus

- Presentation of etudes

Evaluation of etudes

Discussion about examples of cooperative/no cooperative behaviour in school, social, cultural, economical, political …setting.

III. Generalisation phase

- Create a "group conceptual map" of COOPERATION reflecting experience previous activity.

Working in three groups:

- Group 1 – acting the roles of the people with cooperative approach of individuals
- Group 2 – acting the roles with no cooperation of participants
- Group 3 – some people cooperate, some don't

Observers read reports about the process, groups present the outcomes.
After being involved in practical experiential activities, the primary mind map of "COOPERATION" and final concept map of "COOPERATION" are being compared.

Conclusion

Encyclopaedic knowledge has nowadays become unrealistic, as the memory capacity simply does not allow storing it. Global problems of humankind signalize the necessity to appeal for the formative aspects of education and for the inevitable meaningful dialogue, first of all within each single person. The knowledge of one's own world, the understanding of the self, and the acceptance of one's own identity is the presumption for entering the world of the others, by the way which takes into consideration the authenticity and the differences between *my* and *your* experience, and between *my* and *your* interpretation of the world. Respecting the parallel worlds of ideas is a pretext for an equal dialogue with the surrounding. In the process of schooling, among the subjects of educational process – within the construction frame - dialogue has the key role in the question of knowledge. This article seeks to explore the possibilities of interconnecting two approaches in education of subjects with social dimension (represented in the curriculum mainly by the citizenship education and ethic education classes). The focus is put on the creation of a model of a possible integration of cognitive approaches, which aims for the construction of the knowledge in conceptual systems and experiential education, represented by the use of Drama in Education – that is the system of learning in which the defining element is the dialogue among the participants of the role play. In a metaphorical sense, even the process of education connected to social sciences might be perceived as a process of a structured dialogue, which aims to solve and to discover the controversies and conflicts of social world. It is highlighted that, *the education through experience might be a way of the return to moral values, and to the discovery of a new spiritual and ethical frame of human existence.*

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